

2020

Air Force Civil Engineer Utility Energy Service Contract (UESC) Playbook





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Chapter 1 Introduction – Utility Energy Service Contract (UESC)

The objective of the UESC Playbook is to provide the parameters and guidance for implementing a UESC, replacing Engineering Technical Letter (ETL) 12-10: Utility Energy Service Contract (UESC) dated 3 April 2012. This Playbook contains a basic history of the UESC program, primary roles and responsibilities, step-by-step instructions, job aids, and reference documents to ensure UESC procedures are followed. This Playbook applies to all Air Force Installations considering using a UESC including, but not limited to, General Services Administration (GSA), Energy Management Service Agreements (EMSA), and individual installation contracts. Any deviations require written approval from the Energy Savings Performance Contract (ESPC)/UESC Program Manager, Air Force Civil Engineer Center (AFCEC/CND). The (ESPC)/UESC program manager, AFCEC, AFCEC/CND are the sole interpreters of this playbook.

Job Aids, resources and reference materials are provided digitally in [Links](#) 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 Champion (BC), Base Financial Managers (BFM), and installation Contracting Officers (CO), Utilities, Energy Service Companies (ESCOs), and Contracting Agencies (DLA-E, CEHNC, etc.).

Note: Must comply with the most current version of the Air Force Guidance Memorandum (AFGM) Civil Engineer Control Systems Cybersecurity.



Chapter 2 UESC Background, Authority, Financing and Funding

2.1 Background

A UESC is a contract that allows utilities to provide their government customers with energy and water efficiency improvements and demand-reduction services. UESCs leverage third-party funds to identify and implement energy conservation measures (ECMs) for a financing term of up to 25 years by statute [10 United States Code \(U.S.C.\) 2913](#). The AF **requires guaranteed savings** be provided on all UESC's, unless prohibited by statutes or regulations. The AF can use UESCs for all buildings, excluding leased buildings (unless leased from another Federal agency), where the AF pays the utility bill.

UESCs are typically considered to increase facility energy efficiency through improvements to installation infrastructure, buildings, and building systems. Under a UESC, a serving or franchised utility company identifies energy savings strategies that yield an economic return on the investment. UESCs are used for the following:

1. Reducing energy use
2. Reducing water use
3. Repairing and/or Installing high efficiency equipment and/or control systems
4. Re-commissioning or retro-commissioning energy consuming systems
5. Energy/Mission Resiliency

The utility obtains funding to implement design actions along with purchase and install/update equipment and energy systems. The capital costs can be paid with appropriated funds or financed by the utility company. A UESC shall be implemented with assurance that the energy savings can be validated for the term of the UESC and meet the legal intent of the UESC. Used effectively, a UESC can reduce energy consumption and improve facility infrastructure.

2.2 Authority

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

Authority Documents Mandating the AF UESC Program
10 U.S.C. 2911-13, Energy Performance Goals and Plans for Department of Defense
E.O. Regarding Efficient Federal Operations, 17 May 2018
Public Law (P.L.) 109-58, Energy Policy Act of 2005
10 Code of Federal Regulations (CFR) 436, Federal Energy Management and Planning Program (CFR 436.18-19)
Energy Independence and Security Act (EISA) of 2007
10 U.S.C. 2866, Water Conservation at Military Installations
Air Force Policy Directive (AFPD) 32-10, Installations and Facilities

Table 1 - Authority Documents Mandating the AF UESC Program



The statute that provides for UESCs [10 U.S.C. 2913](#) states that:

1. The Secretary of Defense may authorize the Secretary of a military department having jurisdiction over a military installation to enter into agreements with gas or electric utilities to design and implement cost-effective demand and conservation incentive programs (including energy management services, facilities alterations, and the installation and maintenance of energy saving devices and technologies by the utilities) to address the requirements and circumstances of the installation.
2. If an agreement under this subsection provides for a utility to advance financing costs for the design or implementation of a program referred to in that paragraph to be repaid by the United States, the cost of such advance may be recovered by the utility under terms no less favorable than those applicable to its most favored customer.
3. Subject to the availability of appropriations, repayment of costs advanced under paragraph (2) shall be made from funds available to a military department for the purchase of utility services.
4. An agreement under this subsection shall provide that title to any energy-saving device or technology installed at a military installation pursuant to the agreement vested in the United States. Such title may vest at such time during the term of the agreement, or upon expiration of the agreement, as determined to be in the best interests of the United States.

2.3 Financing UESCs and Other Considerations

UESC projects, funded or financed, must produce financial savings that are equal to or greater than the cost of implementation, including the cost of financing, operation & maintenance (O&M), repair & replacement (R&R), etc... All UESC costs, including mid-contract replacement of capital equipment(R&R), must be funded out of the UESC savings generated, unless funded using appropriated funds. An installation's post-UESC utility costs, such as energy and Operations and Maintenance (O&M), plus the cost of the UESC project cannot exceed the utility costs prior to the implementation of the UESC project. If the project is financed, the energy cost savings are used to pay the utility.

2.3.1 Energy Costs

Annual payments by the AF under a UESC cannot exceed the value of energy and O&M savings relative to costs prior to the UESC. Refer to [42 U.S.C. 8287; Section 801\(a\)\(2\)\(B\)](#).

Forecasted energy costs and the discount rate (present value of future cash flows) are major factors in determining UESC savings. [10 CFR 436, Federal Energy Management and Planning Programs](#), provides detailed instructions for UESCs, 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 \(National Institute of Standards and Technology \[NIST\] 85-3273\)](#) to determine the discount rate and forecasted energy costs. UESCs must use the direction provided in “*AFCEC Escalation Guidance*” in Appendix C.1 for determining escalation rates per the EERC. The provisions in [10 CFR 436.14](#) are mandatory and failure to comply results in the contract deemed legally insufficient.



2.3.2 Maintenance Responsibilities and Funding

The Utility is responsible for all costs relating to the energy savings guarantee, including labor, supplies, parts, and materials for the term of the Task Order (TO). Utilities are responsible for all maintenance and repairs during the term of the TO. The exception to this is when the Utility and AF may mutually agree upon certain cases (such as lighting), whereby the installation may physically perform the maintenance as long as the Utility retains the ultimate responsibility for maintenance for the length of the TO. However, prior approval by AFCEC/CND is required and the language in the TO must clearly state the Utility 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 (e.g. lighting has little to no required maintenance).
3. Required to oversee and ensure all maintenance is performed as required for each ECM within the TO.

If approved by AFCEC/CND, the installation may require the Utility 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 and savings.

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

2.3.3 Annual Reconciliation

The M&V Plan is prepared by the Utility for the AF to identify methodologies and performance assurance actions that are technically appropriate, economically viable, within the power of the utility to honor, and effective in identifying the actual energy savings generated by each ECM. The key component to any M&V plan is it must have a path that results in failure, without such, the plan is invalid. Every effort should be made to minimize the extent and cost of performance assurance.

After the ECM installation is complete, the responsible party inspects the installation in the presence of a Base COR to confirm the ECMs meet specifications and are performing per the awarded TO. Any changes are recorded by Base COR and the energy savings are recalculated based on actual installation, with shortfalls in energy savings addressed by the utility.

Commissioning is conducted as each system is installed, including equipment tests, validation of controls functions, and a trend run. The results of these activities are included in a commissioning report documenting the post installation energy savings compared guaranteed savings set forth in the TO. The subsequent M&V activities determine whether the ECM is maintained at the parameters from the commissioning



baseline, validating each ECM is performing its function and energy savings are being achieved.

The M&V requirement is intended to provide documentation regarding the cost effectiveness of the technologies employed.

An annual M&V reconciliation is required for a UESC. A verification of energy savings reconciliation must be accomplished for each awarded TO annually. This requirement includes an approved M&V plan using, at a minimum, the current International Performance Measurement and Verification Protocol (IPMVP) at the time the TO is awarded. Measured savings are required when using option B or option C metered savings, whereby a minimum of 2/3 savings are metered. During the annual reconciliation, the utility contractor confirms the adequacy of maintenance. Refer to [paragraph \(a\)\(2\)\(A\) of 42 U.S.C. 8287](#). The BEM validates that the utility company's annual reconciliation follows the agreed upon M&V plan. Usage of Option D is ***prohibited*** on Air Force third party financed projects, e.g. a UESC.

2.3.4 Budgeting for UESC Contracts

As part of the final submittal the Base will receive a "PAYMENT, AMORTIZATION, AND TERMINATION LIABILITY SCHEDULE". This schedule will contain payment due date, interest, principal, balance, termination fees, and most importantly the annual Government payment. This payment must be reported as part of the utility POM as a must pay bill to AFIMSC/IZBO. The Installation will receive funds to pay this "must-pay" annual expense for the term of the contract.

2.3.5 Buy-down and Buyout

UESC costs may be partially or fully funded with funds used to buy down part or all of the TO, such as end-of-year fallout funds. These one-time funds can be used at time of award or identified in the payment schedule to the utility company 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. Buy-down schedules are required for projects with payment periods greater than 5 years. If, after award, O&M funds are used to buy down a portion of the TO, several steps are necessary:

1. Use of these funds must be identified as soon as possible to the utility company.
2. Economics must be considered.
3. Prepayment penalties must be identified by the utility company.
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 Utility equipment, or mission changes) result in annual savings falling below annual payments to the Utility and the TO term cannot be extended, the buyout provision of the ECM can be exercised. The TO is required to clearly identify the penalties associated with the buyouts.



2.3.6 Guaranteed Savings & Term Limits

As stated in section 2.1, UESCs leverage third-party funds to identify and implement ECMs for a financing term of up to 25 years by statute [10 United States Code \(U.S.C.\) 2913](#). The AF **requires guaranteed savings** be provided on all UESC's, unless prohibited by statutes or regulations.

The guaranteed savings will be part of the TO, the utility company provides an annual guarantee of energy savings to the AF and establishes payment schedules reflecting the guarantee. The equipment/ECMs installed is guaranteed to provide energy savings; provisions shall be made for the labor, supplies, parts, and materials to maintain the ECMs for the term of the TO. Annual verification of energy savings must be accomplished by the utility, as provide for in an approved M&V plan (see Section 6.1).

The payment to the utility is based upon the agreed guaranteed savings, as defined in the TO. UESC payments are like utility bills, and are "must-pay" requirements which are programmed into the annual utility budget process. Refer to [42 U.S.C. 8287, Section 801\(a\)\(2\)\(A\)](#).

2.4 Funding Requirements

2.4.1 Types of Savings

Cost savings which may be included in a UESC include:

1. Reduction in utility commodity consumption, in comparison to normalized baseline, for natural gas, electrical power, water, sewer, propane, etc.
2. 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.
3. As part of TO award, the costs savings from avoided expenditures for O&M, repair, replacement, or other capital expenditures can be utilized to assist in paying down a UESC. Investments can include both facility (real property and Real Property Installed Equipment [RPIE]) improvements and equipment (non-RPIE, such as kitchen equipment). In using a funding source other than utility funding, requires written acceptance by the BCE or Leadership of the agency responsible for the funding source. The signed agreement shall detail the amount, term, and validation of the savings, and submitted for review/approval with AFCEC/CND. Prior coordination with AFCEC/CND is required, before considering or taking actions on alternate funding stream. Lastly, any funding other than utility funding requires approvals to be in place prior to consideration for usage in the UESC project.
4. One-time energy-related cost savings resulting from avoided expenditures because of the UESC project.
5. Demand-related savings, such as peak shaving.
6. One-time utility rebates.



The utility contractor is responsible for the design, acquisition, installation, and measurement and verification (M&V) of the project equipment or systems that produce the savings is required. Refer to [2.3.3 Annual Reconciliation](#) for more information. Refer to the [GSA Utility Contractors List](#) to view approved contractors.

Certain risks are associated with implementing a UESC for the AF. It is essential the AF does not assume any of the utility contractor's risk, such as ECM performance. AF risks include utility rates and mission changes.

Refer to the Risk/Responsibility Checklist (Appendix B.2) job aid for guidance.

2.4.2 Funding UESC Projects

[Title 10 USC § 2913\(d\)\(3\)](#) specifies that repayment of financed costs be made from funds available to a military department for the purchase of utility services. UESC savings must be real (tangible) and verifiable so the installation doesn't run the risk of a funding shortfall. Funding sources that encompass O&M-type savings or other savings that do not eliminate actual costs or produce actual savings versus avoided costs **shall not** be included. Civilian personnel costs are not allowed as a savings mechanism for Air Force projects; revectoring of labor resources does not generate dollar savings.

Use caution if applying anticipated cost avoidance to the UESC due to major repair/replacement that may not be needed because of the UESC. Historical data may not be able to back up expenditures, but the costs may be justified as a future expense (example, an engineering analysis or as life cycle predictions). 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 a UESC, the installation and AFCEC/CND must agree to the funding source and create a record of decision to justify the action and agreement. The record of decision, defining the funding amount and term, must be agreed to and signed by the Base CE Leadership and/or the Leadership of the Agency responsible for the funding, prior inclusion in the project financials/development. The decision to utilize, or not, alternate funding sources, such as O&M, shall be finalized early on in the IGA phase to avoid wasted effort on non-viable opportunities.

2.4.3 FSRM Requirements

FSRM Projects that have Construction Task Ordering (CTO) authority may be included for construction within the UESC. Refer to the most current AFCAMP Business Rules and Scoring Guidance on the AFCEC CE website.

The restriction is that the UESC and the FSRM project must be funded and awarded in the same fiscal year. The inclusion of an FSRM project into a UESC must be early on in the project development as it will affect the financial structure of the project. Once the FSRM project is selected to be included, the Base shall follow the protocol set out in the AFCAMP business rules (e.g. adjust ToT) and the Installation must MIPR the funds to the Procurement Contracting Officer.

As part of including an FSRM or other funded project(s), the installation shall not share DD1391s or other budgeting documentation with the Utility. The Utility must provide the AF competitive pricing for the scope of work defined in the funded project.



2.4.2 Additional Funding Rules

Facilities under a UESC may require a buyout before non-UESC work is conducted. Government actions (post award) on a building that will impact, alter, or dismantle UESC material or equipment, rendering that part of the UESC contract invalid, requires buyout of the applicable portion of the contract. Examples include demolition, upgrades, construction and privatization. Whenever possible, buyout funds shall be programmed with the same fund source as the project itself. Any demolition, upgrades, construction, or privatization shall be identified to the CO for evaluating and determining appropriate contract action.

Usage of other funding sources outside of Base CE have the following additional funding rules which apply:

1. Military Construction (MILCON) funds cannot be applied to a UESC. MILCON projects cannot be accomplished under a UESC. Use of MILCON funds for a purpose outside appropriated use would result in a violation of the [Purpose Act \(31 U.S.C. 1301\)](#).
2. Non-appropriated Fund (NAF) functions may be authorized to use appropriated O&M funds. NAF Category C ECMs must use savings only from other NAF ECMs to avoid subsidizing or being subsidized by funds other than NAF-funded sources. All actions affecting funding must be coordinated with the NAF funds manager. The NAF funding and payments shall be tracked on separate financial schedules within the UESC Task Order.
3. Military Family Housing (MFH) funds are appropriated separately and used specifically for MFH purposes. MFH ECMs must use savings only from other MFH ECMs to avoid subsidizing or being subsidized by funds 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 \(31 U.S.C. 1301\)](#). The MFH funding and payments shall be tracked on separate financial schedules within the UESC Task Order.
4. Reimbursable customers require separate accounting procedures to ensure that adequate payments are being applied to their accounts. Reimbursable customers must agree to a memorandum of agreement or equal to provide payments for the term of the contract. Funding and payments shall be tracked on separate financial schedules within the UESC Task Order.

Additional ancillary savings may also be available to the project such as contract manpower (e.g. service contract), materials, or elimination of other contract-operated functions. Maintenance, repair, or operations costs for tasks currently being conducted by the government or government contractor are ancillary savings if the utility:

1. Assumes the tasks
2. Reduces the tasks
3. Eliminates the tasks.

Savings must be real and verifiable. The BC/BCE determines whether a utility-proposed task elimination or reduction would be considered an ancillary savings available for sharing. The AF provides the dollar value of the ancillary savings.



Elimination of government civilian positions are not considered as a funding source, and shall not be pursued. Additionally, elimination of tasks that only result in revectoring of labor resources elsewhere is not a valid/tangible funding stream since no dollars have been freed up to pay for the UESC.

The final negotiated savings shall be applied to the UESC contract. Although the cost of elimination of contract-operated functions are not negotiated until after TO award, but **must be agreed** to in writing by the BCE prior to inclusion in the TO. These costs are estimated and added into the TO.



Chapter 3 UESC Roles and Responsibilities

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

3.1 AFCEC/CND Roles and Responsibilities

- a. Serves as the Centralized UESC Development & Execution Office and centrally manages all Air Force UESCs once requirement is transitioned from OEA to AFCEC/CND for execution. Provides initial vetting, **approves each stage of project development prior to moving to next phase/stage**, manages the evaluation process, and assists installations in the development of the UESC project through completion of the TO term. Provides technical review and approval of all UESC projects.
- b. Designates, coordinates and supports the contracting office. Validates installation acquisition data package, gathers stakeholder concurrence, and directs contract authority regarding contractual execution.
- c. Develops UESC procedures/guidance and provides UESC training to appropriate installation personnel. AFCEC, to some extent follows the general guidelines of the Department of Energy (DoE) Federal Energy Management Program (FEMP) UESC program, but defaults actions in the best interest of the Air Force.
- d. Acts as the center of expertise for UESC contracts. Provides tools and expertise to assist in implementing a UESC. Is the central clearinghouse for UESC lessons learned.
- e. Maintains oversight and compliance with AF policies and interprets guidance for the installation's UESC program.
- f. Reviews and approves technical aspects of the annual M&V reports.
- g. Provides all required reporting of project data and metrics to SAF and OSD.
- h. Ensures all UESC project scope align with SAF direction and intent.

3.2 Base Champion Roles and Responsibilities

- a. The BC/BCE will work with AFCEC/CND to determine the contracting office for execution of the UESC. The Defense Logistics Agency-Energy (DLA-Energy) and U.S. Army Corp of Engineers Huntsville (CEHNC) are the execution contracting offices utilized for all AF UESCs, due to having resources specialized in third party execution.
- b. Works with AFCEC/CND and Contracting office to implement the UESC program. Compiles and provides required project documentation, including site data packages and evaluation criteria to the AFCEC/CND and CO. Refer to [UESC Considerations for the BC \(Appendix B.3\)](#) for more information.
- c. Completes UESC training before implementing a UESC program and ensures that assigned personnel associated with the UESC program receive this training for the term of the UESC.
- d. Provides onsite support and coordination during the Utility's development of the PA/IGA.
- e. Reviews and provides recommendations on RFIs and submittals during the PA/IGA development.



- f. Coordinates with the Base ISSO/ISSM and/or AFCEC/COOI to ensure actions taken by the Utility will comply with the AF cybersecurity protocols.
- g. Fulfills the GOV role for witnessing of energy measurements during the IGA for development of baseline.
- h. Determines if other funding sources such as Facility Sustainment, Restoration and Modernization (FSRM) are available and offer more cost-effective execution through the UESC.
- i. Ensures the CO is notified of mission changes, facility modifications, or demolition.

3.3 CO Roles and Responsibilities

- a. Overall responsibility to ensure that UESC projects serve the best interests of the AF and are consistent with the terms and conditions of the UESC contracts, legislation, regulations, along with OSD and Air Force leadership guidance and intent.
- b. Awards and administers all issued UESC TOs following AFCEC/CND technical review and approval and authorization.
- c. Along with AFCEC/CND, the Contracting Agent assembles the UESC team and serves as co-chairperson for all meetings with the utility company.
- d. Performs an analysis on all construction costs to determine that all costs are realistic/reasonable for the work to be conducted.
- e. Appoints a Base Contracting Officer Representative (COR) to act as a liaison between the utility contractor and the CO.
- f. Provides the total contract cost for each phase of a UESC and a final signed copy of the TO to AFCEC/CND.

3.4 Base COR Roles and Responsibilities

- a. Technical representative for CO during design/construction.
- b. Acts as the Contracting Officer Representative (COR) during the design and construction action. Assists the CO in ensuring the utility company complies with all requirements for the term of the TO. Conducts onsite oversight/inspection during construction and installation. Reviews and coordinates all deliverables and provides recommendations on submittals to the CO.
- c. Provides onsite support and coordination during the Utility's construction. Coordinates with the Base ISSO/ISSM and/or AFCEC/COOI to ensure actions taken by the Utility are in compliance with the AF cybersecurity protocols.
- d. Fulfills the role of GOV witnessing during Utility commissioning of ECMs.
- e. Identifies and supports project goals and development efforts.
- f. Evaluates and documents mission changes, facility modifications, and demolition and provide information to AFCEC/CND and the Contracting Agent to ensure appropriate contract action is taken.



- g. Conducts witnessing of measurements during annual M&V actions by the Utility during the performance period. Reviews the annual M&V report, in conjunction with AFCEC/CND. In coordination with AFCEC/CND provides recommendation on Utility invoice payments.
- h. Conducts oversight/inspection during construction and installation.
- i. Reviews and approves technical aspects of the annual M&V reports, when applicable.

3.5 Utility Contractor Roles and Responsibilities

- a. Develops and submits the Preliminary Assessment (PA) and Investment Grade Audit (IGA).
- b. Documents the baseline meter data and ensures the data adequately the baseline. Simulation models (e.g. eQuest, Trane Trace, etc.) are **not acceptable baselining tools**. Baseline must be based on metered data and AF must be able to validate.
- c. Obtains/provides funding for energy reduction project(s).
- d. Implements the UESC project, including purchasing equipment, installing equipment, and overseeing and completing construction during projects.
- e. Provides the M&V report and verifies metering and data collection is part of the M&V plan to ensure energy savings of each installed ECM.
- f. Provides the O&MRR based on risk and responsibility matrix set forth in the IGA and codified in the awarded TO.
- g. Provides a project that complies with all AFCEC and AF requirements and guidance (e.g. UFCs, AFIs, Playbooks, etc.)



Chapter 4 Types of UESC Contracts

The AF has several types of UESC contracts available, including, GSA Area-wide Contracts (AWCs), Interagency Agreements and Energy Management Service Agreements (EMSA). Basic Ordering Agreements (BOA) are not contracts, but establish general terms and conditions for future TO or Delivery Order (DO). Agencies not covered by such agreements may enter into contracts with their servicing utility. If an AWC exists with a utility, AFCEC/CND must approve the use of other procurement mechanisms. EMSAs serve as a template for agencies to use in establishing UESC's or as a Master Agreement Exhibit "C" within an AWC, BOA or as a stand-alone agreement.

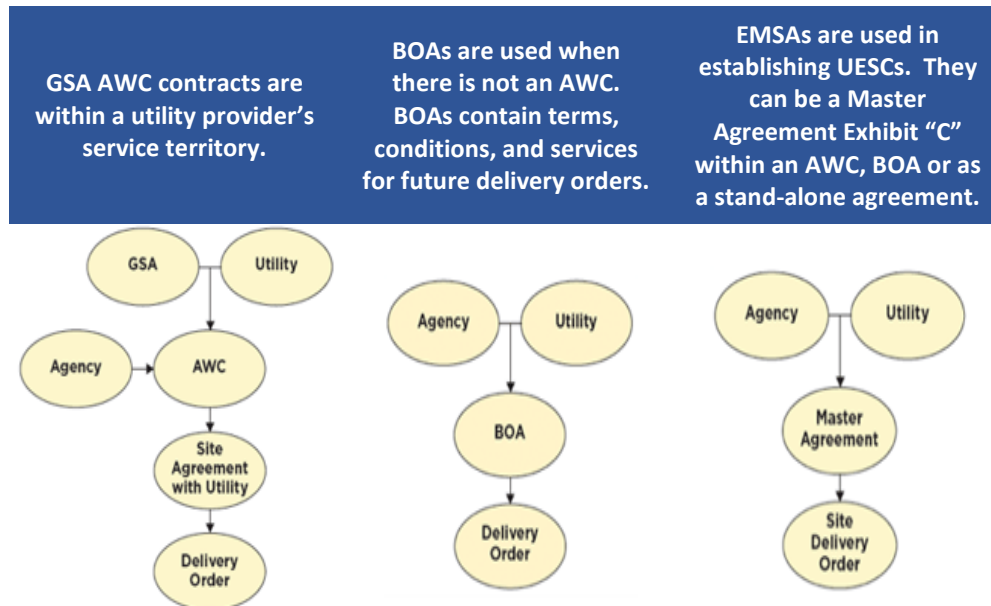


Figure 1 - Procurement Mechanisms

4.1 GSA AWC

Utility services can include electricity, natural or manufactured gas, water, sewage, thermal energy, chilled water, steam, hot water, and high-temperature hot water. AWCs outline general terms and conditions and authorize any agency in a utility's franchised service territory to place TOs for utility services and utility energy services offered under the contract. Refer to the GSA Utility Contractors list to view the servicing area utility contractors.

The GSA has numerous active utility AWCs to procure energy, water, and renewable energy systems projects. Installations develop an EMSA, which is provided as an attachment to the existing GSA AWC. If more than one utility company can offer energy management services the AF provides a fair opportunity and selects the one that provides the best value. If only one utility is available, the CO prepares a justification and approval (J&A), prior to having negotiations leading to an award without full and open competition [Federal Acquisition Regulations \(FAR\) 6.302.5](#). Refer to the [Justification and Approval for Other Than Full and Open Competition \(Appendix D.1\)](#) sample document.

Note: AF preference is usage of the existing GSA AWC at each installation.



4.2 BOA

A BOA is an agreement between the utility and the installation to establish general terms and conditions that are incorporated into future firm fixed-price TOs and may be used when an AWC does not exist. A federal agency can establish a BOA with their utility when specific items, quantities, and prices are not known, but a substantial number of requirements are anticipated and there is potential for more than one UESC TO. A TO is placed under a BOA constitutes the contract and details the services to be delivered.

A BOA does not guarantee future TOs to the utility and is not used to restrict competition if more than one utility supports an installation. The agreement is reviewed annually and revised, as necessary, to meet the requirements of the [FAR 16.703](#). A modification to the agreement itself does not retroactively affect any individual TOs issued under it.

The CO establishes the BOA with the utility employing normal contracting procedures in accordance with [FAR 16.703](#), [DFARS 216.703](#), and [Procedures, Guidance and Information \(PGI\) 217.703\(d\)](#).

4.3 Interagency Agreement

Bonneville Power Administration (BPA) – Provides energy management services to their customers within their service territory.

4.4 Stand Alone Contract

For installations where the utility does not have an AWC, an [EMSA \(Appendix D.3\)](#) may be used as a template for terms and conditions, ,with award made to the utility under the authority of [10 U.S.C. 2913](#).



Chapter 5 UESC Contracting Processes

5.1 Installation Contracting Process

5.1.1 Phase 1: Project and Acquisition Process

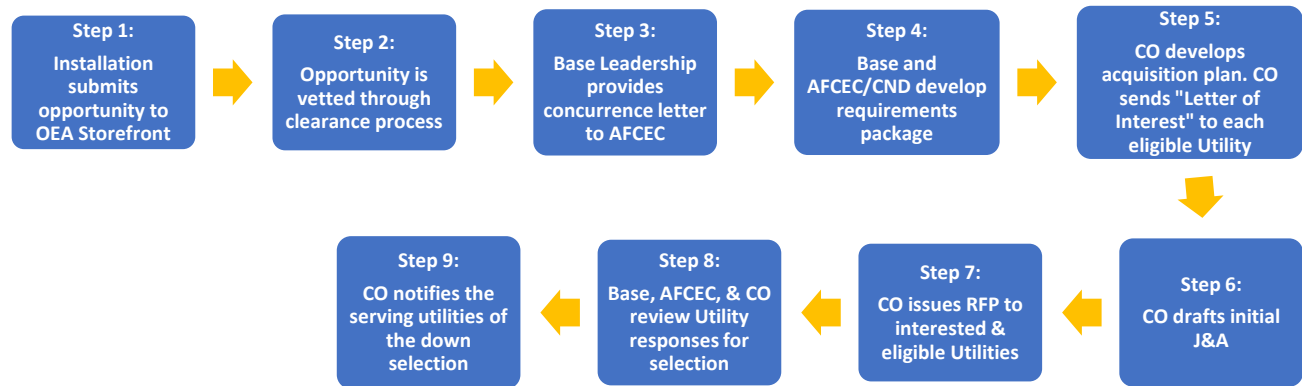


Figure 2 - Phase 1: Project Scoping and Acquisition Process

Step 1: Installation Leadership Decides to Pursue an Energy Opportunity

Prior to engaging with a utility, the Base Champion/BCE prepare a summary of the type of Resilience ECMs being considered, relevant baseline information, and submits all requirements to the Office of Energy Assurance (OEA) storefront platform for assessment and validation.

OEA serves as the single point of entry for all installation resilience and energy requirements/opportunities.

Step 2: Opportunity Vetted Through Clearance Process

OEA acts as the facilitator and integrator to maximize energy assurance/resiliency, and coordinates with AFCEC to determine the acquisition approach. If third party financing via a UESC is the determined approach for execution of the opportunity, then AFCEC/CND engages with the Base Champion/BCE to start development of the project.

Step 3: Installation leadership initiates the UESC project with AFCEC/CND

Once UESC is selected as the execution method the Base CE Leadership provides a signed letter of concurrence to AFCEC/CND for initiating a UESC.

Step 4: Development of Scope and Requirements

Prior to engaging with a utility, the Base Champion/BCE prepare a summary of the type of ECMs being considered, facilities to be considered, relevant baseline information, and submits them to AFCEC/CND for review. AFCEC/CND and BC develop package for submission to the contracting agent for start of acquisition process. The development package shall contain a minimum of one ECM addressing resiliency at the installation. SAF/IEE has defined the acceptable level of resiliency for an UESC to be one or more elements of Generation, Storage, or Microgrid. Note: AFCEC serves as advisor and approval point throughout the project life. Refer to the [AFCEC UESC Planning Checklist \(Appendix B.1\)](#) job aid for guidance.



Steps 5: CO develops acquisition plan/strategy and sends a “Letter of Interest” to each eligible utility and provides each utility with a fair opportunity to be considered.

The CO contacts each serving utility to determine interest in providing a UESC. The letter should provide:

1. Clarify agency intention to use UESC to meet energy goals.
2. Describe the initial project scope.
3. Inform the serving utilities of the opportunity for consideration to all.
4. Provide evaluation method and criteria.

If more than one utility responds with interest in participating in the project, then a competitive downselect effort will be initiated. If only one utility responds or is eligible, the CO will proceed with the J&A, and selection of the one eligible Utility.

Step 6: The CO drafts the initial J&A.

The J&A is to be executed prior to negotiations leading to TO award without full and open competition. J&As use guidance provided in the following regulations:

1. [FAR 6.302-5](#)
2. [10 USC 2304\(c\)\(5\)](#)
3. [Competition in Contracting Act \(CICA\)](#)

J&As are initiated during acquisition planning and establishes the contractor meets the definition of a utility. The J&A describes services offered by the utility and why performance by the utility is required, indicating the agreement will be cost effective, fair, and reasonable. J&As are finalized before awarding the TO.

Refer to the [Justification and Approval for Other Than Full and Open Competition \(Appendix D.1\)](#) form for an example.

Note: If more than one utility company can offer energy management services, all must be provided a fair opportunity to participate and the one providing the best value is selected; no J&A required. However, if only one utility is available, the CO must prepare a J&A prior to negotiations, leading to an award without full and open competition.

Step 7 & 8: CO Issues RFP to Eligible/Interested Utilities & Energy Team Evaluates Proposals

In selecting a utility, the following evaluation factors may be used:

1. Is this a multi-year project with multiple TOs or will this have a single TO?
2. What experience does the utility have doing UESC projects?
3. What types of projects has the utility done in the past?
 - a. How complex were previous projects compared to current project?
 - b. What was the size and scope of the previous projects?
 - c. How was their past performance?
 - d. What are their staff qualifications?



- e. What is their experience with the specific ECM technology being pursued?
4. Is their pricing clear?
 - a. Do they provide an explanation of fees and markups?
 - b. Do they provide expectation of payment and cost recovery for assessments?
 - c. Do they have the ability to secure financing at reasonable terms?
5. What is the AF's history and experience with the utility?

The Base Champion, AFCEC/CND, and the Contracting Agent review and evaluate the Utility responses to the RFP. The selection team provides evaluation documentation which is consolidated into a technical evaluation for a recommendation to the CO for down selection of a utility.

Steps 9: The CO notifies the servicing utilities of the selection results.

Once a utility is selected the CO notifies the selected utility, as well as the utilities not selected. As part of the selection the CO provides information to the utility to begin the Preliminary Assessment.

5.1.2 Phase 2: Project Development

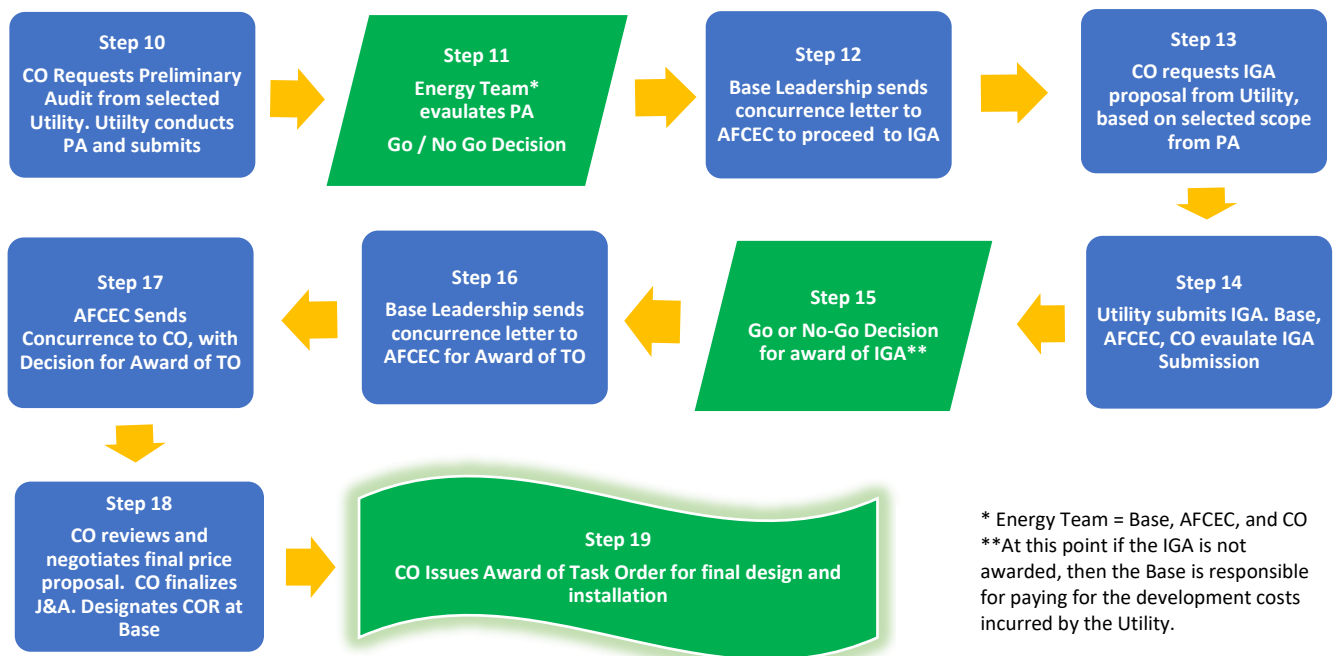


Figure 3 - Phase 2: Project Development

Step 10, 11 & 12: The CO requests a Preliminary Assessment (PA) from Utility & Energy Team Evaluates

The PA is a high-level assessment that:

1. Provides a baseline for existing conditions.
2. Identifies potential water and energy efficiencies and renewable energy opportunities.
3. Provides potential opportunities, that specifically address Base's requested ECMs
4. Estimates the cost and savings to implement the opportunities.



5. Determines available data sources (e.g. meters, utility databases, etc.) and gaps (i.e. need for meters) for baseline development in IGA. A metering survey and plan must be submitted with PA.

The CO develops a Master Agreement Exhibit “C” (Appendix D.2), checks the appropriate box and provides details of specific installation requirements. The Master Agreement Exhibit “C” must be signed by the utility representative and CO. The PA **should be at no cost** to the government, and stated in the Master Agreement Exhibit “C”. If there is a cost to the government, the cost shall be negotiated with the utility and included in the Master Agreement Exhibit “C”. Any costs incurred are a must pay, and funds shall be identified and/or allocated prior to proceeding.

Note: If a long-term project or multiple projects are anticipated, the use of the [EMSA \(Appendix D.3\)](#) may be beneficial. The EMSA is a template for developing a Master Agreement Exhibit “C” and contains terms and conditions essential to a UESC. It can be used to issue single or multiple TOs for the three phases:

1. Preliminary Audit
2. Investment Grade Audit
3. Construction/Implementation

If the EMSA is not used, each phase will have a separate Master Agreement Exhibit “C”, which is not uncommon to do so.

Once the utility completes the PA, the Energy Team reviews the PA and provides written comments, which are consolidated by the CO. The CO ensures all parties have reviewed the proposal. Then the comments are issued to the Utility for response. Once responses have been adjudicated to the satisfaction of all parties, a government-only meeting is held to discuss the comments and determine if recommended measures will be pursued in an IGA. Once the Energy Team has decided on scope of work to proceed within an IGA, the Base leadership is engaged to obtain their written concurrence to proceed to the IGA phase. Upon receipt of Base leadership concurrence, AFCEC/CND approves, and the CO prepares authorization for the utility to begin an IGA.

Note: If the government decides to terminate at this point and the PA costs were negotiated, the CO documents the decision and provides an invoice to pay the utility, if necessary.

Step 13: The CO requests IGA proposal from Utility

The CO issues an RFP that clarifies the ECMs from the PA to be included and negotiates the development cost of the IGA prior to obtaining signatures. If financing, the cost can be rolled into the award of the task order (e.g. Development Fee). The CO may require that the funds to cover the IGA development be obligated before proceeding, as it is a **must pay** whether or not the government chooses to proceed to award.

Step 14: IGA submitted by Utility and Evaluated by Energy Team

The Utility completes an in-depth IGA of the selected ECMs and delivers a technical and price proposal to the Energy Team. The CO ensures that all Energy Team parties review the proposal. The Energy Team reviews the proposal and provides written comments to the CO to consolidate. Prior to sending comments to the Utility, a government-only meeting and/or teleconference is held to discuss the consolidated comments and determine if recommended measures will advance to the award of the construction task order. The comment matrix is then sent to Utility for responses, which then



evaluated by the Energy Team. Once all comments are closed or addressed the CO requests a final IGA that incorporates all the comments/resolution. The Energy Team reviews the final IGA to ensure all comments and revisions have been incorporated.

Note: The Investment Grade Audit (IGA) was historically referred to as a “Feasibility Study” in a UESC, but for commonality of language both FEMP and the AF have adopted IGA for this phase.

The IGA is a detailed analysis and contains the following elements;

1. Identifies and describes a technically viable and cost-effective project scope.
2. Develops and provides a metered baseline of energy and water consumption, equipment inventory and conditions, and operational schedules. Simulation models (e.g. eQuest, Trane Trace, etc.) for establishment baseline are **prohibited** on AF projects. AFCEC/CND review and approval of the baseline is required, and baseline calculations/data shall be submitted in a functional spreadsheet format that can be validated by AFCEC/CND. Additionally, the baseline methodology **shall be** submitted for AFCEC/CND review early on in the IGA development to ensure it will meet AF requirements.
3. Provides energy savings calculations for the various ECMs. AF must be able to validate spreadsheet calculations savings for any facilities that utilize M&V Option A.
4. Defines the O&M requirements along with the roles and responsibilities for ECMs installed.
5. Defines the Repair & Replacement (R&R) requirements along with the roles and responsibilities for ECMs installed.
6. Provides for general roles and responsibilities (reference Appendix B.2)
7. Provides for the M&V Plan. Note: Option D M&V methodology is **prohibited** on AF projects. The M&V Plan shall follow the format of the DOE ESPC IDIQ attachment J-8.
8. Provides for assumptions and expectations.
9. Provides a project scope and design sufficient to support a firm-fixed price proposal for award of design and construction. The proposal shall comply with all applicable AF and Base design and construction standards.
10. The proposal shall provide a firm fixed price cost along with competitive quotes (subcontractors) for the various project actions, showing full and open competition for project pricing.
11. The IGA financials shall also include all costs associated with Utility provided O&M and R&R over the term of the contract, and would be part of annual payments schedule.
12. The IGA shall also include finalized financing terms and TO Schedules (TO-1 through TO-5), which correlate to those used in ESPCs (Appendix C.3).

Note: If the government decides to terminate the IGA at this point, the CO documents the decision and provides an **invoice** to pay the negotiated IGA costs, as this is a **must pay** bill. Additionally, the installation **must** provide cancellation documentation to SAF/IEE per the Memorandum included in Appendix C.2.



Step 15, 16, & 17: Base Leadership Concurrence and AFCEC/CND Approval to CO

At the conclusion of IGA review actions, and the Energy Team decides to move to award, then Base CE Leadership is engaged for written concurrence to proceed to task order award. Once AFCEC/CND receives Base CE Leadership concurrence, AFCEC/CND will then direct Contracting Officer to proceed with award actions. In addition, the Base must identify the Base COR for actions during the design and construction efforts. The CO will provide the proper training and documentation so that the Base COR appropriately fulfill their role, prior to being appointed by the CO.

Step 18: Utility submits Final IGA and CO negotiates pricing and finalizes the J&A.

The CO prepares authorization for the utility to submit final cost proposal and begin negotiations. The final proposal shall provide competitive cost quotes for the various project actions, demonstrating full and open competition for project pricing. In addition to finalizing the J&A, refer to the [Justification and Approval for Other Than Full and Open Competition \(Appendix D.1\)](#) form for an example.

Step 19: The CO issues the Award of Task Order for design and implementation (construction).

The award letter:

1. States the TO executes a contract under the AWC.
2. Provides authorization to proceed with the project.
3. Lists attachments, which include:
 - a. Scope of work, specifications, and performance standards.
 - b. Terms and conditions.
 - c. Agency-specific clauses not in AWC or Master Agreement Exhibit "C".
 - d. Templates for invoicing, price schedule and termination schedule.
 - e. Completed Quality Assurance Surveillance Plan (QASP)
4. Requests confirmation or update of submittals/construction schedule.
5. Sets time and location for kick-off meeting.
6. Provides name and contact information of the CO and the COR.

Refer to the [Task Order Sample \(Appendix D.7\)](#) for an example TO.

UESCs are subject to the requirements of part 17.1 of the FAR, which requires federal agencies to notify Congress at least 30 days prior to the award of certain proposed multiyear contracts. FAR part 17.1 establishes the Congressional notification requirement for multiyear contracts that include a cancellation ceiling in excess of \$125 million. See 48 C.F.R. § 17.108(b). The Congressional notification requirement need not be burdensome or result in undue delay. Notification can be provided when a reasonable estimate of the underlying project's cancellation ceiling is obtained, which generally occurs well in advance of contract award. Such early notification may also be provided on a periodic basis (e.g., semiannually, quarterly, etc.) and for multiple UESCs.



5.1.3 Phase 3: Design and Construction/Installation

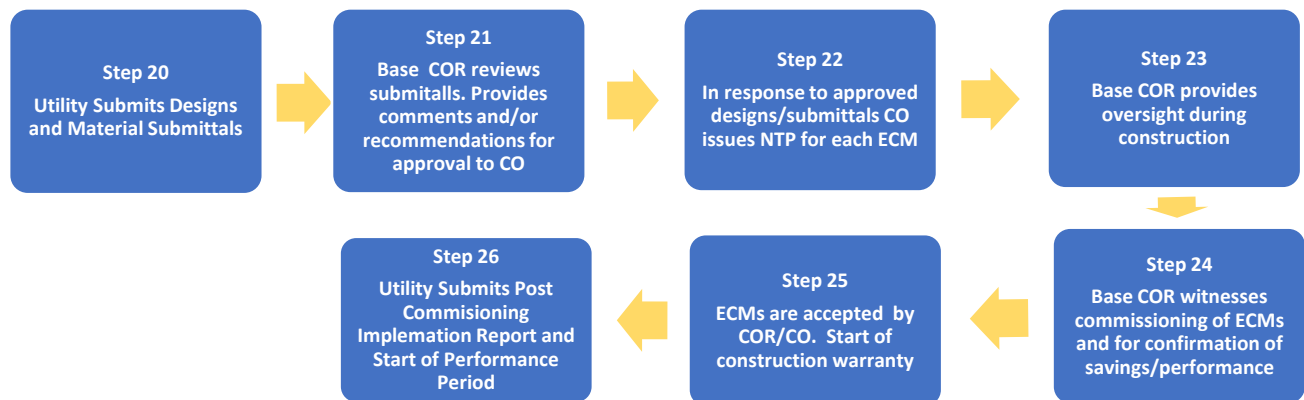


Figure 4 - Phase 3: Final Design and Construction/Installation

Step 20 through 22: Utility submits designs & submittals and the Base and CO reviews/approves.

The CO designates the Contracting Officer Representative (COR) at the Base. The utility provides the designs and material submittals to the CO/COR, similar to any normal construction contract. The COR and Base personnel review the designs, plans, and specification and provides written comments to the CO to consolidate, with reach back assistance from AFCEC. The utility addresses the consolidated comments, and once acceptable to the Base, the COR provides a recommendation for approval to the CO for each submittal. Based on the reviews and approvals, the CO issues a NTP for various ECMs.

Steps 23 and 24: Utility constructs/install the ECMs and the installation CO and COR provides oversight. The utility provides O&M training, performance testing, commissioning, etc.

During construction/installation, AF oversight is critical. Due diligence requires the Base COR to trust but verify to ensure the installed ECMs meet design and performance requirements, in addition to providing the energy savings per the TO.

The utility begins construction/installation in accordance with (IAW) and the TO prior to government submittal acceptance. As part of the construction/installation the utility will provide:

1. ECM training
2. O&M manuals
3. As-built drawings/specifications
4. Testing of each ECM IAW commissioning plan.
5. Forms DD1354s for Transfer and Acceptance of DoD Real Property.

The COR **must** witness the utility's commissioning activities, in order to confirm savings/performance data is collected.

Steps 25 & 26: The CO accepts the ECM projects and reports project details to FEMP and GSA.

After all of the ECMs are installed, tested, and commissioned and all deliverables are received, the CO signs a Certificate of Completion that includes a checklist and statement allowing payments to begin. After construction is complete, the Utility will submit the Post Installation Commissioning Report (PICR). The PICR shall follow the format of the DOE ESPC IDIQ attachment J-9



5.1.4 Phase 4: Post Project Installation

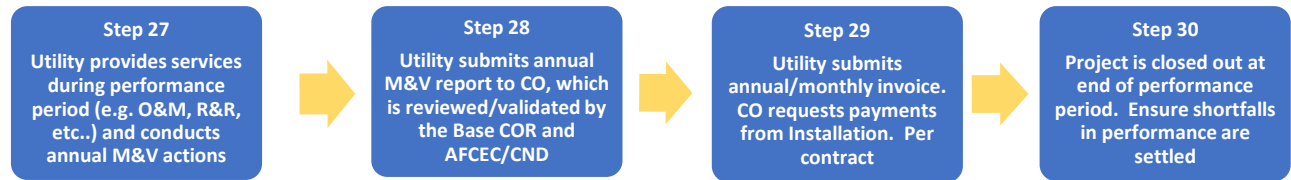


Figure 5 - Phase 4: Post Project Installation

Step 27 & 28: Utility provides services per the TO.

The roles & responsibility matrix and M&V Plan prescribes the post-acceptance activities (i.e., AF responsibilities and utility responsibilities).

Reporting shall be done IAW the awarded TO and GSA guidelines. GSA and FEMP must be notified of the TO award. The notification includes:

1. Report on the use of AWC and service agreements including the Authorization for Energy Management Services.
2. FEMP UESC Data Collection. Note: The DoD may or may not participate, check with AFCEC/CND before reporting.
3. Annual Agency reports include UESC project information.

The Utility shall submit an annual M&V Report providing for the energy savings of the ECMs installed. The M&V report shall detail any shortfalls or underperforming ECMs. AFCEC/CND and the Base COR will review and validate the annual M&V report. AFCEC/CND and the COR shall report their validation findings, if any, back to the CO for the Utility to address. Failure of any ECM to meet the savings guarantees per the TO shall be addressed by the Utility, and payment maybe adjusted depending on the TO. If overall the guaranteed savings are met, but ECMs are under performing (i.e. not meeting savings) the Utility must take necessary actions to address the savings shortfall, even though full payment would/may still be warranted. The M&V report shall follow the format of the DOE ESPC IDIQ attachment J-10.

Step 29: The CO submits invoices & payments.

Timely payment to the utility is critical to avoid additional fees/interest payments. Payment frequency is defined in the TO, which can be annual or monthly. The energy portion of the invoices can be paid as part of the utility bill, while O&M, capital costs avoidance, etc. can be paid out of their respective account. Payments shall be made using proper accounting, budgeting, and invoicing procedures.

Step 30: The installation closes out the contract at the end of the TO.

At conclusion of contract term, the Contracting Officer and the Base COR will determine that all TO performance requirements and savings guarantees have been met by the utility. If there are outstanding actions by the utility, the final payment may be withheld until corrective action by the utility, as determined by the Contracting Officer.



Chapter 6 UESC Project Requirements

The following business practices help the installation implement a UESC, translate the legislative requirements, and apply the lessons learned to achieve a successful ECM. Each awarded TO shall include mutually agreed upon procedures defining how to verify ECM performance and energy savings post-installation.

6.1 M&V Plan & Requirements

The M&V Plan is measurement-based, ensuring the AF's ability to confirm actual energy savings are occurring and are verified in a reasonable, cost-effective manner. Using this plan annually guarantees the installed equipment is performing as predicted. A well-written M&V plan:

1. Mitigates risk to the Air Force and installation.
2. Eliminates conflict when systems fail to meet their expected savings.
3. Ensures the Utility 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:

1. Option A: Retrofit Isolation uses key parameter measurements in conjunction with statistical sampling. This option can only be used with AF approval.
2. Option B: Retrofit Isolation with Continuous Metering is used when synergistic energy impacts are fully mitigated.
3. 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.
4. Option D: Calibrated Simulation are **prohibited** on any AF UESC contracts.

Refer to the Overview of M&V Options to view examples for each of the Options listed above.

A Utility M&V plan for UESC project shall follow the guidance below:

1. Metered consumption data is required for the M&V baseline. Estimating or simulation modeling (e.g. eQuest, Trane Trace, etc..) of baseline consumption is prohibited on AF UESCs.
2. If the installation cannot provide measured consumption data from existing meters, the Utility shall install meters to capture the data to build the baseline. It is the Utilities' responsibility to take whatever action necessary to establish the baseline data for the ECMs proposed.
3. A UESC has a minimum requirement of 2/3 (67%) of the energy savings validated with metered data using Option B (sub-meters) or Option C (whole-building meters), with the preference being Option C.
4. A minimum of 12 months of metered data is usually required to establish the baseline per FEMP guidelines for M&V. AFCEC/CND will accept less than 12 months (for example, 6



months) of metered data if the appropriate season(s) for heating &/or cooling (depending on type of ECM) is included in metered data, and if data sufficiently correlates (prefer $R^2 > 0.8$) with weather or other factors. AFCEC/CND approval is based on a case by case analysis, per ECM.

5. The installation shall not provide funds to support metering requirements. Metering costs are to be included in the UESC.
6. If the Utility proposes an M&V plan that transitions from Option C (after a minimal number of years) to Option A or B during a UESC performance period, then AFCEC/CND review/approval is required. The Utility needs to submit the reasoning and documentation to provide why the transition would be a benefit to the AF on a cost and risk basis.
7. Option B measures commodity consumption of the selected ECM using sub-meters, such as electrical or natural gas. It is not an estimate from the building automation system (BAS) or a calculation using other parameters.
8. Buildings that are identified as candidates for Option C shall have all ECMs implemented within that building measured by Option C (e.g. cannot split out lighting as Option A)
9. When there are multiple ECMs in a building, AFCEC/CND provides that the Utility use M&V Option C and aggregate all savings from those ECMs as a whole.
10. The M&V Plan shall be a holistic document that can stand on its own as a severable document from the IGA.

In summary, for M&V requirements, a minimum of 2/3 of the guaranteed savings for any UESC project must be validated with meter readings confirming the actual savings. In a single facility, the criteria to determine usage of Option C:

1. Multiple ECMs being implemented in a single facility;
2. Combined savings from the ECMs exceed \$9,000 annually;
3. Combined savings are greater than 10% of the facility's annual consumption

Measurement of the 2/3 of guaranteed energy savings is the minimum goal for M&V at TO award. As part of the project development, the Utility shall start at a higher goal such as metering 80%. The higher the percentage, the better, and Option C is considerably less expensive than multiple Option "A" or "B" solutions for each individual ECM. Option C provides a more precise measurement of overall savings and verification that the savings have been achieved.

The COR is required to witness the annual M&V actions conducted by the Utility. With regard to M&V witnessing, Option C is the most efficient method to verify savings because Option C is the most accurate while also being the easiest and quickest to witness.

6.2 Baseline Development

An energy baseline is the amount of energy that would have been used if no energy conservation equipment had been installed. The utility contractor must clearly document the baseline data and correlate to the required M&V Option.

M&V is part of a UESC contract, metering and data collection are conducted by the utility and verified



by the installation to ensure the baseline reflects realistic energy consumption upon which the savings calculations are based. Data collection requirements vary by ECM and M&V method, but metered data is required. The Utility can use existing meters or install new meters to ensure relevant data is collected. A meter survey shall be conducted by the Utility for all buildings and included in the PA, along with a meter plan to address gaps/deficiencies identified during the PA. Existing meters shall be used as much as possible to collect this data. The M&V plan must be measurement-based.

Note: It is important that equipment controlled by ambient temperature devices have valid measurements (e.g. calibrated for accuracy). Savings validation and future baseline adjustments will require this data before modifications can be applied to the existing baseline.

All assumptions made in the PA shall be validated in the IGA by the utility. Validation includes documenting all pertinent data and formulas used to compute the energy savings so the BC/COR can easily explain these savings in the future. Baseline development and data collection begins immediately after the Utility is directed to start the IGA. The longer the data collection period, the lower the risk to the installation and the Utility, which minimizes overall total project cost. AFCEC/CND review and approval of the baseline is required, as such the baseline methodology shall be submitted for AFCEC/CND review early on in the IGA.

6.3 Performance Tests

A performance test is a process for achieving, verifying, and documenting the energy savings of equipment installed or modified as part of an M&V Plan. This process begins in the IGA phase with the development and approval of an M&V Plan that is implemented after the TO award. Performance tests are completed post construction to certify that all equipment is functioning and operating properly. The results are approved by the Base COR, with requested assistance from AFCEC/CND, before conducting the energy savings verification tests.

A performance test plan is developed as part of the IGA phase and is prepared for each ECM. The performance test plan describes all aspects of the test process, including:

1. Schedules
2. Responsibilities
3. Documentation requirements
4. Functional performance test requirements, which are described as;
 - a. Conditions or loads the tests are performed.
 - b. Location of test sensors.
 - c. Frequency of measurements.
 - d. Type of test equipment.
 - e. Test methods.
 - f. Acceptable range of results.
 - g. Corrective action for test failure/fault

The level of detail depends on the complexity of the ECM. The performance test plan is detailed enough so the installation knows exactly what tests will be conducted, prior to signing the TO award.



The final acceptance report is submitted after all functional performance tests are completed. The final acceptance report is submitted for approval in writing to the CO and COR. The final acceptance report includes:

1. The executive summary
2. ECM descriptions.
3. The performance plan.
4. Test results.

The CO approves the performance test results after coordination and verification of results by the COR.

6.4 Post Installation Commissioning

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 utility contractor during the IGA and approved before awarding the TO. The test procedures describe:

1. The conditions or loads for the tests being performed.
2. The location of test sensors.
3. The frequency of measurements.
4. The type of test equipment used.
5. Test methods.
6. The acceptable range of test results.

The test procedures shall verify all energy savings intended under the ECM.

After the COR/CO approves the performance test results for each ECM, the utility contractor conducts the approved energy savings test procedures to validate the energy savings for each ECM. The Utility submits the results of the testing in the Post Installation Commissioning Report, which is reviewed and validated by the COR and AFCEC/CND. Once validated, the utility contractor submits an invoice for payment per the awarded TO schedules.

6.5 Annual Reconciliation Plan (Audit of Savings)

Each ECM in the TO has, at a minimum, a detailed annual reconciliation plan approved before the TO award. The plan describes:

1. A formal set of test procedures.
2. An acceptable range of results.
3. A schedule of how reconciliation payments will be assessed if savings fall below the guaranteed energy savings provided by the Utility.
4. A certification by the utility that all O&M requirements and conditions have been met for each ECM in the TO.

The procedures shall be similar to those developed to validate energy savings at post acceptance. The purpose is to test, validate, and document the energy savings. The CO must approve the annual reconciliation of savings after coordination and verification of savings by the COR and AFCEC/CND.



6.6 Maintenance Related to the TO

The default for all UESCs is that all maintenance of Utility installed equipment is the responsibility of the Utility. The awarded TO defines the Utility's and the installation's maintenance responsibilities. In facilities and areas where Utility and installation equipment operate, a clear line of demarcation is identified.

In simple cases (such as lighting) and only after approval by AFCEC/CND, the installation may conduct maintenance. However, the installation must carefully consider the consequences if it is unable to perform in accordance with the maintenance schedule. If the installation decides to assume some or all of the O&M responsibilities; the BCE must provide a signed acknowledgement to AFCEC/CND, which will then review and approve if deemed an acceptable risk. Since the Utility is ultimately responsible for O&M, the Utility determines if the government is meeting the TO requirements. If the installation fails to perform proper maintenance, the Utility may take over the maintenance and charge the installation for any required tasks. 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 Utility provides a detailed maintenance schedule reflecting when, how often, and by whom the maintenance is to be performed, as detailed in the IGA report. Also refer to section [2.3.2 Maintenance Responsibilities](#)

Since all costs must be accounted for, the estimated cost of the Utility conducting 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-ECM levels.

Similar to a construction contract, the Utility is responsible for a 1-year warranty period, unless other conditions are negotiated.

6.7 Pricing of TO Work

As part of the submission of the IGA, the Utility provides a firm fixed price (FFP) bid for execution of the project, along with other financials captured in the TO Schedules (Appendix C.3). As part of the submission the utility company provides detailed documentation needed to determine the reasonableness of the price. As part of this action, the Utility shall provide competitive subcontractor quotes and other necessary documentation per the CO, in order to determine price reasonableness. Utility company identifies all major costs in their FFP proposal, including:

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



The government prepares an independent government estimate (IGE).

6.8 Equipment Ownership

Generally, the AF owns the equipment post-construction and must update real property records to show ownership of the utility installed equipment. The utility is required to provide to the AF, prior to contract completion, O&M manuals, maintenance training, and the Material Inspection and Receiving Report (DD1354 Form). On rare occasions, due to taxes and/or rebates, the utility may retain ownership post-construction. In either case, the ownership determination is defined and agreed upon within the TO.



Appendix A - Acronym List

Acronym	Definition
AF	Air Force
AFCEC/CND	Air Force Civil Engineer Center, Energy Program Development Division
AFPD	Air Force Policy Directive
ASD	Assistant Secretary of Defense
AWC	Area-wide Contract
BCE	Base Civil Engineer
BEM	Base Energy Manager
BFM	Base Financial Managers
BOA	Basic Ordering Agreements
BPA	Bonneville Power Administration
CE	Civil Engineer
CFR	Code of Federal Regulations
CICA	Competition in Contracting Act
CO	Contracting Officer
COR	Contracting Officer Representative
D&I	Design and Implementation
DLA	Defense Logistics Agency
DO	Delivery Order
DoD	Department of Defense
DoE	Department of Energy
ECIP	Energy Conservation Investment Program
ECM	Energy Conservation Measure
ECP	Energy Conservation Project
EISA	Energy Independence and Security Act
EMSA	Energy Management Service Contract
EO	Executive Order
ESCO	Energy Services Company
ES&H	Environmental, Safety & Health
ESPC	Energy Savings Performance Contract
ETL	Engineering Technical Letter
FAR	Federal Acquisition Regulation
FEMP	Federal Energy Management Program
FFP	Firm Fixed Price
FIO	Facilities Improvements Office
FS	Feasibility Study
FSRM	Facility Sustainment Restoration & Modernization
GHG	Greenhouse Gas
GSA	General Services Administration
HAZMAT	Hazardous Material
IAW	In Accordance With
IES	Illuminating Engineering Society
IGA	Investment Grade Audit
IGE	Independent Government Estimate



Acronym	Definition
IPMVP	International Performance Measurement and Verification Protocol
J&A	Justification and Approval
JB	Joint Base
M&O	Maintenance and Operations
M&V	Measurement and Verification
MFH	Military Family Housing
MILCON	Military Construction
NAF	Non-appropriated Fund
NIST	National Institute of Standards and Technology
O&M	Operations and Maintenance
ODC	Ozone Depleting
ORCA	Online Representation and Certifications Application
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PGI	Procedures, Guidance and Information
P.L.	Public Law
PLC	Programmable Logic Controller
PICR	Post Installation Commissioning Report
PMO	Project Management Office
POM	Program Objective Memorandum
QAE	Quality Assurance Evaluator
QASP	Quality Assurance Surveillance Plan
RFP	Request for Proposal
SOW	Statement of Work
SRM	Sustainment, Restoration and Modernization
TO	Task Order
U.S.C.	United States Code
UESC	Utility Energy Service Contract



Appendix B - Job Aids

Appendix B.1 - AFCEC UESC Planning & Document Development Checklist

AFCEC UESC Planning & Document Development Checklist			Page 1 of 2
Process Step / Resource Name		Objective	Timeline
STEP 1 -Approval/Clearance for UESC Acquisition			
	Base Submits Opportunity to OEA Storefront	Notifies OEA of opportunity and desire to execute a project	6-9 Months
	Base works with OEA to Develop Fidelity for Opportunity	Provides information to develop package for review/approval	
	OEA staff the Opportunity for Adjudication	Information with recommended acquisition method submitted for	
	Opportunity is Adjudicated through SAF Approval Process		
	AFCEC Council Provides Recommendation To Proceed with UESC	Provides for AFCEC/CND to Start Acquisition Actions	
	AFCEC/CND Notified of Approval to Proceed to Acquisition		
	AFCEC/CND Requests Concurrence from Base Leadership	X Base Leadership Concurrence to Proceed with Acquisition	
STEP 2 - Requirement Development			
	AFCEC/CND and Base Develop Data Package	Establishes scope and desired ECMs and AFCEC PF Selected	4-6 Months
	AFCEC/CND Submits Data Package to Acquisition Agency	X Start of Actions for Acquisition Agency	
	Acquisition Strategy / Planning	Establishes scope and desired outcome of project	
	Limited Acquisition Plan		
	Survey of Interest of Eligible Utilities	Determines which serving utilities are interested and capable	
	Receipt of Letters of Interest from Utilities	Interested Utilities Notify Agency of Desire to Participate in UESC	
	Utility Selection Evaluation Factors Developed	Energy Team Develop Factors To Select Utility for UESC	
	Issue RFP to Eligible/Interested Utilities	Notifies serving Utilities of project scope and to provide proposal	
	Utilities Submit Proposals	Utilities proposed plan to address RFP Scope	
	Energy Team Evaluates Proposals	F Allows for selection of utility based on RFP Selection Factors	
	AFCEC/CND Submits Technical Evaluation to CO	X Provides technical narrative for selection of utility	
	CO Develops J&A	Justification to use a limited source contract	
	CO Selects Utility and Notifies all Utilities of Selection	Notifies Utilities of Selection	
	Utility Selection Letter Is Issued	Notifies Utility of Their Selection and start of Preliminary Assessment	
STEP 3 - PROJECT DEVELOPMENT			
Preliminary Assessment			
	CO Develops/Uses AWC Exhibit C To Initiate Preliminary Assessment	Establishes bilateral agreement for PA, at no Cost to GOV	3-5 Months
	Utility Conducts Preliminary Assessment	PA Includes Meter Survey	
	Utility Submits Preliminary Assessment Report	Provides for Utility Proposed ECMs for further investigation	
	Energy Team Reviews/Evaluates PA Report	Determines if PA Report meets the requirements of the Base	
	Energy Team Provides Comment/Resolution Matrix to Utility	F	
	Utility Responds to Comment/Resolution Matrix		
	Govt Team Determines Go or No-Go	F Energy Team determines scope, if any , to proceed with in IGA	
	Base staffs Package to Base Leadership for Approval	Base leadership approves moving to IGA	
	AFCEC/Base Agree to Move to IGA	X Notifies CO of scope to proceed with in IGA	
	CO Notifies Utility of Scope Be Addressed in IGA	Initiates actions to start IGA	



AFCEC UESC Planning & Document Development Checklist				Page 2 of 2
Investment Grade Audit (IGA)				
	Energy Team Develops SOW for IGA		Defines AF/Base Requirements (i.e. Base Standards, UFC, etc..)	6-12 Months
	CO Develops/Uses AWC Exhibit C To Initiate IGA		Establishes bilateral agreement for IGA and FFP costs for IGA	
	Performance Assurance Plan		Provided to utility as an attachment to the IGA SOW	
	Kick-Off Meeting and NTP for IGA	F		
	FAR Clauses for UESC not in AWC			
	- Area Wide Contract		List FAR Clauses Included by Reference in the AWC	
	- UESC Task Order		List FAR Clauses Included by Reference in the TO	
	Utility Conducts Investment Grade Audit		Base conducts Witnessing of Baseline Measurements	
	Energy Team Continues Development of Requirements for Final TO	F	Ensure Base/AF requirements are in TO and Utility is aware.	
	Utility Submits IGA with FFP		Defines M&V, O&M, Baseline, Savings, Risk & Responsibility,	
	Govt Team Reviews/Evaluates IGA		Govt Validates Baseline, Savings, Assumptions, etc..	
	Energy Team Provides Comment/Resolution Matrix to Utility	F		
	Utility Responds to Comment/Resolution Matrix		Utility to resolve Energy Team comments	
	Energy Team Determines Go or No-Go for TO Award	F		
	Base staffs Package to Base Leadership for Approval		Base leadership approves moving to Award of Contract	
	AFCEC/Base Agree to Move to TO Award	X		
	CO Requests Final Proposal FFP for TO Award		CO Starts Negotiations and Pricing Evaluation for Award of TO	
	Finalize J&A			
	Business Clearance Memorandum			
Award for Design and Installation				
	Notify Congress 72 hrs before awarding TOs >\$4M Award D&I TO		Group of documents that make up the TO Establishes bilateral	2-4 Months
	Award TO			
	Standard Form 26		FAR calls out Form 26; use form to award the contract	
	Finalize TO for Award			
	CO Develops/Uses AWC Exhibit C To Initiate TO Award		Establishes bilateral agreement for FFP for TO Award	
STEP 4 - PROJECT IMPLEMENTATION				
Design				
	Utility submits designs / Agency reviews and approves			1-3 Months
Installation/Construction				
	Utility installs ECMS / CO Monitors / Base COR Oversight		Agency is CO and Base COR oversight during construction	12-36 Months
	Utility conducts / Base receives O&M training, commissioning, etc..		Base COR witness during commissioning	
	ECM Performance Verification Checklist		Lists items to ensure installation / performance meets design intent	
	Utility Provides Post Installation Commissioning Report			
	AFCEC/Base Review Post Installation Commissioning Report	F		
	Base/Agency Accept Project	X	Agency approves work performed by Utility under contract	
	Agency Reports Project Details to FEMP and GSA			
	UESC Project Reporting			
STEP 5 - POST-ACCEPTANCE				
	Invoices and payments		Invoices and payments	Term of Contract (0-25 Years)
	Utility Submits Annual Performance Report and Payment Request	F	Annual Performance Report and Payment Process	
	AFCEC/Base Review Annual Performance Report		Govt Ensure Performance Metric are met and is CA necessary	
	AFCEC/Base provide Review Responses (if any)			
	AFCEC/Base Provide Approval to Agency for Payment of Invoice	X		
	Close out Of Contract Term			
Energy Team = AFCEC/Base/Acquisition Agency		X = AFCEC ESPC/UESC PMO Approval Point F = Coordination Point with AFCEC PF		



Appendix B.2 - Risk/Responsibility Checklist

		Risk/Responsibility Description	Does utility have an acceptable approach to deal with the risk/responsibility??	Has AFCEC/CND assessed the utility's approach?
Financial	Interest Rates	Neither the utility nor the AF has significant control over prevailing interest rates. Interest rates will change with market conditions during all phases of the project. Higher interest rates will increase project cost, financing/project term, or both. The timing of the delivery order signing may impact the available interest rate and project cost. Clarify when the interest rate is locked in, and if it is a fixed or variable rate.		
	Energy Prices	Neither the utility nor the AF has significant control over actual energy prices. For calculating savings, the value of the saved energy may either be constant, change at a fixed inflation rate, or float with market conditions. If the value changes with the market, falling energy prices place the utility company at risk of failing to meet cost savings guarantees. If energy prices rise, there is a small risk to the AF that energy-saving goals might not be met while the financial goals are. If the value of saved energy is fixed (either constant or escalated), the AF risks making payments in excess of actual energy cost savings.		
	Construction Costs	The utility is responsible for determining construction costs and defining a budget. In a fixed-price design/build contract, the AF assumes little responsibility for cost overruns. If construction estimates are significantly greater than originally assumed, however, the utility company may find that the project or measure is no longer viable and drop it. In any design/build contract, the AF loses some design control. Clarify design standards and the design approval process (including changes) and how costs will be reviewed.		
	M&V Costs	The AF assumes the financial responsibility for M&V costs directly or through the utility. If the AF wishes to reduce M&V costs, it may do so by accepting less-rigorous M&V activities with more uncertainty in the savings estimates. Clarify what performance is being guaranteed (equipment performance, operational factors, energy cost savings) and that the M&V plan is detailed enough to satisfactorily verify it. Note: This only applies if M&V is required.		
	Delays	Both the utility and the AF can cause delays. Failure to implement a viable project in a timely manner costs the agency in the form of lost savings, and can add costs to the project. Clarify the schedule and how delays will be handled.		
	Major Facility Change	The AF (or Congress) controls major changes in facility use, including closure. Clarify responsibilities in the event of a premature facility closure, loss of funding, or other major change.		



		Responsibility Description	Does utility have an acceptable approach to deal with the risk/responsibility?	Has AFCEC/CND assessed the utility's approach?
Operational	Operating Hours	The AF generally has control over the operating hours. Increases and decreases in operating hours can show up as increases or decreases in "savings," depending on the M&V method (e.g., operating hours, improved efficiency of equipment vs. whole building, utility analysis). Clarify if operating hours are to be measured or stipulated and what the impact will be if they change. If the equipment loads are stipulated, the baseline shall be carefully documented and agreed to by both parties.		
	Load	Equipment loads can change over time. The AF generally has control over hours of operation, conditioned floor area, and intensity of use (e.g., changes in occupancy or level of automation). Changes in load can show up as increases or decreases in "savings," depending on the M&V method. Clarify if equipment loads are to be measured or name plate values and the impact if they change. If the equipment loads are based on name plate, the baseline shall be carefully documented and agreed to by both parties.		
	Weather	Energy efficiency measures are affected by weather. Changes in weather can increase or decrease "savings" depending on the M&V method (e.g., equipment run hours x efficiency improvement vs. whole building utility analysis). If weather is "normalized," actual savings could be less than payments for a given year but will "average out" over the long run. Weather corrections to the baseline or ongoing performance shall be clearly specified and understood.		
	User Participation	Many energy conservation measures require user participation to generate savings (e.g., control settings). The savings can be variable and the utility may be unwilling to invest in these measures. Clarify what degree of user participation is needed and utilize monitoring and training to mitigate risk. If performance is stipulated, document and review assumptions carefully and consider M&V to confirm the capacity to save.		
Performance	Equipment Performance	Generally, the utility has control over the selection of equipment and is responsible for its proper installation and performance. The utility also has overall responsibility to demonstrate that the new improvements meet expected performance levels, including standards of service and efficiency. Clarify who is responsible for initial and long-term performance, how performance will be verified, and what will be done if performance does not meet expectations.		
	Operation	Responsibility for operations is negotiable, and it can impact performance. Clarify how proper operation will be assured. Clarify responsibility for operations and the implications of taking on the operation of the equipment.		
	Maintenance and Repair	Responsibility for maintenance & repair is negotiable; however, it is often tied to performance. Clarify how long-term maintenance and repair will be assured, especially if the party responsible for long-term performance is not responsible for maintenance. Clarify who is responsible for ECM overhaul and component or equipment repair required to maintain operational performance throughout the contract term.		
	Equipment Replacement	Responsibility for replacement of utility-installed equipment is negotiable; however, it is often tied to ECM performance. Clarify who is responsible for replacing failed components or equipment throughout the term of the contract. Specifically address potential impacts on performance due to equipment failure. Life of equipment is critical to ECM performance during the contract term. Specify equipment life expected for all installed equipment and specify warranties proposed for the installed ECMs.		



Appendix B.3 - UESC Considerations for the Base Champion

The following considerations can help the Base Champion implement a successful UESC project.

1. Prior to engaging with a utility, the Base Champion/BCE prepare a summary of the type of ECMs being considered and at least one type of resiliency measure, relevant baseline information, and submits them to the Office of Energy Assurance (OEA) storefront platform. OEA serves as the single point of entry for all installation energy requirements.
2. OEA acts as the facilitator and integrator to maximize energy assurance, and coordinates the opportunity through the assessment and validation process through appropriate AF offices. If OEA and AFCEC determine third party financing is the appropriate method of execution for the opportunity, then AFCEC/CND works with the Base Champion/BCE to determine the best Contracting Office (DLA or USACE) for execution.
3. Though the utility company brings technical energy expertise to the installation's energy program, the BC should have a plan to improve the energy efficiency of the buildings, and determine how to most efficiently plan and schedule the work to be accomplished. Ask local facility managers and operations staff for ideas on improving their building's operational characteristics. The local staff often knows what equipment is failing or not operating properly due to design defects, age, or other factors. Keep in mind the overall energy goals. UESCs are not meant to be used as "wish lists" for building managers, nor are they opportunities for contractors to only choose the most profitable projects, leaving the less-economical work for others. If that happens, the other work will never be completed, and installations will be saddled with undesirable systems in their present condition.
 - a. The utility company's costs and overhead will be greater for widely-scattered buildings than it will be for facilities that are clustered together. Structure packages of buildings to take maximum advantage of project economics. Include the less-desirable projects with the more attractive projects, and ensure that the utility company takes them as a package. Use the attractive savings from rapid payback projects, such as lighting retrofits, to help support and subsidize the less-economical work, such as resiliency or chiller replacement.
 - b. Do not accept a preliminary assessment report that addresses only technology that the utility company elected to consider. If the Base is interested in the viability of a specific technology, and the UESC contractor states that the proposed technology is not economical, request the contractor explain why in writing as part of the PA.
4. Use a multidisciplinary team to evaluate proposals. Consider the cost of maintenance and repairs after equipment is installed and items such as the equipment's noise level. Each ECM should be evaluated on a life-cycle cost basis and energy-efficient or "Energy Star" equipment should be used in the project where possible.
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, though the GOV cannot provide funding within the contract for meters, there is already a program for meters. It is often difficult to assign energy savings value to such equipment, so be prepared for these issues. The importance of having advanced metering technology available for obtaining the best energy procurement prices cannot be overstated.



6. Ensure a clear understanding with the UESC contractor regarding expectations and goals.
7. Keep the terms and provisions of the UESC TO as straightforward and clear as possible, without, for example, all sorts of added O&M savings. Look at each ECM and determine how it contributes to the overall project, including 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.
8. Obtain load profiles and tour the building during peak energy use and make observations about the operation of energy-using equipment. Determine if any equipment use or power loads can 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 using automated building management systems and timed-out electronic locks on non-essential equipment so it cannot be operated during periods of peak demand.
9. The importance of coordination cannot be overstated. Pay attention to detail and follow-up on everything. Be sure to involve installation engineering, AFCEC/CND, construction, contracting, finance, and legal functions before awarding the TO.
10. 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 conducted, as required by the contract. Become familiar with the latest version of the IPMVP and make use of the M&V protocols in your contract. The UESC Playbook Section 6.1 provides guidance on witnessing baseline, post-installation, first-year, and annual M&V inspections and analyses, as well as commissioning installed equipment. After construction completion and acceptance, the COR will provide the date of construction acceptance to the CO and AFCEC/CND.
11. All ECMs shall be thoroughly evaluated against future known renovations or new initiatives for possible reduction or elimination of projected UESC savings. When ECM savings are eliminated or greatly reduced, a buyout may be required. The installation programming function shall include the cost of the ECM buyout on DoD form (DD) 1391, Military Construction Project Data.
12. All MFH ECMs shall be thoroughly evaluated against future known MFH renovations or new housing initiatives for possible reduction or elimination of projected UESC savings. When MFH ECM savings are eliminated or greatly reduced, a buyout may be required. The MFH programming function shall include the cost of the ECM buyout on DoD form (DD) 1391. Before proceeding with any UESC project in MFH, coordinate with the installation housing office and the Office of the Civil Engineer, Housing Division (A7/A7CH) to identify and eliminate any potential conflict with current or planned MFH projects.



Appendix C – Guidance Documents

Appendix C.1 - AFCEC Escalation Rate Guidance

Escalation Rates - Supplement to the UESC Playbook

As a supplement to the AF UESC Playbook, the following is the guidance for Utilities calculating escalation rates in UESC projects.

Escalation Rates:

Based on guidance from FEMP, the escalation rates for the UESC going forward will be the Nominal Escalation Rate for each utility as calculated by National Institute for Standards and Technology (NIST) software program, Energy Escalation Rate Calculator, or EERC. EERC 2.0-XX (use the most current version) is available for download from the FEMP website.

<http://www.energy.gov/eere/femp/energy-escalation-rate-calculator-download>

The inflation rate used for calculating escalation rates in UESCs will be in IAW the directives of 10 CFR 436, Subpart A "Federal Energy Management and Planning Programs, Methodology and Procedures for Life Cycle Cost Analyses". The inflation figure shall represent "estimated increases in the general level of prices consistent with projections of inflation in the most recent Economic Report of the President's Council of Economic Advisors." The inflation rate used for calculating the UESC escalation rates will be the projected rates of general inflation published in the most recent Report of the President's Council of Economic Advisors, which is default in the current EERC 2.0-XX.

Individual escalation rates must be used for each commodity, and specify 100% for a single fuel type:

1. Identify the state in which their prospective project will take place.
2. Select "industrial" sector for AF installations.
3. The expected start date (award year).
4. Duration of the project (contract term).

With that, the tool will determine an escalation rate for each fuel type, which shall be used for the financials in the UESC. A new EERC is published about every June, the Utility shall use the most current version of the EERC in the IGA submission. If the version of the EERC changes prior to start of price negotiations prior to award, then the Utility shall update the escalation rates using the new version.

If the escalation for sewer/water is needed for the project, then the BC/Utility shall utilized the most current guidance from FEMP. Also for commodities not listed in the EERC calculator (e.g. fuel oil), BC/Utility shall consult with AFCEC/CND regarding escalation guidance.



Appendix C.2 – ASD Policy Letter for Performance Contracts



ASSISTANT SECRETARY OF DEFENSE
3500 DEFENSE PENTAGON
WASHINGTON, DC 20301-3500

NOV 20 2018

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS,
ENERGY, AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY,
INSTALLATIONS, AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE
(INSTALLATIONS, ENVIRONMENT, AND ENERGY)
DIRECTORS OF THE DEFENSE AGENCIES

SUBJECT: Policy on Energy Savings Performance Contracts and Utility Energy
Service Contracts

As described in the *National Defense Strategy*, the variety and velocity of global threats continues to rapidly evolve. The homeland is no longer a sanctuary, and we must anticipate and mitigate potential attacks against our critical defense, government, and economic infrastructure. In this environment, maintaining secure access to energy resources is critical to the Department of Defense (DoD) mission execution, and ensuring energy resilience at DoD installations is a top priority.

This policy provides guidance on the use of Energy Saving Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs), as respectively authorized under 42 U.S.C. 8287 and 10 U.S.C. 2913(d), to enhance energy resilience at DoD installations. ESPCs and UESCs enable the DoD to leverage private sector funding and expertise to execute certain types of energy projects on DoD installations. By law, Congress directed the Secretary of Defense to ensure the readiness of the armed forces for their military missions by pursuing energy security and energy resilience. With this in mind, ESPCs and UESCs shall be designed to achieve objectives aligned with installation energy security priorities, and be documented in Installation Energy Plans (IEPs). The requirement for IEPs is outlined in the Assistant Secretary of Defense for Energy, Installations, and Environment (ASD(EI&E)) Memorandum, "Installation Energy Plans – Energy Resilience and Cybersecurity Update and Expansion of the Requirement to All DoD Installations" of May 30, 2018.

Pursuant to statutory directive, DoD Components shall execute ESPCs and UESCs in a manner consistent with the energy resilience guidance contained in DoD Instruction 4170.11, "Installation Energy Management," December 11, 2009 (Change 1, Effective March 16, 2016) and the guidance provided in the ASD(EI&E) Memorandum, "Energy Resilience: Operations, Maintenance, and Testing (OM&T) Strategy and Implementation Guidance," effective March 2017.

DoD Components shall take a holistic view of the energy project opportunities on their installations, and aggregate energy conservation measures (ECMs) – including ECMs with quick payback – with energy resilience enhancement projects that may have a longer payback period. Aggregating such initiatives is particularly important when a utility infrastructure project facilitates energy savings or is required to affect energy savings as part of an ESPC or UESC. DoD Components should ensure that ESPCs or UESCs continue to support mission assurance



goals and requisite managerial and contractual controls are in place to ensure a ready force. DoD Components shall review the potential for modifying existing ESPCs and UESCs to add energy resilience features to these contracts. Such a review may occur during a Component's master planning process, when developing an IEP, or as the mission requires. Prior to execution of an ESPC or UESC, DoD Components shall ensure required resources are in place to enable proper post award oversight to make certain these contracts are meeting expected performance requirements.

In addition, ESPCs and UESCs must include a cybersecurity plan for ECMs and energy resilience projects that include the installation or modification of Operational Technology (OT). OT encompasses Platform Information Technology (PIT), Control Systems (CS), or Facility-Related Control Systems (FRCS). Cybersecurity for OT shall be incorporated in accordance with Unified Facilities Criteria (UFC 4-010-06), "Cybersecurity of Facility-Related Control Systems," September 2016, "Supply Chain Materiel Management Regulation" (DoDI 4140.01), DoD Federal Acquisition Regulation Supplement (DFARS) Clause 252.204-7012, "Safeguarding Covered Defense Information and Cyber Incident Reporting," and the DoD Cybersecurity 8500 series of directives and instructions. In addition, all ECMs and energy resilience projects must adhere to the applicable Component's existing cybersecurity policy and guidance. DoD Components shall assess OT installed and operating under ESPCs and UESCs, throughout the life of the contract in accordance with DoD and their Component's cybersecurity policies and methodologies, and, where necessary, execute appropriate action in adherence with the Federal Acquisition Regulation (FAR), the DFARS, and above references to ensure the cybersecurity of these systems.

For ESPCs and UESCs, DoD assumption of maintenance, repair, and replacement (MR&R) for ECMs places the long-term performance of the ECMs, and thereby the ESPC or UESC, at risk; such an assumption by DoD should be avoided. Thus, DoD Components shall require that all MR&R for an ESPC or a UESC be carried out by the contractor. Exceptions to this policy should only be permitted on a case-by-case basis, and the DoD Component must document the rationale for assuming responsibility for the MR&R of an ECM in a memorandum signed by the installation commander or commanding officer. The memorandum must be submitted in the Component's next quarterly report to the Office of the Deputy Assistant Secretary of Defense for Energy (ODASD(E)), following contract award.

DoD Components shall report on executed ESPCs and UESCs on a quarterly basis, and shall provide Measurement and Verification reports annually, as required by the ODASD (Installation Energy) Memorandum, "Reporting Requirements for the Oversight of ESPCs and UESCs" of July 13, 2018.

My subject matter expert for this policy is CDR Walter Ludwig at 571-372-6859 or walter.s.ludwig.mil@mail.mil.

Robert H. McMahon



Appendix C.3 – SAF/IEE Memorandum for Performance Contracts



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR ALMAJCOM

FROM: SAF/IEE
1665 Air Force Pentagon
Washington, DC 20330-1665

SUBJECT: Decision Processes for Energy Project Development Using Performance Contracts

The Air Force uses third-party financed contracts as a method to improve resilience, optimize demand, and assure supply. Well-scoped Energy Savings Performance Contracts (ESPCs) and-or Utility Energy Service Contracts (UESCs) should support energy resilience and subsequent assurance. The Air Force is committed to the success of ESPC and UESC projects and success is dependent upon due diligence, stringent requirements and proposal evaluation, and total-team communication.

Effective immediately, the Air Force Civil Engineer Center Energy Directorate (AFCEC/CN), in coordination with the Air Force's Office of Energy Assurance (OEA), shall utilize the following approval and-or cancellation process:

- Phase One Decision Point: The AFCEC Energy Working Group (EWG) will validate Installation Commander concurrence with potential scope effort in signed memo for the project. Validation shall include concurrence with impacted tenants.
 - Approval Authority: The Installation Commander will approve the project to move forward with Notice of Opportunity and subsequent Preliminary Assessment (PA.)
- Phase Two Decision Points: The PA proposed scope is reviewed by the Installation Commander and AFCEC.
 - Approval Authority: The Installation Commander will approve the project to move forward into the Investment Grade Audit (IGA) or Feasibility Study.
- Project Cancellation after IGA: Should the Installation Commander recommend cancellation or it is thought to be in the best interest of the Air Force to cancel or reduce the scope of the project due to a technically non-responsive submittal by the contractor, a cancellation notification must be provide to SAF/IEE via memorandum to include explanation. All other cancellation requests must submit to the Headquarters Air Force Facility Energy and Water Board (FEWB) via memorandum an explanation of level of effort, timeline, and detailed cause for cancellation. In the event of a cancellation, the installation may be liable to the contractor for IGA or other development expenses. If viable projects are cancelled after the IGA, the installation will not be authorized to select high return ECMs from an IGA report and accomplish those ECMs as independent government funded projects.



DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

- Approval Authority: SAF/IEE will be the sole source of approval for changes in Phase Two (outside of technical non-responsive submittals.)

These reviews and approvals will ensure sustained success of performance contract programs. Future revisions of the ESPC and UESC Playbooks will include this approval process, and SAF/IEE will incorporate guidance, as appropriate. My point-of-contact is Ms. Kathleen Richardson SAF/IEE (703) 693-3254, email: kathleen.c.richardson.civ@mail.mil.

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Date: 2019.10.22 10:24:40 -04'00'

MARK A. CORRELL, P.E.
Deputy Assistant Secretary of the Air Force
(Environment, Safety, and Infrastructure)

Attachments:

1. Facility Energy and Water Board
2. Energy and Water Executive Steering Council

cc:
SAF/GCN
AF/A4C
AFIMSC/CD
AFCEC/CL



Appendix C.4 – TO Financial Schedules

The PA and IGA shall provide TO Schedules that mimic those provided in ESPC projects. The AF does not utilize eProject Builder for UESCs, thus standard MS Excel format TO schedules are acceptable. The values and calculations on the TO schedules shall match those values used in the body of the PA/IGA report.

TO-1 Proposed Annual Cost Savings & Annual Contractor Payments

TO-1 shows the annual savings and payments. Implementation period savings and payments consistent with Agency expectations and FEMP guidance. Estimated annual cost savings traceable to and consistent with ECM-level calculations. Guaranteed, if provided, cost savings consistent with estimated annual cost savings. Annual utility payments consistent with guaranteed/estimated cost savings, and are less than guaranteed/estimated savings in each contract year.

TO-2 Implementation Price by Energy Conservation Measure

TO-2 is a breakdown of the project implementation price by ECM. Implementation expense of each ECM traceable to pricing calculations in body of IGA so that each ECM adequately documented. The Utility shall calculate the ECM implementation costs based on subcontractor/vendor bids and internal estimates (if warranted). Project level costs are calculated and distributed amongst ECM costs to arrive at each ECM's direct implementation expense. Finally, overhead and profit are distributed amongst the ECM costs to arrive at an ECM-by-ECM price summary.

TO-3 Post Acceptance Performance Period Costs

TO-3 provides for the costs breakdown for the contact term, starting at ECM acceptance. O&M, M&V, and R&R costs are broken down for each year of performance. Additional data includes annual principle repayment, annual repayment interests, indirect cost rate, and any other annual costs within the project.

TO-4 First Year Estimated Annual Cost Savings by Energy

Energy baseline and savings for each ECM and each form of energy consistent with calculations provided in the IGA. Energy cost savings for each ECM and each form of energy consistent with energy savings and energy unit costs

TO-5 Annual Cancellation Ceiling Schedule

Cancellation ceiling for each year is consistent with remaining principle per Schedule TO-3 and agreed upon cancellation penalty ceiling

TO-5A Amortization Schedule

Amortization schedule providing breakdown of lender payments, principle, interest, etc.



Appendix D – Example Documents

Appendix D.1 – Example Justification & Approval (J&A)

JUSTIFICATION AND APPROVAL FOR OTHER THAN FULL AND OPEN COMPETITION

1. **Contracting Activity:** (FACILITY NAME), ATTN: _____
(LOCATION) _____
2. **Description of Action:** This action will establish a new Basic Ordering Agreement (BOA) between the (SITE NAME AND UTILITY NAME) and will establish terms and conditions to receive energy management services by issuing separate task orders or contracts. The task orders will be funded by (FUNDS Account). The task orders will each be fixed- price type contracts.
3. **Description of Supplies/Services:** The (UTILITY NAME) will provide energy and water conservation and demand side management type projects and services to reduce energy consumption, directly or indirectly reduce the peak period demand, and provide energy related operations, maintenance, and repair services for natural gas, steam, electric power, water, or waste water at (SITE NAME) facilities. The energy conservation projects will be amortized for a term not to exceed 10 years and the monthly payment will be included on the utility bill. The energy conservation projects will be required to show a net overall savings and thus the cost of the projects will be covered by the utility savings.
4. **Authority Cited:**
 - a. [Energy Policy Act of 2005 \(Public Law 109-58 109th Congress\)](#)— Legislation regarding energy-savings goals, directives and regulations.
 - b. [Energy Savings Contracts and Activities \(10 U.S.C. Section 2913\)](#) — Legislation regarding energy-saving goals and plans at military facilities.
 - c. [Water Conservation at Military Installations \(10 U.S.C. Section 2866\)](#) — Legislation regarding water-saving goals and plans at military facilities.
 - d. [Federal Acquisition Regulations \(FAR\) 6.302-5](#)—FAR, Subpart 6.3 – Other than Full and Open Competition.
 - e. [Executive Order Regarding Efficient Federal Operations, 17 May 2018](#) — Legislation regarding agencies to meet such statutory requirements in a manner that increases efficiency, optimizes performance, eliminates unnecessary use of resources, and protects the environment
5. **Reason for Authority Cited**

[Energy Policy Act of 2005 \(Public Law 109-58 109th Congress\)](#) directed the Architect of the Capitol to develop and implement a cost-effective energy conservation and management plan for all facilities administered by Congress. Agencies are authorized and encouraged to participate in programs to increase energy efficiency and for water conservation or the management of electricity demand conducted by gas, water, or electric utilities and generally available to customers of such utilities.



The Energy Savings Contracts and Activities ([10 U.S.C. Section 2913](#)) states that The Secretary of Defense shall permit and encourage each military department, Defense Agency, and other instrumentality of the DoD to participate in programs conducted by any gas or electric utility for the management of electricity demand or for energy conservation or by any utility for water conservation activities.

The Water Conservation at Military Installations ([10 USC Section 2866](#)) states that The Secretary of Defense shall permit and encourage each military department, Defense Agency, and other instrumentality of the DoD to participate in programs conducted by a utility for the management of water demand or for water conservation.

The Federal Acquisition Regulation (FAR) 6.302-5 provides that full and open competition is not required where a statute; i.e., [10 U.S.C. 2913 \(D\) \(3\)](#), expressly authorizes that an acquisition be made from a specified source; i.e., the servicing gas or electric utility.

[E.O. Regarding Efficient Federal Operations, 17 May 2018](#) states that agencies shall utilize performance contracting to achieve energy, water, building modernization, and infrastructure goals.

4. **Efforts to Obtain Competition:** Not applicable. Per authorities cited above, these types of agreements are limited to either the servicing gas or electric utilities, or both.
5. **Actions to Increase Competition:** Not applicable. Per authorities cited above, these types of agreements are limited to either the servicing gas or electric utilities, or both.
6. **Market Research:** Not applicable. Per authorities cited above, these types of agreements are limited to either the servicing gas or electric utilities, or both.
7. **Interested Sources:** Not applicable. Per authorities cited above, these types of agreements are limited to either the servicing gas or electric utilities, or both.
8. **Other Facts:**
9. **Technical Certification:** I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief.

Name: _____ Date: _____

Title

Signature: _____

10. **Requirements Certification:** I certify that the supporting data under my cognizance which are included in the justification are accurate and complete to the best of my knowledge and belief.

Name: _____ Date: _____

Title

Signature: _____

11. **Fair and Reasonable Cost Determination:** I hereby determine that the anticipated cost to the Government for contracts issued under this BOA action will be fair and reasonable.
The basis for this determination is _____



Name: _____ Date: _____
Title _____

Signature: _____

- 12. Contracting Officer Certification:** I certify that this justification is accurate and complete to the best of my knowledge and belief.

Name: _____ Signature: _____
Title _____

Approval

Based on the foregoing justification, I hereby approve the establishment of the BOA with (Utility name) authority for energy and water conservation and demand side management services on another than full and open competition basis, pursuant to the authority of [10 U.S.C. 2913](#), and the [Energy Policy Act of 2005 \(Public Law 109-58 109th Congress\)](#), subject to the availability of funds, and provided that the services herein described have otherwise been authorized for acquisition.

Name: _____ Date: _____
Title _____

Signature: _____



Appendix D.2 – Example Master Agreement Exhibit “C”

Master Agreement Exhibit “C”

Contractor’s ID # _____ (Optional)

Ordering Agency’s ID # _____ (Optional)

Authorization for Energy Management Services Contract # _____

Ordering:

Agency:

Address:

Pursuant to Contract # _____ between the Contractor and the United States Government and subject to all the provisions thereof, service to the United States Government under such contract shall be rendered or modified as hereinafter stated. Contract Articles 2 and 4 shall be followed for the initiation of service under this contract.

Premises to be served:

—

Service Address:

—

Nature of Service:

- | | |
|---|---|
| <input type="checkbox"/> Preliminary Energy Audit | <input type="checkbox"/> ECP Engineering & Design Study |
| <input type="checkbox"/> Energy Conservation Project (ECP) Installation | <input type="checkbox"/> Demand Side Management (DSM) Project |
| <input type="checkbox"/> ECP Feasibility Study | <input type="checkbox"/> Special Facilities |
| <input type="checkbox"/> Other (See below) | |

SERVICE HEREUNDER shall be provided consistent with the Contractor’s applicable tariffs, rates, rules, regulations, riders, practices, and/or terms and conditions of service, as modified, amended or supplemented by the Contractor and approved, to the extent required, by the Commission. (See Article 5 of this contract.)

Estimated Project Cost: \$ _____

Capital Cost: \$ _____



Percentage of Cost _____ %
Financed:

Rebate Amount (If _____ \$
Applicable):

Simple Payback (Years) _____ Years

Accounting and Appropriation Data: _____

Energy Conservation Measures:

- | | |
|--|---|
| <input type="checkbox"/> Mechanical Systems Upgrades | <input type="checkbox"/> Lighting |
| <input type="checkbox"/> Steam Systems Upgrades | <input type="checkbox"/> Renewables |
| <input type="checkbox"/> Controls | <input type="checkbox"/> Water Conservation |
| <input type="checkbox"/> Cogeneration | <input type="checkbox"/> Others |

List of Attachments:

- | | | |
|--|--|--|
| <input type="checkbox"/> General Conditions | <input type="checkbox"/> Historical Data | <input type="checkbox"/> Certifications |
| <input type="checkbox"/> Facility Site Plans | <input type="checkbox"/> Design Specifications | <input type="checkbox"/> Economic Analysis |
| <input type="checkbox"/> Design Drawing | <input type="checkbox"/> Special Requirements | <input type="checkbox"/> ECP Feasibility Study |
| <input type="checkbox"/> Payments Provisions | <input type="checkbox"/> Utility Usage History | <input type="checkbox"/> Commission Schedules |

Remarks: _____

Accepted:

(Ordering Agency)

(Contractor)

By:

By:

(Authorized Signature)

(Authorized Signature)

Title:

Title:

Date:

Date:

NOTE: A fully executed copy of this Authorization shall be transmitted by the Contracting Officer to General Services Administration, WPE, Washington, DC 20407.



Appendix D.3 – Example EMSA

EMSA/MODEL AGREEMENT

AGREEMENT FOR ENERGY CONSERVATION AND DEMAND SIDE MANAGEMENT SERVICES BETWEEN THE UNITED STATES OF AMERICA AND _____ UTILITY COMPANY

This Agreement for implementation of Energy Conservation Measures (ECMs) is entered into this day of _____, 20____, by and between _____ Utility Company (Utility) and the United States of America (Government), represented by the Contracting Officer executing this Agreement. The signatories to this Agreement will be sometimes collectively referred to as the “Parties” and individually as a “Party”. This Agreement (when signed by the Parties), any Task Orders (TO) executed pursuant to this Agreement, and any other associated agreements shall constitute the entire Contract between the Parties with respect to a particular ECM. A term or condition contained in this Agreement may be amended at any time by mutual written agreement of the Parties. However, termination, modification, or expiration of a term or condition shall not retroactively affect TOs previously entered into under this Agreement. The Parties agree to the following principles, concepts and procedures.

GENERAL CONDITIONS

GC.1 Purpose

The Government desires assistance in accomplishing ECMs at an Installation (may substitute at all Installations within the Utility Company’s service area, to include [list the installations by name] (hereinafter, Installations). The purpose of this Agreement is to facilitate the implementation of ECMs through TOs. This Agreement sets forth the terms and conditions under which subsequent TOs may be entered into between the Parties.

GC.2 Definitions

Terms used in this Agreement shall have the following definitions:

- a. Acceptance: Written acceptance by the authorized representative of the Government of an individual Phase or completed ECM pursuant to a TO.
- b. Carrying Charge: For the purpose of this Agreement, Carrying Charge shall be an interest rate applied to all ECM Costs incurred by the Utility until permanent financing is put in place or the Government pays the ECM Cost. Accrued interest shall be considered an ECM Cost.
- c. Contracting Officer: A Government official authorized to enter into, administer, and/or terminate a contract on behalf of the Government, and who is authorized to make related determinations and findings within the limits established pursuant to Government regulations.
- d. Contracting Officer Representative (COR) or Contracting Officer Technical Representative (COR): A local or project site representative of the Contracting Officer delegated specific limited authority, as set forth in a formal delegation letter signed by the Contracting Officer, for a given TO, including the investment grade audit, engineering and design, operation and maintenance, and/or implementation of one or more ECMs.



- e. **Energy Conservation Measure Cost (ECM Cost):** The total cost may include, but is not limited to the Work, finance charges and overhead and profit, for the investment grade audit, engineering and design, implementation and operation and maintenance of an ECM, less any financial incentive or rebates, if provided by the Utility. Payment for completed ECMs shall be calculated based upon the ECM Cost.
- f. **Energy Conservation Measure (ECM):** A specific project intended and designed to provide any of the following: energy savings, demand reduction, efficiency improvements and water conservation. ECMs are described in more detail in Section GC 17.
- g. **Occupied Period:** Hours during which a facility or building is occupied or used in the normal course of business.
- h. **Quality Assurance Evaluator (QAE):** A functionally qualified person who evaluates or inspects the contractor's performance of service in accordance with the quality assurance surveillance plan written specifically for the contracted service to be evaluated. The QAE performs technical monitoring of contractor actions, is responsible for requesting products and services through a government contract, and manages the day-to-day tasks of the contract.
- i. **Quality Control:** A management function whereby control of quality of raw or produced material is exercised for the purpose of preventing production of defective material. For purposes of this Agreement, quality control is those actions taken by a contractor to control the production of outputs to ensure that they conform to the contract requirements.
- j. **Possession:** When the Government takes beneficial occupancy of an ECM (Possession of an ECM).
- k. **Subcontractor:** Any corporation, partnership or individual hired directly by the Utility to perform a service or provide a product under this Agreement and TOs resulting from this Agreement.
- l. **Task Order (TO):** A binding contractual action entered into under this Agreement for the investment grade audit, engineering and design, implementation, and/or operation and maintenance of, or any activity related to, an ECM. (A TO can also be identified as a Delivery Order [D.O].)
- m. **Termination Schedule:** A schedule developed for each financed ECM specifying the lump sum payment necessary at any time during the contract period following the initial Government payment for the complete repayment of the ECM costs, including any finance costs accrued to that point.
- n. **Work:** All labor, materials, tools, equipment, services, transportation and/or other items required for the completion of the ECM.

GC.3 Term

This Agreement shall have a term of years. This Agreement may be terminated in its entirety by either Party upon 30 days' written notice to the other Party. Thereafter, no new TOs shall be entered into under this Agreement. Termination, modification or expiration of this Agreement shall not affect in any way TOs previously entered into under this Agreement. This Agreement shall be effective from the date it is signed by both



Parties. In the event the Parties sign this Agreement on different dates, then the effective date shall be the latter of the two dates.

GC.4 Services to be Provided by the Utility

The Utility shall provide preliminary audits, feasibility studies, engineering and design studies, and all initial capital, labor, material, supplies and equipment to the Agreement. These services may be ordered individually, as a group or in any combination under a single TO.

GC.5 Information

Subject to national security constraints and unless otherwise prohibited by law, the Government shall provide the Utility with any information requested by the Utility to comply with regulatory commission requirements.

GC.6 Relationship of Parties

The Government acknowledges the Utility and/or its Subcontractors shall each perform their work as independent contractors and the Government shall have no direct control and supervision of Utility or Subcontractor employees, who shall not be considered employees or agents of the Government for any purpose. The Utility, in negotiations with its Subcontractors, will ensure that the Government will be the direct beneficiary of any and all product and service guarantees and warranties.

GC.7 Subcontractor Selection

The Utility may perform some or all of the Work under a TO itself or through Subcontractors. When practical, the Utility shall competitively select Subcontractors for the purpose of determining the reasonableness of Subcontractor prices. When competition is not practical, price reasonableness may be determined by comparing proposed prices with those obtained for the same or similar work, prices published in independent cost guides, published in competitive price lists, or developed by independent sources.

Subcontractor selection shall be based on cost, experience, past performance, reliability, and such other factors as the Utility may deem appropriate, as long as such factors are practicably related to the Government's minimum needs. In no event may such services be provided by Subcontractors listed as excluded from Federal Procurement Programs, which list is maintained by GSA pursuant to [48 CFR 9.404](#). For any TO, the Utility may submit the names of proposed Subcontractors to the Government Contracting Officer to ensure they are not excluded pursuant to 48 C.F.R. 9.404.

GC.8 Authority of Contracting Officer

The Government's Contracting Officer shall be the only Government official authorized to enter into and/or modify a TO entered into under this Agreement.

GC.9 Ownership of Work Product

The Government may elect not to use the Utility to implement the ECM. If the Government so elects, it will pay for any accepted work, including any equipment, completed studies, and engineering and design work. Title to any work done by the Utility for the Government under a TO shall become the property of the Government at the time of acceptance of the work.



GC.10 Responsibility for Operation and Maintenance

The operations and maintenance of the equipment installed pursuant to any TO executed under this Agreement shall be the responsibility of the Utility during the payment term unless otherwise provided in the TO.

GC.11 Government Projects

The Government shall not be restricted from implementing equipment installation, construction projects and ECMs independent of work performed under this Agreement, including installing new energy conservation equipment, removing existing energy consuming equipment, or adding new energy consuming equipment. The Government will notify the Utility prior to implementing projects that may affect ECMs under this Agreement.

GC.12 ECM Performance Verification

Each TO shall include procedures that are mutually agreeable to the parties to verify ECM performance following installation.

GC.13 Emission Credits

All on-site Government emission credits earned by virtue of TOs entered into hereunder shall be the property of the Government.

GC.14 Order of Precedence

The Government and Utility shall determine in this Agreement or subsequent TOs the precedence given to the TO, this Agreement or other documents, exhibits and attachments, in the event an inconsistency arises among these documents.

GC.15 Preliminary Assessments

At the request of the Government or the Utility and upon the mutual consent of both parties, the Utility will conduct, at no cost to the Government, an audit consisting of an on-site building investigation and evaluation for a mutually agreeable facility to determine if any significant energy conservation opportunities exist and whether further detailed energy analysis is warranted. Government buildings/facilities plans will be made available upon request. Requests for plans shall be made to the COR at least fifteen (15) calendar days in advance of the audit start date. The Utility will provide a written report of the audit to the Government, typically at no cost. The Utility will utilize historical building data, utility data, and information obtained by the Utility to identify ECMs. Using this information, the Utility will generate a prioritized list of recommendations, in sequence of implementation that are life-cycle cost-effective and can be implemented in the facility being audited. The preliminary audit, to the extent applicable, shall include, but not be limited to, the following information:

- a. Preliminary estimated energy and water savings.
- b. Preliminary estimated cost savings, including reduced maintenance costs.
- c. Current utility rates.
- d. Preliminary retrofit cost.
- e. Utility financial incentive/rebate, if any.
- f. Description of existing equipment.



- g. Description of the proposed retrofit equipment.
- h. Overview of the general environmental impact and potential hazardous wastes identified through existing facility records, if any.

GC.16 ECM Proposal

After reviewing the preliminary audit, the Government may request a proposal from the Utility, for the evaluation of an ECM. The Utility shall submit an ECM proposal, setting forth a prioritized list of the ECMs, a preliminary estimate of the cost to implement each ECM, the total costs for implementing the ECM (including estimated investment grade audit, engineering and design, and implementation costs), and estimated cost savings.

GC.17 Energy Conservation Projects

The Utility may propose one or more ECMs. ECMs that substitute one energy type for another (e.g., natural gas in lieu of electricity) will not be considered for implementation unless a net overall energy or cost reduction can be demonstrated based on current market energy prices. Potential ECMs include, but are not limited to:

- a. Interior and exterior lighting replacement.
- b. Transformer replacement.
- c. Lighting control improvements.
- d. Motor replacement with high efficiency motor.
- e. Construction of alternative generation or cogeneration facilities.
- f. Boiler control improvements.
- g. Packaged air conditioning unit replacement.
- h. Cooling tower retrofit.
- i. Economizer installation.
- j. Energy management control system (EMCS) replacement/alteration.
- k. Occupancy sensors.
- l. LED exit sign installation.
- m. Fans and pump replacement or impeller trimming.
- n. Chiller retrofit.
- o. Upgrade of natural gas-fired boilers with new controls (low NOX burners).
- p. Solar domestic hot water system.
- q. Solar air preheating system.
- r. Steam trap maintenance and replacement.
- s. Insulation installation.
- t. Variable speed drive utilization.
- u. Weatherization.
- v. Window replacement.



- w. Window coverings and awnings.
- x. Reflective solar window tinting.
- y. Fuel cell installation.
- z. Photovoltaic system installation.
- aa. Faucet replacement (infrared sensor).
- bb. Replacement of air conditioning and heating unit with a heat pump.
- cc. Addition of liquid refrigerant pump to a reciprocating air conditioning unit.
- dd. High efficiency refrigerator replacement.
- ee. High efficiency window air conditioner replacement.
- ff. (Water conservation device installation (e.g., flow restrictors, low flow flush valves, waterless urinals, horizontal axis washing machines).
- gg. Installation, maintenance and operation of power quality and reliability measures including UPS systems, back-up generators, emergency generators.
- hh. Fuel switching technology.
- ii. Infrared heating system.
- jj. Heat pipe dehumidification.
- kk. Flash bake commercial cooking.
- ll. Thermal energy storage system.
- mm. Operation, maintenance, modification and/or extension of utility distribution and collection system.
- nn. Training that will result in reduced energy costs.
- oo. Power factor correction measures and equipment.
- pp. Installation, maintenance and operation of standby propane facility.
- qq. Installation, maintenance and operation of gas distribution system and associated equipment.
- rr. Water distribution system leak detection, and cost-effective repair.
- ss. Any other ECM that is cost effective using the then-current DoD-prescribed procedures and standards, and which encourages the use of renewable energy, reduces the Government's energy consumption or energy demand, or results in other energy infrastructure improvements.

GC.17.1 ECM Restrictions

The Government shall not consider ECMs which include:

- a. Measures which could jeopardize existing agency missions.
- b. Measures which could jeopardize the operation of, or environmental conditions of computers or computer rooms.
- c. Unless waived by the Contracting Officer, measures that would result in



increased water consumption (e.g., once-through fresh water cooling systems).

- d. Measures which would violate any federal, state, or local laws or regulations.
- e. Measures which degrade performance or reliability of existing Government equipment.
- f. Unless waived by the Contracting Officer, measures that would reduce energy capacity currently reserved for future growth, mobilization needs, safety, emergency back-up, etc.
- g. Measures that violate the then-current versions of the National Electric Code, the National Electric Safety Code, the Uniform Building Code, or the Uniform Mechanical Code.
- h. Utility-financed measures that do not result in savings in the base utility expenditures sufficient to cover the project costs.
- i. Energy cost reduction through rate adjustments.
- j. Advanced metering system covered by AFCEC/CNP

GC.17.2 Facility Performance Requirements of ECMs

ECMs proposed by the Utility shall conform to the following facility performance standards:

- a. Lighting levels shall meet the minimum requirements of the then-current Illuminating Engineering Society (IES) Lighting Handbook.
- b. Heating and cooling temperature levels shall meet Government design standards.
- c. ECMs shall permit flexible operation of energy systems for changes in occupancy levels and scheduling of facilities. In proposing an ECM, the Utility may assume the building function will remain constant unless otherwise indicated by the Government.

GC.18 TOs

Following the evaluation of the ECM proposal, the Government may elect to execute a TO with the Utility for the evaluation, implementation, or operation and maintenance of the ECM. If requested by the Government, the Utility will provide or obtain financing on terms at least as good as those available to customers in a comparable service class, or with a comparable risk profile, considering the nature of the security interests to be granted, if any, and other conditions affecting the cost of financing.

The TO may have five phases; Audit (when applicable), Investment Grade Audit Phase, Engineering and Design Phase, Implementation Phase, and Operation and Maintenance Phase. Because the extent of all the work is unlikely to be known at the time the TO is entered into, these phases shall be line items under the TO, and shall be issued with an estimated Termination Schedule at the time the TO is executed. However, work will not commence on a particular phase unless and until a statement of work and a price for that phase have been agreed upon.



Following completion and acceptance of the Feasibility or Engineering and Design Phases, the Government may elect to (i) pay the ECM Cost for each completed Phase within thirty (30) calendar days of being invoiced; or (ii) defer payments for that Phase until the end of the next Phase, at which time the Government shall pay the ECM Cost for each completed Phase within thirty (30) calendar days of invoice; or (iii) include such amounts in the ECM Cost, if the Government elects to proceed with the Implementation Phase. If the Government elects not to proceed with the next Phase, it shall pay the Utility the ECM Cost for the prior completed Phases, plus a Carrying Charge as negotiated by the parties in the TO. A decision to proceed or not to proceed with the next Phase must be made within 60 days of receipt of a written request from the Utility. Only the Contracting Officer shall be authorized to exercise the Government's option to proceed to the next Phase, and such exercise shall be provided in writing within sixty (60) days of receipt of a statement of work and price. Government finance payments for the Implementation Phase shall begin on the date of the first Utility bill following the 30-day period after the Government takes possession of all or part of the ECM as provided in [FAR, Part 36, Subpart 36.511](#), and a satisfactory ECM Performance Verification as defined in the TO and pursuant to Section GC.12 of this Agreement. The timing and amount of Government payments of appropriated funds for the Operation and Maintenance Phase shall be determined in the TO. The TO is subject to any legally-required Federal Acquisition Regulations. Because services may vary widely from one TO to another, the Contracting Officer will insure that the appropriate FAR clauses from the FAR matrix found at [FAR, Part 52, Subpart 52.301](#), are incorporated into any contract entered into by the parties for services provided by the Utility under the TO.

GC.19 ECM Investment Grade Audit Phase

The TO shall set forth a scope of work feasible (the Investment Grade Audit). The TO shall specify the terms for the completion of the Investment Grade Audit and establish a price for the Investment Grade Audit. The Government will pay the Utility the agreed-upon price for the Investment Grade Audit in accordance with the TO. If the Government elects to proceed with the Engineering and Design Phase as set forth below in Paragraph GC.20, the cost of the Investment Grade Audit shall be rolled into the Engineering and Design Phase ECM Cost. The Investment Grade Audit will provide, at a minimum, the following information:

Technical Factors:

- a. Audits of energy consumption of existing equipment and facilities, including estimated energy and cost savings, and proposed retrofit costs and financial incentives/rebates.
- b. Water audits of supply and utilization facilities, if specified by the Government.
- c. Equipment to be removed or replaced, and new equipment to be installed.
- d. Specifications, including catalog cuts, for new equipment. Specifications shall include (as applicable): power rating, estimated energy consumption, input/output, power ratio, lighting level, and estimated equipment life.
- e. Operation and maintenance procedures required after ECM implementation (if significantly altered by the ECM).
- f. Training that will be provided for the proper operation and maintenance of ECMs,



including details on how many hours of training will be provided and how many people will be trained.

- g. Electrical and mechanical sketches for all ECMs that involve changes to existing systems (sketches will not be required for ECMs involving only component replacement).
- h. Government support (e.g., minor changes in Government operation, movement of equipment) required during implementation of the ECM.
- i. Utility interruptions needed for implementation of each ECM by type (gas, electricity, water, etc.), extent (room number, entire building, etc.) and duration.
- j. Identification of potential adverse environmental effects.
- k. Any documentation required to comply with applicable environmental laws.
- l. Estimated construction time in calendar days, showing significant milestones.
- m. Estimated annual energy savings in kilowatt-hour and kilowatt demand of electricity, dekatherms of natural gas, and cubic feet of water for the life of each ECM, including all assumptions and detailed calculations showing how savings were determined.
- n. Estimated equipment life for each ECM.
- o. A proposed method to verify energy savings at the time of ECM Acceptance which shall be subject to Government approval.
- p. Documentation that each proposed ECM has been recommended and selected without regard to fuel source.

Cost Factors:

- a. Estimated annual operation costs (e.g., increased use of alternate fuel sources, replacement filters) and increased maintenance costs (e.g., re-lamping with a higher cost product).
- b. Total estimated ECM Cost to the Government.
- c. Estimated breakdown of financial incentives/rebates for each ECM (if any) in a format mutually agreeable to the Parties.
- d. Estimated cost-of-money rate (percent).
- e. Estimated annual energy and operation and maintenance cost savings including details on estimated annual savings for each area of savings, such as lighting, controls, motors and transformers.
- f. Estimated breakdown of implementation costs for each area of energy savings, such as lighting, controls, motors and transformers.
- g. Estimated costs for replacing existing components and installing new components/systems, listed separately.
- h. Estimated unit costs for major components and systems.
- i. An estimated life cycle cost analysis prepared in accordance with the then- current edition of the [Energy Prices and Discount Factors for Life-Cycle-Cost Analysis](#),



published as the annual supplement to the National Institute of Standards and Technology (NIST) Handbook 135.

GC.20 ECM Engineering and Design Phase

After evaluation and acceptance of the Investment Grade Audit, the Government may elect to proceed with the Engineering and Design Phase. Prior to proceeding, the Parties shall agree upon a statement of work for all engineering and design services necessary for the implementation of a particular ECM, a time frame for completion of the work, and a price or cost cap for engineering and design work for the ECM. If the Government elects to proceed with the Implementation Phase as set forth below, the cost of the engineering and design work shall be rolled into the total ECM Cost. This TO shall include an estimated amortization schedule for the ECM.

GC.20.1 Verification of Floor Plans

The Utility will verify the accuracy of any floor plans provided by the Government.

GC.20.2 Government Design Review

TOs shall permit adequate time for Government review of engineering and design work at 35% and 95% design completion, or at any other stage, as negotiated in the TO.

GC.20.3 Site Plans

If proposed ECMs require installation outside existing buildings or structures, a site plan showing recommended siting of ECMs shall be prepared for Government review and approval. Site plans shall be submitted as part of the Utility's proposal. It is recommended that the Utility propose alternate sites for review in case the primary site is unavailable.

GC.20.4 ECM Implementation Proposal

Upon completion and Acceptance of the Engineering and Design Phase, the Utility will submit to the Government an ECM implementation proposal (the "Proposal"). If requested by the Contracting Officer, the Utility will be required to present a briefing to the Government explaining the Proposal. At a minimum, the Proposal shall include all pertinent technical and cost factors listed in paragraph GC.19 of this Agreement, plus a copy of subcontractor(s) bid(s). The Proposal shall also set forth negotiated pricing criteria that describe the method for determining the prices to be paid to the Utility for supplies or services. The Government shall evaluate the Proposal for technical soundness and price reasonableness. If the Government elects to proceed with the ECM, the Utility and Government shall agree upon a complete scope of work with specifications, time for performance, ECM Cost, source and cost of capital or financing, payment terms, amortization schedule, and final Termination Schedule. If the Contracting Officer deems it appropriate, the Utility will provide acceptable performance and payment bonds.



GC.21 ECM Implementation Phase

The Utility shall perform work in accordance with the TO. The following provisions shall apply to ECM implementation work performed pursuant to TOs executed under this Agreement, unless exceptions are provided in the TO.

GC.21.1 Pre-Work Requirements

Prior to commencing ECM implementation Work on a TO, the Utility shall meet with the Contracting Officer or COR at a time mutually agreeable to the Utility and the Contracting Officer, to discuss and develop mutual understandings relative to safety, scheduling, performance, obtaining necessary permits, and administration of the Implementation Phase. Prior to commencement of on-site work, written approval of the following shall be obtained from the Contracting Officer by the Utility:

- a. The utility's proposed implementation schedule, indicating the installation period and time required for delivery of equipment.
- b. Evidence that the required insurance has been obtained.

GC.21.2 Interruptions

The Utility shall arrange on-site work to minimize interference with normal Government operation. All interruptions shall be made outside occupied periods whenever possible and coordinated with the Contracting Officer or COR. The Utility shall endeavor to keep the duration of utility interruptions to a minimum. Requests for utility outages shall be submitted for approval, in writing, as specified in the TO. The request shall include the approximate duration, date, time, and reason for the interruption. Utility interruptions include, but are not necessarily limited to, the following systems:

- a. electrical
- b. natural gas
- c. sewer
- d. steam
- e. water
- f. telephone
- g. computer cables

GC.21.3 Construction Documentation

The Utility shall provide construction drawings and specifications, certified by a registered engineer or architect, as applicable, to ensure compliance with all applicable federal, state and local codes and regulations as required by individual TOs.

GC.21.4 Standardization of Materials

All materials proposed to be installed pursuant to this Agreement shall be readily commercially available, and as similar in form, fit, and function to each other as is practicable to allow efficient provisioning of replacement parts.



GC.21.5 Water Conservation Measures

The Utility will consider water conservation in all ECMs. The Utility will obtain rebates from the local water utility if available. Rebates, if any, shall be applied to the cost of the project.

GC.21.6 Operation and Maintenance Manuals

At the time of Government Acceptance of a completed ECM, the Utility shall furnish, for the equipment specified, operation and maintenance manuals and recommended spare parts lists identifying components adequate for competitive supply procurement for operation and maintenance of ECM equipment. The operation and maintenance manuals shall include maintenance schedules for all equipment. The scope of each manual shall be agreed upon in the TO.

GC.21.7 Government Personnel Training for ECMs

The Utility shall train Government personnel, as required, to operate, maintain, and repair ECM equipment and systems. The date and time of training shall normally be coordinated with the Contracting Officer or COR prior to Acceptance of the ECM. The cost for such training shall be included in the ECM Cost.

GC.21.8 As-Built Drawings

Within 45 calendar days after Government Acceptance of each installed ECM, the Utility shall submit as-built drawings to the Contracting Officer or COR. Drawings will not be required for component replacement. Drawings shall include at a minimum:

- a. Installation (i.e., form, fit, and attachment details) of the interface between ECM equipment and existing Government equipment.
- b. Location and rating of installed equipment on building floor plans.

GC.21.9 Installation

The Utility will arrange for the installation of approved ECMs and construction oversight and verify that the designed and specified energy efficiency equipment and/or system modifications are properly supplied or installed in a manner that will give the intended long term demand and energy reductions. The Utility will select Subcontractors in accordance with paragraph GC.7 above.

GC.22 Operation and Maintenance Phase

The Government may elect to have the Utility perform the operation and maintenance on part or all of the ECM. Before exercising its option for this Phase, the Government and Utility shall agree upon a complete scope of work with specifications, schedules, warranties, and cost.

GC.23 Required FAR Clauses

The following FAR clauses are required to be included in any contract with the Government:



[52.203-3, Gratuities](#); [52.203-5, Covenant Against Contingent Fees](#); [52.203-7, Anti- Kickback Procedures](#); [52.222-3, Convict Labor](#); [52.222-25, Affirmative Action Compliance](#); [52.222-26, Equal Opportunity](#); [52.223-6, Drug Free Workplace](#); [52.233-1, Disputes](#).

WARRANTIES AND REMEDIES

WR.1 Warranties

The Utility shall pass through to the Government all warranties on equipment installed pursuant to a TO. In addition, the Utility shall provide, from the date of Acceptance or Government Possession of an ECM, whichever is earlier, a one- year comprehensive wrap-around warranty guaranteeing that the equipment installed shall perform in accordance with the specifications agreed upon between Government and Utility, as set forth in the applicable TO. In the event the Utility provides O&M services, a separate warranty will be negotiated for such services, in accordance with [FAR Part 52, Subpart 52.246-20](#).

WR.2 No Other Warranties

The warranties set forth in WR.1 are exclusive and in lieu of all other warranties. The Utility makes no other representations or warranties of any kind with respect to the services and products it provides pursuant to this Agreement and subsequent TOs. The Utility does not guarantee any level of energy or water savings or cost reductions.

WR.3 Utility Limitation of Liability

The Utility shall not be liable for any special, incidental, indirect, or consequential damages, connected with or resulting from the performance or non-performance of work under this Agreement or subsequent TOs. In addition, the Utility shall not be liable under its warranty to the extent that damages are caused by Government negligence.

WR.4 Utility Default

The Government and Utility agree that Utility default provisions will be governed by those FAR clauses applicable to specific circumstances. A determination of applicable FAR default clauses will be made by the Contracting Officer for a specific TO.

WR.5 Prompt Payment

As required in [FAR, Part 32, Subpart 32.903](#), the Government shall promptly pay ECM utility bills. Late payments shall accrue interest as provided in [FAR, Part 32, Subpart 32.907](#).

WR.6 Disputes

Disputes that arise under this Agreement and subsequent TOs shall be governed by the applicable dispute provisions found at [FAR, Part 33, Subpart 33.2](#).

WR.7 Differing Site Conditions

In the event site conditions differ materially from those contained in the TO, additional costs incurred by the Utility due to the differing conditions shall be negotiated prior to work, and the ECM Cost shall be increased to reflect an equitable adjustment as permitted in [FAR, Part 36, Subpart 36.502](#).



WR.8 Suspension of Work

In the event work is delayed, suspended, or stopped by the Government, [FAR, Part 42, Subpart 42.13](#) shall apply.

FINANCING AND PAYMENT PROVISIONS

FP.1 Energy Savings and Financing

It is intended that the life-cycle energy and related savings achieved from the implementation of an ECM funded or financed in a UESC project will produce financial savings to the Government that are equal to or greater than the cost of implementing the ECM, including the cost of financing, if applicable, provided under this Agreement. The payment term shall be in accordance with Agency policy following current legislation, legal opinions, and Agency guidance.

FP.2 Financial Incentives, Rebates, and Design Assistance

The Utility will provide to the Government the same financial incentives, rebates, design review, goods, services, and/or any other assistance provided without charge that is generally available to customers of a similar rate class or size. Incentives that may be available are to be identified in the preliminary audit report provided according to paragraph GC.15 and the ECM implementation proposal provided according to paragraph GC.20.4.

If rebates are available and have been applied for by the Government and such funds have been set aside, then the Utility shall provide a separate letter of agreement clarifying timelines and responsibilities of both parties and guaranteeing rebates and other incentives from the Utility to the Government.

The Utility shall also be responsible for determining the source, value, and availability of any applicable financial incentives to the project offered by the state and other jurisdictions in which the facility is located, and if the value of the incentives exceeds the administrative costs to be incurred by the Utility or the Government in acquiring such incentives.

The Utility shall be responsible for coordinating with the Agency Contracting Officer regarding preparation of any and all documentation required to apply for any such applicable financial incentives and to effectively apply such incentives to the capital cost of the project.

Rebate disbursement options include:

Option 1: The Utility shall apply rebates to the next payment due to reduce capital cost of the project.

Option 2: Where allowable by the Public Utility Commission, the Government may assign rebate to a third party to reduce the construction costs and thereby reduce the total amount financed.

Option 3: Rebates may be accepted as a credit on the utility bill.

FP.3 Calculation of Payment

Payment for accepted ECMs shall be equal to the ECM Cost amortized over a negotiated term. In accordance with [10 U.S.C. Section 2912](#), the cost of financing, if any, for any



completed ECM shall be recovered under terms and conditions no less favorable than those for others in the same customer class. Monthly payments will commence on the date of the first Utility bill following the 30-day period after the date the Government takes Possession of the ECM, and after ECM Performance Verification Testing, as required by GC.12 and negotiated in the TO, is satisfactorily completed.

FP.4 Buydown

The Government reserves the right at any time following Acceptance, but prior to final payment, to buy down the outstanding TO payments without penalty by giving thirty (30) days' written notice to the Utility. Upon such buydown, the Government shall pay to the Utility a negotiated amount to include an additional finance charge based on an indexed formula, which reduces the financier's risk and reduces the cost of buydown to the Agency, or provide a termination schedule. Monthly payments will continue at the same level, but the term of ECM financing will be shortened to reflect the amount of the buydown payments.

FP.5 Pre-Acceptance Buyout

If the Government desires to terminate a TO for any reason (including, without limitation, for convenience) prior to Acceptance, the Government may do so by giving written notice to the Utility thirty (30) days prior to the effective date of such termination. The Government shall pay to the Utility a negotiated amount to include an additional finance charge based on an indexed formula, which reduces the financier's risk and reduces the cost of buyout to the Agency, or provide a termination schedule which will be described in Attachment A of the TO. If a termination occurs for the convenience of the Government, the amount payable pursuant to this paragraph shall be deemed as an allowable cost under [FAR Part 17](#) and [FAR Part 52, Subpart 52.249-2](#).

FP.6 Post-Acceptance Buyout

In the event the Government desires to terminate a TO for any reason (including, without limitation, for convenience) after Acceptance, the Government may do so by giving written notice to the Utility 30 days prior to the effective date of such termination. The Government shall pay to the Utility a negotiated amount to include an additional finance charge based on an indexed formula, which reduces the financier's risk and reduces the cost of buyout to the Agency, or provide a termination schedule which will be described in Attachment B of the TO. If a termination occurs for the convenience of the Government, the amount payable pursuant to this paragraph shall be deemed as an allowable cost under [FAR Part 17](#) and [FAR Part 52, Subpart 52.249-2](#).

FP.7 Assignment of Claims

Government payments under each TO executed pursuant to this Agreement may be assigned pursuant to [FAR Part 52, Subpart 52.232.23](#), "Assignment of Claims". Any bank, trust company, or other financing institution that participates in financing an ECM shall not be considered a Subcontractor of the Utility. Any "Assignment of Claims" must comply with the provisions of [FAR Part 32, Subpart 32.8](#).



FP.8 Novation

The Parties agree that if, subsequent to the execution of this Agreement, it should become necessary, or desirable, to execute a "Novation Agreement", said Novation Agreement will comply with the provisions of [FAR Part 42, Subpart 42.12](#) and will be in the form as provided at [FAR Part 42, Subpart 42.1204](#).

SPECIAL REQUIREMENTS

SR.1 Environmental Protection

The Utility shall comply with all applicable federal, state, and local laws, regulations, and standards regarding environmental protection ("Environmental Laws"). All environmental protection matters shall be coordinated with the Contracting Officer or designated representative. The Utility shall immediately notify the Contracting Officer of, and immediately clean up, in accordance with all federal, state and local laws and regulations, all oil spills, hazardous wastes (as defined at [42 U.S.C. §9601](#)), and hazardous materials (as defined at [49 CFR Part 172](#)), collectively referred to as Hazardous Materials", resulting from its operation on Government property in connection with the implementation of ECMs. The Utility shall comply with the instructions of the Government with respect to avoidance of conditions that create a nuisance or create conditions that may be hazardous to the health of military or civilian personnel.

SR.2 Environmental Permits

Unless otherwise specified, the Utility shall provide, at its expense, all required environmental permits and/or permit applications necessary to comply with all applicable federal, state, and local requirements prior to implementing any ECM in the performance of a TO executed pursuant to this Agreement. If any such permit or permit application requires the signature or other cooperation of the Government as owner/operator of the property, the Government agrees to cooperate with the Utility in obtaining the necessary permit or permit application.

SR.3 Handling and Disposal of Hazardous Materials

Notwithstanding the provisions of the [FAR Part 52, Subparts 52.236-2](#) "Differing Site Conditions" and [52.236-3](#) "Site Investigations and Conditions Affecting Work," the Government understands and agrees that (i) the Utility has not inspected, and will not inspect, the project site in connection with a proposed ECM for the purpose of detecting the presence of pre-existing Hazardous Materials that relate to an ECM or any project site; and (ii) the Government shall retain sole responsibility for the proper identification, removal, transport, and disposal of any fixtures, components thereof, or other equipment or substances incidentally containing pre-existing Hazardous Materials, except as specifically agreed to by the Utility pursuant to paragraphs SR.4 and SR.5 (below).

If the Utility, during performance of the work under a TO executed pursuant to this Agreement, has reason to believe that it has encountered or detected the presence of pre-existing Hazardous Materials, the Utility shall stop work and shall notify the Government. The Government will evaluate the site conditions and notify the contractor of the results of this evaluation. The Utility shall not be required to recommence work until this situation



has been resolved. Any delay resulting therefrom shall be grounds to request an increase in the ECM Cost to the extent that such delay increases ECM costs.

SR.4 Asbestos and Lead-Based Paint

To the extent provided for in a TO executed pursuant to this Agreement, in connection with the implementation of any ECM, the Utility may agree to remove pre-existing asbestos-containing material or lead-based paint, incidental to implementation of an ECM. However, unless the Utility explicitly agrees in said TO to perform any portion of the testing, removal, or abatement of the pre-existing asbestos or lead-based paint as part of the scope of work for any ECM, and unless the TO specifically references this paragraph SR.4, the Government shall be deemed to be solely responsible as provided for in paragraph SR.3.

If the Utility, in the course of ECM implementation, disturbs suspected lead-based paint or asbestos-containing material, the Utility may propose to the Government that the Utility will perform any portion of the testing, removal, or abatement of the lead-based paint or asbestos-containing material. Said proposal will include the requested increase in the ECM cost on account of such additional work. The Utility will not commence work involving additional cost without approval of the Contracting Officer. Provisions of paragraph SR.3 shall apply in the absence of an agreement to the contrary. If the Utility agrees to include any portion of the testing, removal, or abatement of the asbestos within the scope of work for an ECM implemented as described previously in this section, the hazardous waste manifests or other shipping papers shall identify the Government as the sole generator of the Hazardous Materials.

SR.5 Refrigerants, Fluorescent Tubes, and Ballasts

To the extent provided for in a TO executed pursuant to this Agreement in connection with the implementation of any ECM, the Utility shall remove and/or dispose of all ozone-depleting refrigerants, fluorescent tubes, and fluorescent magnetic core and coil ballasts incidental to an ECM to the Hazardous Materials (HAZMAT) disposal site on the installation. If there is no HAZMAT disposal site on the installation, the above HAZMAT will be disposed of in accordance with all applicable federal, state, and local laws and regulations, provided however, that the hazardous waste manifests or other shipping papers shall identify the Government as the sole generator of the Hazardous Materials.

SR.6 Ozone-Depleting Refrigerants

All ozone-depleting (ODC) refrigerants will remain the property of the installation. The Contractor will collect all ODCs and provide them to the installation in accordance with the procedures in the TO.



Appendix D.4 – Example Statement of Work (SOW)

Basic Statement of Work (SOW) for the “Letter of Interest”

The SOW for the “Letter of Interest” should be a broad overview and not specific. We want the Utility to draw on their experience and expertise to review and analyze the current energy situation at your location and provide an overview of all ECMs they recommend to improve energy conservation. The utility will provide specifics in the Preliminary Analysis and the Investment Grade Audit. Provide general areas you wish to explore and let the experts at the utility analyze the situation and recommend a course of action. You can drop an ECM or ask the utility to add something at this stage.

SOW

Joint Base (JB) Outstanding intends to enter into a UESC contract for energy conservation measures (ECMs) which enhances or improves the bases energy usage. Various upgrades or improvements of all types are being considered. Among them we are looking at controls, heating, ventilating and air conditioning upgrades, high efficiency motors, piping insulation upgrade, lighting controls and water conservation measures.

These upgrades will result in energy cost savings to JB Outstanding. In accordance with UESC procedures, the utility will arrange for third party financing to be paid back within 10 years with the energy savings.

Insulation: Furnish and install insulating jackets on domestic hot water heaters (electric and natural gas fired units). Repair damaged or missing insulation on heating hot water and chilled water lines. Insulation shall be rotary glass fiber insulation with a service jacket. Repair damaged or missing insulation on refrigerant lines. Insulation shall be a minimum of 1.5 inches thick expanded closed cell foam with vapor barrier and service jacket.

Condenser Coil Improvements: Furnish and apply protective corrosion inhibitor on air-cooled condensers. The material shall be Adsil Microguard or an approved equivalent. The material shall be installed in accordance with manufacturer’s recommendations.

Controls: Furnish and install programmable thermostats. The new thermostat shall be internet compatible and integrated with all currently installed EMCS. Furnish and install an air quality sensor to establish demand controlled ventilation.

HVAC Upgrades: Furnish and install new split system and roof mounted heating and cooling units to replace aging units. The new units shall match existing capacities and have minimum efficiencies of 12.1 EER and 13.4 EER for the split systems and roof mounted units respectively. Furnish and install new variable frequency drives on pump motors. Furnish and install new air-cooled condensing units.

High Efficiency Motors: Furnish and install new premium efficiency, inverter rated motors on air handler fan motors.

Lighting and Lighting Controls: Furnish and install new linear fluorescent light and electronic ballasts replacing existing incandescent and aging fluorescent lighting. Furnish and install new high bay fluorescent T5 lamps replacing high intensity discharge lighting in the main shop area. Furnish and install new wall and ceiling mounted occupancy sensors.



Appendix D.5 – Example UESC IGA Report



Example UESC FS
Report new.pdf

Appendix D.6 – Example M&V QASP Template



2_Appendix B_M&V
QASP Template.pdf



Appendix D.7 – UESC Task Order (TO) Sample

TO # _____

GSA Area Wide GS-xxx

This TO is entered into by and between _____ (Utility) and _____ (Agency) for implementation of certain Energy Conservation Measures (ECMs) as described herein at _____ (installation/site).

All terms and conditions of the GSA Areawide Public Utility Contract apply to this TO, unless modified by the paragraphs below. In the event of a conflict between the requirements of the GSA Areawide Public Utility Contract and those of this TO, the requirements of this TO shall prevail.

1. Purpose (Note: change as required to cover your project purpose)

The intent of this project is to meet the objective of _____ (Agency) energy goals and missions by increasing lighting efficiency, replacing and enhancing outdated building controls, and reducing chilled water costs including the cost of fuel used to produce chilled water. It is anticipated that energy will be optimized in each covered building to achieve _____ reduction in _____ and _____ reduction in energy intensity and advanced metering.

2. Scope of Work (Note: Add your scope here. This is a sample SOW)

The Contractor shall arrange for all initial capital for third-party financing for this project. The Contractor shall provide all labor, material, equipment, and supervision to implement the ECMs described below. The project work includes interfacing and connecting to existing facilities and systems. Upon completion, inspection, and acceptance of Line Items 1, 2, and 3, including testing, training, and delivery of all O&M manuals as required herein, _____ (Agency) agrees to purchase the work described in this TO.

The Contractor shall provide Performance Assurance of all work associated with this TO for the first 12 months after acceptance of all Line Items.

All work for Line Items 1 and 2 described below shall be performed in accordance with Attachment TO-1 – “Agency/Site/M&O Guidance.”

Line Item 1: Lighting Upgrades

Provide design and installation services to complete lighting upgrades in the following buildings:

ECM	Building #	Building location/name
ECM-1		
ECM-2		
ECM-3		
ECM-4		
ECM-6		
ECM-8		
ECM-9		
ECM-10		



ECM-11		
ECM-12		

This work described in the following documents:

- Attachment TO-2 Lighting Statement of Work
- Attachment TO-3 Lighting Equipment Specifications

Line Item 2: Controls Upgrades

Provide design and installation services to complete controls upgrades in the following buildings:

ECM #	Building #	Building Name
ECM X	Building X	Ipssum
ECM X	Building X	Ipssum
ECM X	Building X	Ipssum
ECM X	Building X	Ipssum

This work is described in the following documents:

- Attachment TO-4 Controls Statement of Work
- Attachment TO-5 Controls Equipment Specifications

Line Item 3: Chiller Plant Upgrade

Provide installation services to complete the Chiller Plant Upgrade (ECM X). This work is described in the following documents:

- Attachment TO-6 Specifications for Chiller Plant
- Attachment TO-7 Construction Drawings (Bid Package X)

The Operations and Maintenance (O&M) contractor will provide Human Machine Interface (HMI) screen modifications and additions, Programmable Logic Controller (PLC) and HMI programming, including loading, debugging and checkout of the control programs, subsequent to the Contractor's completion of installation and confirmation of control wiring continuity. Control Panels as shown on drawings _____ through _____ are existing, except as noted on the drawings. ControlNet and redundancy connections to the panels are by the Contractor.

Line Item 4: Performance Assurance

A Performance Assurance Plan will be implemented to verify that the new equipment is operating to specified operational standards and generating savings when compared to the existing systems that were replaced. The Performance Assurance Plan is provided in Attachment TO-8. The Performance Assurance process shall commence as specified in Attachment TO-8 for a period of 12 months after final acceptance by _____ (Agency) of Line Items 1, 2 and 3. At that point, the Performance Assurance process will be turned over to the Agency.

Performance Assurance for Line Item 1: Lighting Upgrades, shall be based on the Calculation Methodology included in Attachment 2. This work is described in Attachment 8: Performance Assurance under *Detailed Procedures – Lighting Upgrade*.

Performance Assurance for Line Item 2: Controls Upgrades, shall be based on the Calculation Methodology included in Attachment 4. This work is described in Attachment 8: Performance



Assurance, under *Detailed Procedures – Energy Management System* and Attachment 9: ECM Calculations.

Performance Assurance for Line Item 3: Chiller Plant Upgrade, shall be performed in accordance with Attachment 8: Performance Assurance, under *Detailed Procedures – Chiller Plant Upgrade*.

It is anticipated that energy will be optimized in each covered building to achieve 29% reduction in Greenhouse Gas (GHG) and 31% reduction in energy intensity and advanced metering. However, the Contractor does not guarantee that the ECMs installed pursuant to this TO will result in energy savings to the Government, and the Government expressly recognizes and agrees that unrealized energy savings are not a basis for failing to make payment as required by Paragraph 6.D.

3. SUBMITTALS

Required submittals are described in Attachment TO-14.

4. TERM

This TO shall be effective from the date that the Award document is signed by both Parties. In the event the Parties sign this TO on different dates, the effective date shall be the latter of the two dates.

This TO shall have a term of 10 years, consisting of an anticipated 18 month design and construction period and a 9 year payment period. The term, not including the construction period, may not exceed 10 years.

A. Notice to Proceed

The Contractor shall not commence work on the _____ (installation/site) until _____ (Agency) issues a Notice to Proceed.

The Notice to Proceed is issued on receipt of all required bonds and insurance documents and on approval of the Contractor's Worker Safety & Health Program under [10 CFR 851](#) and the Contractor's Health & Safety Plan.

(Note: The Agency may want to specify in the TO the number of days allowed for submittal of Performance and Payment bonds and the Certificate of Insurance, typically between 10 to 15 days after the date of award. The number of days allowed for submittal of the Safety documents could be specified as well.)

The "Notice to Proceed" is issued with an "Agency/Site/M&O Safety Management" Form which must be completed by every Subcontractor to be used in performance of this TO and submitted to _____ (Agency) in accordance with Attachment TO-14, Agency Reporting & Submittal Requirements.

Within 15 days after the Contractor receives the "Notice to Proceed," the Contractor will commence work. Prior to receipt of the "Notice to Proceed" the Contractor may prepare and submit required submissions and may order materials and equipment that do not require prior Agency approval.

B. Performance Schedule

The detailed performance schedule is contained in Attachment 15.



5. ACCEPTANCE

The Contractor shall request an inspection by the Agency as the Contractor completes Line Items 1, 2 and 3. The _____ (Agency) will inspect the work within 14 calendar days of the request, and complete a “Certificate of Substantial Completion” for each Line Item. “Substantial completion” means that the facilities are usable and the greater majority of the work is installed and acceptable.

Any discrepancies or “punch list” items shall be described in writing. If the _____ (Agency) indicates acceptance, takes possession of the equipment, or uses the equipment for beneficial use, this shall be construed as acceptance of the work that is completed, with the items on the punch list representing work that is not accepted. The Contractor shall complete or correct all items on the punch list within 30 calendar days and shall present the Agency with documentation indicating completion. The Agency will indicate final acceptance in writing within 14 calendar days after completion of the punch list items. If the Agency fails to accept or reject the completed punch list items within 14 calendar days after written notice from the Contractor indicating completion, then the Agency shall be deemed to have accepted the work. Following Agency acceptance of the work, the Contractor shall not be liable to the Agency for any liability, loss or damage caused or alleged to be caused directly or indirectly by the equipment or by any inadequacy thereof or deficiency or defect therein, except as provided in [FAR 52.246-21](#), Warranty (see Attachment A-1, FAR Clauses).

6. PRICE, BILLING, FINANCING, AND PAYMENT

A. Price

The total firm fixed price for execution of the project defined above is \$xx,xxx,xxx.

B. Financing

_____ (Agency) will not spend capital investment dollars. The Contractor will finance the entire project price. The Contractor shall make all arrangements necessary to deliver the project as described above and will arrange for financing during the design and construction period. The total financed amount, including construction financing and financing fees, will be \$xx,xxx,xxx. Repayment will commence with the initial invoice submitted in _____ (Month) _____ (Year) and payment due in _____ (Month) _____ (Year) as described in Paragraph D below.

C. Financial Incentives, Rebates, and Design Assistance

Note: The Agency may want to consider discussing incentives and rebates with the Utility and negotiate taking any available rebates as a reduction in TO price, or having the amount of the rebates identified and applied as a reduction to the installation’s Utility bill.

The Contractor will provide to the Agency the same financial incentives, rebates, design review, goods, services, and/or any other assistance provided without charge, that is generally available to customers of a similar rate class or size.

If rebates are available and have been applied for by the Agency and such funds have been set aside, then the Contractor shall provide a separate letter clarifying timelines and responsibilities of both parties and guaranteeing rebates and other incentives from the Contractor to the Agency.



The Contractor, through its Subcontractor(s), is responsible for determining the source, value, and availability of any applicable financial incentives to the project offered by the state and others in which the _____ (installation/site) is located, and if the value of the incentives exceeds the administrative costs to be incurred by the Contractor or _____ (Agency) in acquiring such incentives.

The Contractor, through its Subcontractor(s), is responsible for coordinating with the CO for the preparation of all documentations required to apply for any such applicable financial incentives.

The preferred method for applying financial rebates/incentives is to have the rebates/incentives disbursed directly to the Utility and applied to reduce the total price. If this is not possible an alternative process must be considered in accordance with current Government policy.

D. Payment

Following final acceptance of Line Items 1, 2, and 3 by _____ (Agency), payments will be made annually in accordance with the Payment and Termination Schedule (Attachment 16). The Contractor or its designee will submit an invoice for the first payment, which will be due and payable within 30 days from final acceptance of Line Items 1, 2, and 3. The Contractor will submit invoices annually thereafter. Each successive annual payment will be due on the anniversary of the due date of the first payment.

It is the Contractor's responsibility to arrange for an adjustment to the due date for the first payment in the event of Contractor-caused delays in final acceptance of Line Items 1, 2, and 3. There shall be no additional cost to the Government or deviation from the dollar amount or number of payments in the TO. Delays by _____ (Agency) that prevent final acceptance and payment by the billing date will result in adjustment of the financing cost of the project. Following the *Agency's* acceptance, the *Agency's* obligation to pay all of the payments due hereunder is absolute and unconditional, and will not be entitled to any abatement, reduction, set-off, counterclaim, defense, interruption, deferment, recoupment, or deduction with respect to any payments due hereunder, including without limitation any reduction for unrealized energy savings.

The Contractor enters into this TO as the franchised natural gas supplier to _____ (Agency). If the *Agency* terminates the natural gas service agreement with the Contractor prior to the date of completing repayment for this project, they will either continue to make the annual payment in accordance with the Payment and Termination Liability Schedule or shall pay the Termination Amount identified in such Payment and Termination Liability Schedule.

Upon final payment, the Contractor shall execute a release of all claims against the *Agency* under this TO.

E. Buydown

_____ (Agency) retains the right, at any time following final acceptance of Line Items 1, 2, and 3, but prior to final payment, to buy down the outstanding TO payments without penalty by giving the Contractor 30 days prior written notice. Upon such buydown, the *Agency* will pay to the Contractor the pro rata



termination amount specified in the Payment and Termination Liability Schedule (Attachment 16). Payments will continue at the same level but the term of ECM financing will be shortened to reflect the amount of the buydown payments. Any such additional sums shall be used to reduce the outstanding Termination Amount, maintaining the payments and shortening the payback period. Each time an additional payment is made, the Payment and Termination Liability Schedule will be recalculated to show the new payback period. _____ (Agency) acknowledges and agrees that the payment of such amounts are reasonable and allowable costs with respect to the TO.

F. Pre-Acceptance Buyout

In the event that _____ (Agency) desires to terminate this TO for any reason (including, without limitation, for convenience) prior to final acceptance of Line Items 1, 2 and 3, they may do so by giving written notice to the Contractor 30 days prior to the effective date of such termination. _____ (Agency) will pay to the Contractor an amount negotiated between the *Agency* and the Contractor that is equal to the value of work verified as completed at the time of termination, plus allowable costs related to such work. If a termination occurs for the convenience of the Government, the amount payable pursuant to this paragraph shall be deemed as an allowable cost under [FAR Part 17](#) and [Part 52, Subpart 52.249-2](#).

Note: The *Agency* should be aware that the terms in E and F above have in some cases caused the lender to increase the interest rate or the termination liability amount to cover the risk of such buydowns and buyouts.

G. Post-Acceptance Buyout

In the event that _____ (Agency) desires to terminate this TO for any reason (including, without limitation, for convenience) after final acceptance of Line Items 1, 2 and 3, the *Agency* may do so by giving written notice to the Contractor 30 days prior to the effective date of such termination. The *Agency* shall pay to the Contractor a termination amount in accordance with the Payment and Termination Liability Schedule (Attachment 16).

7. ASSIGNMENT OF CLAIMS

The Contractor may assign payments due from _____ (Agency) under this TO pursuant to [FAR 52.232-23](#), *Assignment of Claims*. The *Agency* agrees to complete any necessary forms which acknowledge that assignment. Any bank, trust company or other financing institution that participates in financing an ECM shall not be considered a Subcontractor of the Utility. Any assignment of claims must comply with the provisions of [FAR Part 32, Subpart 32.8](#).

8. WAGE RATES AND LABOR STANDARDS

The attached wage determination from the U.S. Secretary of Labor shall be implemented in accordance with the statutes for labor standards requirements for contracts over \$2,000.00 involving construction. (Attachment B– U.S. Department of Labor General Decision)

The following labor standards provisions apply to work performed under this TO as if they were set forth herein in their entirety. For more information on clauses incorporated by reference see Attachment A-1 – Terms and Conditions.



FAR Ref	Title	Date
52.222-6	Davis-Bacon Act	Jul 2005
52.222-7	Withholding of Funds	Feb 1988
52.222-8	Payrolls and Basic Records	Jun 2010
52.222-9	Apprentices and Trainees	Jul 2005
52.222-10	Compliance with Copeland Act Requirements	Feb 1988
52.222-11	Subcontracts (Labor Standards)	Jul 2005
52.222-12	Contract Termination – Debarment	Feb 1988
52.222-13	Compliance with Davis-Bacon and Related Act Regulations	Feb 1988
52.222-14	Disputes Concerning Labor Standards	Feb 1988
52.222-15	Certification of Eligibility	Feb 1988
52.222-23	Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity for Construction*	Feb 1999
52.222-27	Affirmative Action Compliance Requirements for Construction	Feb 1999

Note: Ensure all FAR clauses/references are reviewed and included in the TO.

Note: For purposes of the Notice, the “covered area” is _____ (County, State). The goals for minority and female participation, expressed in percentage terms for the Contractor’s aggregate workforce in each trade on all construction work in the covered area are as follows:

1. Goals for Minority Participation for Each Trade 5.8%
2. Goals for Female Participation for Each Trade 6.9%

These goals are applicable to all of the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

9. SAFETY REQUIREMENTS

All work under this TO shall be conducted in a safe manner and shall comply with the requirements of *Agency* requirements. Furthermore, in performing work under this TO, the Contractor will perform work in a manner that ensures adequate protection for employees, the public, and the environment, and will be accountable for the safe performance of the work. The Contractor will exercise a degree of care proportionate with the work and the associated hazards. The Contractor will ensure that management of environment, safety and health (ES&H) functions and activities is an integral and visible part of its planning and execution processes while performing work at the site.

With respect to performance of any portion of the work under this TO that is performed on the _____ (installation/site), the Contractor agrees to comply with all State and Federal ES&H regulations, and with all ES&H requirements of M&O, the site operating contractor. *Agency* requirements include, but are not limited to, compliance with all OSHA standards, as well as with any other ES&H reporting requirements that the CO may require.



Other specific requirements relative to safety are as follows:

- A. Prior to commencing work, the Contractor shall meet with the COR's to agree on administration of the safety program.
- B. The Contractor's workplace may be inspected periodically for OSHA violations. Abatement of violations is the Contractor's responsibility. The Contractor will provide assistance to *Agency* and Federal/State OSHA inspectors if a complaint is filed. Any fines levied on the Contractor due to safety/health violations shall be paid promptly by the Contractor.
- C. In accordance with [FAR 52.236-13](#), *Accident Prevention*, as set forth in Paragraph 12 herein, "Additional Provisions", the Contractor is required to report to the CO all accidents within 24 hours of occurrence.
- D. In accordance with [FAR 52.236-13](#), *Accident Prevention*, as set forth in Paragraph 12 herein, "Additional Provisions", the Contractor shall submit to the COR a full report of damage to Government property and equipment by Contractor employees or subcontractors, at any tier within 24 hours of occurrence.

10. BONDS

Bonds are typically required within 15 days after award of the task order, since the contract price will have been negotiated.

- A. Within 30 days of TO award or acceptance of the Design and Construction Package, whichever is later, the Contractor will furnish a certified copy and duplicate of a performance bond (SF 25), with the project financier as co-beneficiary along with the *Agency*. The performance bond shall be in a penal sum equal to 100% of the total firm fixed price for all ECMs. The Contractor will furnish a payment bond (SF25A) in duplicate. The payment bond shall be in a penal sum equal to 100% of the total firm fixed for all ECMs.
- B. The performance and payment bonds will remain in effect during the total implementation period for all ECMs. The ECM implementation period shall include all time required for installation, testing, measuring initial performance, and *Agency* acceptance of all contractor-installed ECMs. The payment bond shall be released upon receipt of satisfactory evidence that all subcontractors, laborers, etc., have been paid in full.
- C. The Contractor will not file any mechanics liens against the *Agency* for the TO projects and this requirement shall flow down to all subcontractors. Therefore, the payment bond will secure the Contractor's obligations for payment of laborers, suppliers, and all subcontractors.

11. INSURANCE

In accordance with [FAR 52.228-5](#), "Insurance – Work on a Government Installation", which is incorporated herein by reference, the Contractor will, at no cost to the Government, maintain policies providing the following insurance protection, which insurance will apply to all operations of the Contractor hereunder and employees of the Contractor engaged therein.

- A. Worker's Compensation Coverage, as provided in the Worker's Compensation Law of the State having jurisdiction, including occupational disease coverage for limits of



\$1,000,000 per person in any one case and additional Employees Liability of \$1,000,000 per occurrence.

- B. General Liability Insurance, with limits of \$1,000,000/\$2,000,000 for bodily injury liability and \$100,000 for property damage liability in the comprehensive liability form.
- C. Automobile Liability Insurance, with limits of \$250,000/500,000 for bodily injury liability and \$50,000 for property damage liability in the comprehensive policy form.

The Contractor will provide an endorsement to its liability policies naming the U.S. Government and “*Agency/Site/M&O*” as additional insureds.

The Contractor will furnish the CO a certificate of insurance to show compliance with this paragraph. The insurance certificate will be submitted within 14 days after award and prior to issuance of a “Notice to Proceed”. The Contractor will also ensure that the certificate states that the insurance carrier(s) will give _____ (Agency) 30 days prior written notice if there is any cancellation or material change in such policies. The Contractor will ensure that the certificates are kept up to date during the period of contract performance.

The Contractor agrees to insert the substance of this clause in all subcontracts hereunder at any tier where work will be performed on the _____ (installation/site).

The Contractor may purchase such additional or other insurance protection, as it may deem necessary, at its own expense.

Nothing herein shall relieve the Contractor of or limit the Contractor’s liability for losses and damages to person or property as a result of its operations. The Contractor will indemnify, and hold _____ (Agency), and any person acting on behalf of the *Agency*, harmless from any and all liability, including attorneys’ fees and legal costs, associated with or resulting from the Contractor’s operations under this TO.

12. CONTRACT ADMINISTRATION

The Contracting Officer (CO) is:

Name:

Email:

Telephone:

Fax:

The CO is the primary point of contact for all matters regarding this TO except technical/project matters.

The Contracting Officer Representative (COR) is:

Name:

Email:

Telephone:

Fax:



The COR is the focal point for all technical/project matters related to this Task Order.

13. JOB COORDINATION

Note: Only use this M&O verbiage if you have an M&O contractor performing maintenance on any affected equipment/ECM. The paragraph can be modified to include the authority section for the CO, COR, Safety Officer.

_____ (M&O Contractor) operates the _____
(installation/site) under Contract # _____ with _____ (Agency). Job coordination for installation of the ECMs on the *installation/site* will be done through M&O's Facilities Improvements Office (FIO). After the "Notice to Proceed" as described in Paragraph 4.A above, all day-to-day coordination regarding construction management from the M&O to the Contractor will come from FIO in writing.

The *Agency* Contracting Office is the sole entity that can modify the TO or initiate change orders. All direction to the Contractor must come from the *Agency* CO. The *Agency* COR will provide answers for questions and/or issues involving construction only and has no authority to make any changes whatsoever to the TO. The Safety Officer shall provide answers for questions and/or issues involving safety only and has no authority to make any changes whatsoever to the TO. All correspondence, including but not limited to: notifications, changes, or direction referred to in this TO or other documents between the Contractor, *Agency* and M&O will be in writing. All correspondence from the Contractor is to be addressed to the *Agency* CO; with copies to the *Agency* COR and the M&O FIO.

The M&O FIO is responsible for documenting and reporting the daily monitoring and inspection of all work activities at the site to the *Agency* COR. These responsibilities include and are not limited to:

- A. The assurance that all installed materials and systems meet the level of quality as defined in the TO.
- B. Ensuring that all work is completed in accordance with the Contractor's ES&H program and the ES&H provisions of this TO.

FIO is the first line of contact with the Contractor's field organization on matters involving safety and interface with *installation/site* operations. The *Agency* CO is responsible for all contracting matters. The *Agency* Contracting Officer Technical Representative (COR) is the first line of contact between the *Agency* and the Contractor for all technical matters. The Contractor is to take direction from no other sources within the *Agency* or M&O organization.

14. REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

The Representations, Certifications, and Other Statements of Offerors completed by the Contractor and certified in the Online Representation and Certifications Application (ORCA) System, are hereby incorporated by reference.

15. SMALL BUSINESS SUBCONTRACTING PLAN

The Small Business Subcontracting Plan submitted and filed by Contractor and incorporated in the Areawide Contract, including any annual plans, are hereby incorporated by reference.



16. TITLE TO, AND RESPONSIBILITY FOR, CONTRACTOR-INSTALLED EQUIPMENT

Title to all equipment installed by the Contractor will be vested in the Government after acceptance by the Government, and will not relieve the Contractor's responsibility for ECM performance.

17. CONTRACTOR'S RESPONSIBILITIES

The Contractor is responsible for all damages to persons or property that occur as a result of the Contractor's fault or negligence. The Contractor is responsible for all materials delivered and work performed until completion and acceptance of the entire work, except for any completed unit of work, which may have been accepted under this TO. The Contractor's responsibility applies to activities of the Contractor, its agents, lower-tier subcontractors, and employees.

18. GENERAL PROVISIONS

The following general provisions are incorporated in and made a part of this TO:

Attachment	Title
A-1	Terms and Conditions – Federal Acquisition Regulation Clauses
A-2	Terms and Conditions – <u>Agency</u> Clauses
A-3	Terms and Conditions – Site-Specific Clauses
B	Wage Determination (ref)
C	ETL 13-10

19. LIST OF REFERENCED ATTACHMENTS (add or delete as desired by installation)

The following attachments referenced herein are incorporated in and made a part of this TO:

Attachment #	Description
TO-1	<u>Agency/site/M&O guidance</u>
TO-2	Lighting Statement of Work
TO-3	Lighting Specifications
TO-4	Controls Statement of Work
TO-5	Controls Specifications
TO-6	Specifications for Chiller Plant Upgrade – <u>Identification of Specifications & Bid Package</u>
TO-7	Chiller Construction Drawings
TO-8	Performance Assurance Plan
TO-9	ECM Calculations
TO-10	Lighting Calculation Spreadsheets
TO-11	Controls Calculation Spreadsheets
TO-12	Chiller Calculation Spreadsheet
TO-13	Measurement & Verification
TO-14	<u>Agency</u> Reporting & Submittal Requirements
TO-15	Performance Schedule (TBD)
TO-16	Payment & Termination Liability Schedule (TBD)



Appendix E - References and Master List of Links

Section	Type	Name of Item Linked	Link
Chapter 2, 4, Justification and Approval for Other Than Full and Open Competition	External	10 U.S.C. 2913	https://www.gpo.gov/fdsys/pkg/USCODE-2010-title10/pdf/USCODE-2010-title10-subtitleA-partIV-chap173-subchapl-sec2913.pdf
Chapter 2	External	10 United States Code (U.S.C.) 2911-13, Energy Performance Goals and Plans for Department of Defense	https://www.gpo.gov/fdsys/granule/USCODE-2010-title10/USCODE-2010-title10-subtitleA-partIV-chap173-subchapl-sec2911
Chapter 2, Justification and Approval for Other Than Full and Open Competition	External	Public Law (P.L.) 109-58, Energy Policy Act of 2005	https://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf
Chapter 2	External	10 Code of Federal Regulations (CFR) 436, Federal Energy Management and Planning Programs (10 CFR 436.18-19)	https://www.gpo.gov/fdsys/search/pagedetails.action?collectionCode=CFR&browsePath=Title+10%2FChapter+II%2FSubchapter+D%2FPart+436%2FSubpart+A%2FSection+436.18&granuleId=CFR-2002-title10-vol3-sec436-18&packageId=CFR-2002-title10-vol3&collapse=true&fromBrowse=true
Chapter 2	External	Energy Independence and Security Act (EISA) of 2007	https://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf
Chapter 2, Justification and Approval for Other Than Full and Open Competition	External	10 U.S.C. 2866, Water Conservation at Military Installations	https://www.law.cornell.edu/uscode/text/10/2866
Chapter 2	External	Air Force Policy Directive (AFPD) 32-10, Installations and Facilities	http://static.e-publishing.af.mil/production/1/af_a4_7/publication/afpd32-10/afpd32-10.pdf
Chapter 2	External	42 U.S.C. 8287, Section 801(a)(2)(A)	https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/html/USCODE-2010-title42-chap91-subchapVII.htm
Chapter 2	External	42 U.S.C. 8287; Section 801(a)(2)(B)	https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/html/USCODE-2010-title42-chap91-subchapVII.htm
Chapter 2	External	10 CFR 436, Federal Energy Management and Planning Programs	https://www.gpo.gov/fdsys/granule/CFR-1999-title10-vol3/CFR-1999-title10-vol3-part436
Chapter 2	External	10 CFR 436.14	https://www.gpo.gov/fdsys/granule/CFR-2011-title10-vol3/CFR-2011-title10-vol3-sec436-14
Chapter 2	External	10 CFR 436, Federal Energy Management and Planning Programs	https://www.gpo.gov/fdsys/granule/CFR-1999-title10-vol3/CFR-1999-title10-vol3-part436
Chapter 2	External	10 CFR 436.14	https://www.gpo.gov/fdsys/granule/CFR-2011-title10-vol3/CFR-2011-title10-vol3-sec436-14



Section	Type	Name of Item Linked	Link
Chapter 2	External	Life Cycle Costing Manual for the Federal Energy Management Program (National Institute of Standards and Technology [NIST] 85-3273)	https://energy.gov/eere/femp/building-life-cycle-cost-programs
Chapter 2	External	Title 10 USC § 2913(d)(3)	http://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title10-section2913&num=0&edition=prelim
Chapter 2	External	Purpose Act (31 U.S.C. 1301)	https://www.gpo.gov/fdsys/granule/USCODE-2010-title31/USCODE-2010-title31-subtitleII-chap13-subchapl-sec1301
Chapter 4, 5	External	FAR 6.302.5	http://www.farmaster.com/farmaster/data/idx/FAR84/0603020005.htm
Chapter 4, Justification and Approval for Other Than Full and Open Competition	External	FAR 16.703	https://www.acquisition.gov/far/html/Subpart%2016_7.html
Chapter 4	External	DFARS 216.703	http://www.acq.osd.mil/dpap/dars/dfars/html/current/216_7.htm
Chapter 4	External	Procedures, Guidance and Information (PGI) 217.703(d)	http://www.acq.osd.mil/dpap/dars/dfars/html/current/216_7.htm
Chapter 5	External	10 USC 2304(c)(5)	http://uscode.house.gov/view.xhtml?req=10+USC+2304%28c%29%285%29&f=treasort&fq=true&num=22&hl=true&edition=prelim&granuleid=USC-prelim-title10-section2304c
Chapter 5	External	Competition in Contracting Act (CICA)	http://www.cohenseglas.com/federal-contracting-database/competition-in-the-contracting-act
AFCEC Guide to Annual M&V Activities	External	Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities	https://www.energy.gov/eere/femp/downloads/guide-government-witnessing-and-review-measurement-and-verification-activities
AFCEC Guide to Annual M&V Activities	External	Reviewing Post-Installation and Annual Reports for Federal ESPC Projects	https://energy.gov/eere/femp/downloads/reviewing-post-installation-and-annual-reports-federal-espc-projects
AFCEC Guide to Annual M&V Activities	External	FEMP webpage	https://energy.gov/eere/femp/federal-energy-management-program
Justification and Approval for Other Than Full and Open Competition	External	10 U.S.C. 2913 (D)(3)	https://www.gpo.gov/fdsys/pkg/USCODE-2010-title10/pdf/USCODE-2010-title10-subtitleA-partIV-chap173-subchapl-sec2913.pdf
EMSA/Model Agreement	External	48 CFR 9.404	https://www.law.cornell.edu/cfr/text/48/9.404



Section	Type	Name of Item Linked	Link
EMSA/Model Agreement	External	FAR, Part 36, Subpart 36.511	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2036.5.html
EMSA/Model Agreement	External	FAR, Part 52, Subpart 52.301	https://www.gpo.gov/fdsys/granule/CFR-2011-title48-vol2/CFR-2011-title48-vol2-sec52-301
EMSA/Model Agreement	External	Energy Prices and Discount Factors for Life-Cycle-Cost Analysis	http://nvlpubs.nist.gov/nistpubs/ir/2017/NIST.IR.85-3273-32.pdf
EMSA/Model Agreement	External	FAR 52.203-3, Gratuities	https://www.acquisition.gov/sites/default/files/current/far/html/52_200_206.html
EMSA/Model Agreement	External	FAR 52.203-5, Covenant Against Contingent Fees	https://www.acquisition.gov/sites/default/files/current/far/html/52_200_206.html
EMSA/Model Agreement	External	FAR 52.203-7, Anti- Kickback Procedures	https://www.acquisition.gov/sites/default/files/current/far/html/52_200_206.html
EMSA/Model Agreement	External	FAR 52.222-3, Convict Labor	https://www.acquisition.gov/sites/default/files/current/far/html/52_222.html
EMSA/Model Agreement	External	FAR 52.222-25, Affirmative Action Compliance	https://www.acquisition.gov/sites/default/files/current/far/html/52_222.html
EMSA/Model Agreement	External	FAR 52.222-26, Equal Opportunity	https://www.acquisition.gov/sites/default/files/current/far/html/52_222.html
EMSA/Model Agreement	External	FAR 52.223-6, Drug Free Workplace	https://www.law.cornell.edu/cfr/text/48/52.223-6
EMSA/Model Agreement	External	FAR 52.233-1, Disputes	https://www.acquisition.gov/sites/default/files/current/far/html/52_233_240.html
EMSA/Model Agreement	External	FAR Part 52, Subpart 52.246-20	https://www.govregs.com/regulations/title48_chapter1_part52_subpart52.2_section52.246-20
EMSA/Model Agreement	External	FAR Part 32, Subpart 32.903	http://federal.elaws.us/cfr/title48.part32.section32.903
EMSA/Model Agreement	External	FAR Part 32, Subpart 32.907	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2032.9.html#wp1033041
EMSA/Model Agreement	External	FAR Part 33, Subpart 33.2	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2033.2.html
EMSA/Model Agreement	External	FAR Part 36, Subpart 36.502	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2036.5.html#wp1076711
EMSA/Model Agreement	External	FAR Part 42, Subpart 42.13	https://www.law.cornell.edu/cfr/text/48/part-42/subpart-42.13
EMSA/Model Agreement	External	10 USC Section 2912	https://www.law.cornell.edu/uscode/text/10/2912
EMSA/Model Agreement, UESC Task Order (TO) Sample	External	FAR Part 17	https://www.acquisition.gov/sites/default/files/current/far/html/FARTOCP17.html
EMSA/Model Agreement, UESC Task Order (TO) Sample	External	FAR Part 52, Subpart 52.249-2	https://www.acquisition.gov/sites/default/files/current/far/html/52_248_253.html
EMSA/Model Agreement, UESC Task Order (TO) Sample	External	FAR Part 52, Subpart 52.232.23	https://www.acquisition.gov/sites/default/files/current/far/html/52_232.html#wp1152984
EMSA/Model Agreement, UESC Task Order (TO) Sample	External	FAR Part 32, Subpart 32.8	https://www.law.cornell.edu/cfr/text/48/part-32/subpart-32.8



Section	Type	Name of Item Linked	Link
EMSA/Model Agreement	External	FAR Part 42, Subpart 42.12	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2042_12.html
EMSA/Model Agreement	External	FAR Part 42, Subpart 42.1204	https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2042_12.html
EMSA/Model Agreement	External	42 U.S.C. §9601	https://www.law.cornell.edu/uscode/text/42/9601
EMSA/Model Agreement	External	49 CFR Part 172	https://www.gpo.gov/fdsys/pkg/CFR-1998-title49-vol2/xml/CFR-1998-title49-vol2-part172.xml
EMSA/Model Agreement	External	FAR Part 52, Subparts 52.236-2	https://www.acquisition.gov/far/html/52_233_240.html#wp1113365
EMSA/Model Agreement	External	52.236-3	https://www.acquisition.gov/sites/default/files/current/far/html/52_233_240.html#wp1113375
UESC Task Order (TO) Sample	External	10 CFR 851	https://www.gpo.gov/fdsys/granule/CFR-2012-title10-vol4/CFR-2012-title10-vol4-part851
UESC Task Order (TO) Sample	External	FAR 52.246-21	http://www.farmaster.com/farmaster/data/idx/FAR84/5202460021I.htm
UESC Task Order (TO) Sample	External	FAR 52.236-13	https://www.gpo.gov/fdsys/pkg/CFR-2010-title48-vol2/pdf/CFR-2010-title48-vol2-sec52-236-13.pdf
UESC Task Order (TO) Sample	External	FAR 52.228-5	http://farmaster.com/farmaster/data/idx/FAR84/5202280005.htm