FEMP UESC Overview

Welcome!
March 9, 2016
Mission

FEMP works with key individuals to accomplish energy change within organizations by bringing expertise from all levels of project and policy implementation to enable Federal Agencies to meet energy related goals and to provide energy leadership to the country.
Agenda

• Federal Energy Management

• UESC Authority
  – Definition
  – Legislation
  – GSA Areawide Contracts

• UESC Process
  – Acquisition Planning
  – Project Development
  – Design and Installation
  – Post Acceptance

• Closing
  – Benefits of UESC
  – Project Examples
  – Utility Incentives
  – Resources
  – Discussion
Federal Energy Management
# Federal Goals

<table>
<thead>
<tr>
<th>Goals</th>
<th>Existing Goals</th>
<th>New E.O. 13693 Targets (March 2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building Energy Intensity (Btu/Sqft) Reduction</td>
<td>30% (by 2015) Baseline 2003</td>
<td>25% (by 2025) Baseline 2015</td>
</tr>
<tr>
<td>Clean Energy as a Percentage of Building Electric and Thermal Energy</td>
<td>None</td>
<td>25% (by 2025)</td>
</tr>
<tr>
<td>Renewable Electricity Use</td>
<td>20% (by 2020)</td>
<td>30% (by 2025)</td>
</tr>
<tr>
<td>Potable Water Use Intensity (Gal/Sqft) Reduction</td>
<td>26% (by 2020) Baseline 2007</td>
<td>36% (by 2025) Baseline 2007</td>
</tr>
</tbody>
</table>
Section 3 (d) of Executive Order 13693,

- (i) installing agency-funded renewable energy on-site at Federal facilities and retaining renewable energy certificates (RECs);
- (ii) contracting for energy that includes the installation of a renewable energy project on-site at a Federal facility or off-site from a Federal facility and retaining the RECs for the term of the contract;
- (iii) purchasing electricity and corresponding RECs; and
- (iv) purchasing RECs.
### Federal Goals (continued)

<table>
<thead>
<tr>
<th>Goals</th>
<th>Existing Goals</th>
<th>New E.O. 13693 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Buildings Complying with Sustainability Guiding Principles</td>
<td>15% (by 2015)</td>
<td>15% (by 2025)</td>
</tr>
<tr>
<td>Efficiency Investment Implemented through Performance Contracting</td>
<td>$4B (by 2016)</td>
<td>$4B (by 2016)</td>
</tr>
<tr>
<td>Vehicle Petroleum Reduction</td>
<td>30% (by 2020) Baseline 2005</td>
<td>None</td>
</tr>
<tr>
<td>Increase in Vehicle Alternative Fuel Use</td>
<td>159% (by 2015) Baseline 2005</td>
<td>None</td>
</tr>
<tr>
<td>Fleet-wide Per Mile Greenhouse Gas Emissions Reduction</td>
<td>None</td>
<td>30% (by 2025) Baseline 2014</td>
</tr>
</tbody>
</table>
FEMP Funding Opportunity Announcement (FOA)

Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) – Announced March 6, 2015

• $2.85 million available, awards between $50,000 and $1 million (anticipate average award of $400K)

• Direct funding to federal agencies to assist in funding renewable energy projects incorporated in UESC, ESPC or PPA
  – Cost Leverage requirement ≥50% of Total Project costs

• Notification of Award Selections – September 15, 2015

• Awards Announced – January 27, 2016

Visit the website: http://energy.gov/eere/femp/2015-assisting-federal-facilities-energy-conservation-technologies-affect-funding
And the Winners Are!

• U.S. Department of State (Overseas Diplomatic Posts)
  – 11.9 MW photovoltaic (PV) system
  – doubles the use of renewables

• U.S. Department of Agriculture (U.S. Forest Service)
  – 0.76 MW project deploys solar panels at 11 sites across Oregon and Washington
  – 100% of electricity needs for 4 sites; 50% at remaining locations
And the Winners Are! (continued)

• U.S. Department of Justice (Drug Enforcement Administration, DEA)
  – 0.79 MW photovoltaic (PV) system combines ground and carport system at El Paso Intelligence Center (EPIC)
  – 30% of EPIC’s energy use; first renewable energy system

• U.S. Department of Defense (U.S. Marine Corps Installation Command)
  – 10 MW biomass steam turbine generator
  – reduces consumption by 4,600 megawatthours annually
  – Net-zero energy status and energy security
Energy Incentive Programs

• **State Based Energy Incentive Program**
  - In 2014, utilities offered $8.7 B in EE incentives designed to
    – Conserve energy
    – Optimize the value to the rate payers - provided as prescriptive or customized
    – Assist customers with facility improvements and EE/RE goals
  - Agency customers pay into utility incentive programs
    – Use them to improve your facilities!

Finding Funding
Click on a state to see a summary of available energy incentives

- Alabama
- Alaska
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- District of Columbia
- Florida
- Georgia
- Hawaii
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota
- Mississippi
- Missouri
- Montana
- Nebraska
- Nevada
- New Hampshire
- New Jersey
- New Mexico
- New York
- North Carolina
- North Dakota
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- Utah
- Vermont
- Virginia
- Washington
- West Virginia
- Wisconsin
- Wyoming

http://energy.gov/eere/femp/energy-incentive-programs
Energy Incentive Programs

Utility incentives may be:

• Applied to the financed project payment
• Assigned to the contractor
• Applied as a credit to the utility bill

Agencies should obtain letter of commitment for incentives before using them in the project’s economic analysis
Federal Use of UESC

Addendum to OMB Memorandum M-98-13 on Federal use of ESPC and UESC

• A UESC may be scored on an annual basis if the UESC requires:
  – UESC contracts must obligate budgetary resources to **cover payments for the fiscal year in which contract was awarded**
  – A UESC must include:
    • Performance assurance or energy savings guarantees
    • M&V of savings through commissioning or retro-commissioning
    • Competition or an alternatives analysis
UESC Authority
UESC Authority

• Definition
• Legislation
• Energy Management Services under an Areawide Contract
Definition: Utility Energy Services Contract (UESC)

A UESC is a contract authorized by 42 USC 8256* that allows serving utilities to provide their Federal customers with energy and water efficiency improvements and demand-reduction services.

Section 546(c) Utility Incentive Programs

(1) 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.

(2) May accept utility financial incentives, goods, and services generally available to customers

(3) Are encouraged to enter into negotiations with utilities to design cost effective programs to address unique needs of facilities used by the agency

See Enabling Documents, p. 20
10 USC 2913 Energy Savings Contracts and Activities (DOD)

Paraphrased:

(a) Shared energy savings contracts –
   1) Develop a simplified method of contracting for shared energy savings contract services that will accelerate the use of these contracts

(b) Permits and encourages participation in any gas or electric utility programs for the management of energy demand or conservation for management of energy demand or for energy conservation

(c) Authorizes the acceptance of financial incentive, goods, or services to adopt technologies and practices that support DOD energy performance goals

(d) Authorizes agreements with gas or electric utilities
   1) Design and implement cost-effective demand and conservation programs to address requirements and circumstances of the installation
   2) Finance terms equivalent to most favored customer
   3) Repay from funds available for purchase of utility services
   4) Requires government to take title of equipment during or upon expiration of agreement
10 USC 2866 Water Conservation at Military Installations

Paraphrased:

Water conservation activities

1) **Permit and encourage** participation in programs conducted by a utility for the management of water demand or for water conservation

2) **Accept financial incentive** (including agreement to reduce amount of future water bill), *goods or services* generally available from a utilities
What are the benefits of UESC?

<table>
<thead>
<tr>
<th>Agency</th>
<th>Utility</th>
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<tbody>
<tr>
<td>• Leverage incentives including financing (at optimal rates)</td>
<td>Increase incentive program impact and participation</td>
</tr>
<tr>
<td>• Optimize use of energy and water to meet goals</td>
<td>Reduce need for new generation</td>
</tr>
<tr>
<td>• Streamline contracting with established source</td>
<td>Improve system reliability through improved customer load profiles</td>
</tr>
<tr>
<td>• Take advantage of utility expertise</td>
<td>Assist Federal customer goals</td>
</tr>
<tr>
<td>• Appropriate for a wide range of projects and facilities, including leased space</td>
<td>Meet Public Utility Commission requirements</td>
</tr>
</tbody>
</table>

**Resources:** *GSA Opinion on Acquisition of DSM Services*
UESC Authority

FAR Part 41: Acquisition of Utility Services

• Defines “Utility Service” as the furnishing of electricity, natural or manufactured gas, water, sewage, thermal energy, chilled water, steam, hot water, or high-temperature hot water.

• Authorizes GSA to establish contracts, AWC’s, to be used by all federal agencies to procure utility service within the utility’s franchised service territory.

Resources:

“Procuring Energy Management Services with the GSA Utility Areawide Contract”, Areawide Contracts include an “Authorization for Energy Management Services” (EMSA), See link to AWC Guide in the notes.
UESC Authority

FAR Part 41: Acquisition of Utility Services

FAR Part 41
42 USC 8256 ~ 10 USC 2913

GSA Utility AreaWide Contract

Electric Transmission
Natural Gas Transportation
Steam
Electric Distribution

Electricity
Water
Natural Gas

Authorization for Energy Management Services (EMSA)
Authorization for Energy Management Services (EMSA)
UESC Authority

Acquiring Energy Management Services under an AWC

FAR Part 41
42 USC 8256 ~ 10 USC 2913

GSA Utility Areawide Contract

Utility Energy Management Services

Energy Assessment
Demand Response
Incentives

UESC
(Comprehensive Projects w/ Financing Option)
Awarding a UESC under an AWC

- GSA signs AWC with utility
- Agencies place UESC Task Orders (TOs) under the AWC
- An optional Master Agreement may be developed between the ordering agency and utility to establish agency-specific terms & conditions

Resources:
- GSA Opinion concluding that UESCs may have financing terms up to 25 years, see Enabling Documents
Authority: 41 USC 130 and 241.103 and 48 CFR chapter 1
241.103 Statutory and delegated authority -
  • Contracting officer may enter into a shared shavings contract under 10
    USC 2913 [DOD UESC Authority] for a period not to exceed 25 years.

Comments were due on or before January 19, 2016
GSA Energy Conservation Measure Criteria

1) The measure must produce measurable energy or water reductions or measurable amounts of demand reduction;
2) The measure must be directly related to the use of energy or water, or demand reduction;
3) The preponderance of work covered by the measure (measured in dollars) must be for items 1 and 2 above; and
4) The measure must be an improvement to real property.

Resources:

- “Procuring Energy Management Services with the GSA Areawide Contract”, see Enabling Documents, p. 115
UESC Authority

Potential ECMs

- Boiler and chiller plants
- Energy management control systems
- Building envelope
- HVAC
- Chilled/hot water and steam distribution
- Lighting
- Electric motors/drives
- Refrigeration
- Distributed generation
- Renewable energy systems
- Energy/utility distribution
- Water and sewer
- Electrical peak shaving/load shifting
- Rate adjustments
- Energy-related process improvements
- Commissioning
- Advanced metering
- Appliance/plug load reductions
- Combined Heat and Power

List of ECMs is in UESC Model Agreement, Enabling Documents, p. 161
UESC Process
UESC Task Order Award Process

Overarching Documents

AWC

Master Agreement (Optional)

TO Award for UESC

Step 1: Acquisition Planning through Utility Selection

Agency developed initial SOW → Acquisition strategy/planning → Draft initial J&A → Survey interest of eligible utilities → Provide fair consideration to interested utilities → Agency selects utility and notifies all utilities of selection

Step 2: Project Development

EMSA for PA → Utility conducts / Agency supports and evaluates PA → EMSA for FS → Utility conducts / Agency supports and evaluates FS → Agency requests firm-fixed price for D&I → Finalize J&A → Award D&I T.O. → Report project to FEMP & GSA

Implementing the TO

Step 3: Design and Installation

Utility submits designs; agency reviews/approves → Utility installs ECMs / Agency monitors → Utility performs / Agency receives O&M training, commissioning, etc. → Utility proves ECMs performance → Agency accepts projects

Step 4: Post-Acceptance

Invoices & payments → Ongoing performance assurance and annual verification of savings → Close out contract at end of term
UESC Process: Step 1

Step 1: Discussion topics

- Acquisition Plan
- Acquisition Team
- Initial project scope
- Funding strategy
- Utility selection
- Justification and Approval for Other Than Full and Open Competition (J&A)
UESC Process: Step 1

Acquisition Plan – Key Elements

• Develop a clear scope with schedule and cost objectives
• Plan sufficient and appropriate funds
• Plan a sound and equitable business arrangement
• Manage risk of concurrent development/production
• Plan to support installed systems/equipment
• Plan to ensure competition and small business
• Obtain resources to award and administer the contract
Acquisition Team

• **Definition:** A working group with representation from the various departments that contain the knowledge, experience, responsibility, and authority to develop, authorize, and award the project

**Best Practices:**

• Project development time is reduced and results are improved when energy managers and key technical staff participate in the acquisition planning and provide on-going technical support to the contracting team
Acquisition Team – Contracting

Members
- Contracting Officer (CO)
- Acquisition staff

Roles & Responsibilities
- Ensure that contracts adhere to appropriate regulations while addressing agency needs
- Develop contract documents
- Ensure that scope and pricing are in the best interest of the government
- Award the TO
- Responsible for ensuring invoices are received and paid through the term of the contract
Acquisition Team – Technical

Members

- Facility Energy Manager
- O&M team – manager, HVAC and EMCS Specialists; may include O&M contractor (base operations support contractor)
- Environment, Safety, & Health Specialist

Roles & Responsibilities

- Identify project goals
- Support development of the contract documents
- Support utility site investigation and project development efforts
- Review utility deliverables
- Provide oversight during construction
- Act as the COTR
- Operate & maintain equipment after installation
Acquisition Team – Finance

**Members**
- Budget
- Accounting

**Roles & Responsibilities**
- Initial investment
- Financing
- Ensuring that funds will be available for payments
- Make payments
Acquisition Team – Legal Counsel

Members

- Agency Attorney
- Regional or Facility Attorney

Roles & Responsibilities

- Review project documents to ensure appropriate application
- Provide comment and opinion to guide the process as needed
- Provide guidance and approval of the J&A
Acquisition Team – Decision Makers

Members
- Facility Operations & Maintenance Manager
- Facility Manager
- Commander

Roles & Responsibilities
- Ensure that site needs and goals are met within the agency’s mission and budget
- Provide essential support and guidance
Acquisition Team – Others

Members

- Tenants
- Union representative
- Labor relations
- Safety
- Site security
- Real estate

Roles & Responsibilities

- Provide consultation and support during design, installation, and possibly post-installation
- Safety for example, will monitor overall safety of project and ensure that contractors comply with FAR and OSHA and other safety requirements (EM385-1-1)
Utility Team

**Members**
- Project Manager
- Federal Account Rep
- Engineering
- Legal Counsel
- Contracting Staff
- Executive Staff

**Roles & Responsibilities**
- Within stated federal requirements, such as small business plan, subcontract competition, etc.,
- Identify potential ECMs that meet the needs of the agency
- Develop a technically sound and life-cycle cost-effective solution that is priced competitively and fairly
- Install the project, ensure performance meets design intent, provide post-installation services as contracted.
FEMP Direct Project Support

FEMP brings technical expertise to support your project

• FEMP UESC team includes
  • FEMP Project Leader, NREL, ORNL, PNNL including UESC and technology experts
  • FEMP Financing Specialists and Project Facilitators

• Direct project support is provided as needed
  • UESC training and resources
    - Workshops
    - Webinars
    - Legislation and policy
    - Sample contract documents and templates
  • Advise and consult or in-depth support
    - Technical review
    - Financial review
    - RE screening
Acquisition Team – Best Practices

• Prepare for Success
  – Plan to establish project objectives, expedite the acquisition, and ensure FAR and agency requirements are met

• Put your team together early
  – Clarify roles and responsibilities, manage expectations, gain commitment from managers, staff and stakeholders
  – Inform and stay informed of activities that may impact the project

• Prepare for team member turnover
  – Document your process
  – Capture institutional knowledge
UESC Process: Step 1

Initial Project Scope

Drivers

- Energy program mandates
- List of sites, buildings, and systems
- Plans for improvements and future use
- Equipment conditions
- Agency identified ECM list
- Utility budget
- Available incentives

Initial Scope

Best Practices:

- Determine facility needs and priorities
- Develop a preliminary project scope
UESC Process: Step 1

**Funding Strategy**

- UESC Projects can be funded through appropriations and financing

**Resources:**

- 42 USC 8253, EISA Section 512, reinforces funding flexibility
Maximize the value and impact of your project

- Implement a comprehensive project
  - For economies of scale, develop the largest viable project
  - Include multiple sites in a single procurement
  - Doing more with fewer procurement actions

- Include planned improvements that qualify as ECMs

- Pay for assessments with appropriated funds

- Use available appropriations to buy down the project or to fund long-payback ECMs

- Use financing rather than waiting for appropriations
Utility Selection
Fair Opportunity for Source Selection – FAR 16.505(b)

• FAR requires agencies to provide a **fair opportunity to be considered** to all eligible utilities

• Strategies and methods used successfully for UESC:
  – Limit the submission to vital information to save time and money
  – Utility presentations allow the agency to gain familiarity with the utility’s team
  – As it makes sense, tailor the process to the project scope
Letter of Interest

• Action: CO contacts each serving utility
• Purpose: to determine interest in providing a UESC
• Objectives:
  – Clarify agency intention to use UESC to meet energy goals
  – Describe the initial project scope
  – Inform utility that you are providing the same opportunity for consideration to all serving utilities
  – Provide evaluation method and criteria
• CO Tip: email provides a time stamp and electronic record
Utility Selection Evaluation Factors

• Develop evaluation factors, e.g.:
  – *Concept and Vision*: Multi-year/multiple T.O.s or single T.O.
  – *Experience*: types of projects, complexity, size/scope, number of projects
  – *Past performance*: how well they’ve done; with references
  – *Key Personnel*: staff qualifications, use of in-house or ESCO, project manager, etc.
  – *Subcontracting approach*: small business, competing subs, local jobs, assuring quality, etc.
  – *Pricing*: explanation of fees and markups, overhead and profit, contingency, expectation of payment/cost recovery for assessments, ability to secure financing at reasonable terms, etc.
  – *Agency’s history/experience with the utility*

CO Tip: Design selection process appropriate to the scope of the effort
Utility Presentation to Agency Team

The presentation should address:

• Evaluation criteria

• All available energy, water, and renewable energy incentives

• UESC experience and capabilities

• Other

• UESC Best Practice: Agency provide presentation format with the invitation to present
### Summary Chart for Selecting Utility

#### Summary – Pricing Evaluation

<table>
<thead>
<tr>
<th></th>
<th>BASE &amp; OPTIONS</th>
<th>Water Utility</th>
<th>Natural Gas Utility</th>
<th>Electric Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OVERHEAD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>PROFIT</td>
<td></td>
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<tr>
<td>3</td>
<td>CONTINGENCY</td>
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<tr>
<td>4</td>
<td>TIER 1 SUB OVERHEAD</td>
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<tr>
<td>5</td>
<td>TIER 1 SUB PROFIT</td>
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<td>6</td>
<td>TIER 2 SUB OVERHEAD</td>
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<td>7</td>
<td>TIER 2 SUB PROFIT</td>
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<td>8</td>
<td>BOND</td>
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<tr>
<td>9</td>
<td>Risk Insurance</td>
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</tbody>
</table>
Select Utility

• Based on evaluation factors and utilities’ responses to letter of interest, interviews, etc.

• CO sends Utility Selection Letter to notify selected utility
  – Also to unsuccessful competitors

• CO documents process and selection for file
UESC Process: Step 1

Utility Selection

Fair Opportunity for Source Selection
[FAR 16.505(b)]

• Provide fair opportunity to all serving utilities
  – Electric
  – Gas
  – Water

• Most often, only one utility offers UESC

• Since EPAct authorized the use of utility incentives, there has not been a UESC done by a water utility

Selection Strategy

• Limit the submission to vital information to save time and money

• Utility presentations of experience and capabilities allow the agency to gain familiarity with the utility’s team

• Tailor the process to the project scope
UESC Process: Step 1

Sample Solicitation for UESC Implementer

• Requests Statement of Qualifications and Experience from ESCOs
• Determine interest in providing comprehensive services on a UESC basis
• Description of project
  • Project costs, term, project schedule, energy usage pre-implementation, projected energy savings, actual energy savings
• Technical capability, available staff, financial capability
Utility – ESCO Agreement

- **Purpose** – establishes pre-contract relationship between Utility and ESCO

- **Acknowledgement** – acknowledges Utility is regulated and their territory includes federal government facilities and holder of an exhibit for energy management services

- **Relationship of the Parties** – establishes a non-exclusive relationship between the Utility and ESCO

- **Margin Sharing** – establishes that the ESCO agrees that cost data and fees will be at professional services rates, open book, and subject to negotiation and acceptance by the Government
UESC Process: Step 1

Justification and Approval for Other than Full and Open Competition

- Required by the Competition in Contracting Act (CICA)
  - To be executed prior to negotiations leading to the award of a contract w/o full and open competition

- Required by
  - FAR 6.302-5 – Civilian
  - 10 USC 2304( c)(5) – DOD

- Initiated during acquisition planning

- Establishes the contractor meets definition of a utility

- Describes incentive offered by utility and why performance by utility is required

- Indicates agreement will be cost effective and is fair and reasonable

- Finalized before TO award
Regarding Justification & Approval:

If more than one utility company can offer energy management services, you must provide a fair opportunity and select the one that provides the best value. (No J&A required)

If only one utility is available, the contracting officer must prepare a J&A, prior to negotiations leading to an award without full and open competition (FAR 6.302.5)
UESC Process: Step 2

Step 1: Acquisition Planning through Utility Selection

- Step 2: Project Development
  - EMSA for PA
  - Utility conducts PA / Agency supports and evaluates
  - EMSA for FS
  - Utility conducts FS / Agency supports and evaluates
  - Agency requests firm-fixed price for D&I
  - Finalize J&A
  - Award T.O. for D&I
  - Report project details to FEMP and GSA

Step 3: Design & Installation

Step 4: Post-Acceptance
The Preliminary Assessment (PA) is a high-level assessment to:

- Baseline existing conditions,
- Identify potential water and energy efficiency and renewable energy opportunities, and
- Estimate the cost to implement the opportunities.

Depending on the utility, the PA may be an in-depth assessment equivalent to a Feasibility Study, allowing the agency to go directly to a Firm-Fixed Price Proposal for Design and Installation

**Resources:**

UESC Process: Step 2

Project Development

- The Authorization for Energy Management Services, EMSA, is used to request services
  - Assessments and design [PA, FS, E&D]
  - Installation of ECP/DSM project
  - Other: as determined by the agency and utility
UESC Process: Step 2

Award Task Order (TO) for Preliminary Assessment (PA)

The CO will issue a task order for the PA

- Form for awarding contracts:
  - Authorization for Energy Management Services
  - Standard Form 26, and agency-specific form(s)

Best Practices:

- Issue a Task Order for the PA even when there is no cost
The Feasibility Study (FS) is a detailed analysis to:

- Identify and describe a technically viable, life-cycle cost-effective project scope
- Develop a Baseline of energy and water consumption, equipment inventory and conditions, and operational schedules
- A set of plans for training, O&M, performance assurance, and other as requested
- A project design sufficient to support a firm-fixed price for D&I

Note:

- A detailed, open-book, cost estimate should be provided
- The FS is commonly referred to as an “investment grade audit”
Performance Assurance

Preservation of performance —
Performance assurance includes commissioning

**Performance Assurance** ≈ A plan to assure expected performance of ECMs during the contract; at a minimum including:
1. Start-up performance verification (based on measured data)
2. End-of-warranty performance verification (based on measured data)
3. O&M training
4. Continuing training throughout the contract period (as specified in Task Order)
5. Periodic inspections and verification of O&M
6. Performance discrepancy resolution

**Commissioning** ≈ A systematic process to ensure ECMs operate according to design intent during useful life, beginning with design and ending ≥ 1 year after installation; *Per EISA: 42 USC 8253, Section 432*
Award TO for the Feasibility Study (FS)

The CO will issue a Task Order (TO)

- Forms:
  - EMSA
  - Standard Form 26, and agency-specific form(s), for awarding contracts
UESC Process: Step 2

Contract Clauses

Determining relevant contract clauses

• The CO will identify the clauses to be referenced and included according to the project
  – Each AWC includes FAR clauses by reference
  – The Model Agreement, when it is used for a Master Agreement, includes FAR clauses by reference.
  – The Task Order will include all other necessary clauses
Contract Clauses
Contract Clauses

Determining relevant contract clauses

• The CO will identify the clauses to be referenced and included according to the project
  – Each AWC includes FAR clauses by reference
  – The Model Agreement includes FAR clauses by reference
  – The Task Order will include all other necessary clauses

*When adding clauses for specific UESC projects, the contracting officer ensures the most current clauses are used.*

~ Linda Collins, GSA, Contracting Officer, Director, Natural Gas Acquisition Program (NGAP), Energy Division
Contract Clauses

Service or Construction

- Most CO’s agree that clauses for services and construction are applicable
- Two different strategies
  - **Services contract with a construction component** – the service is “energy management” and includes the PA, FS, E&D, installation, and post-installation services
  - **Construction with Services contract** – the construction is the installation of the ECMs and the services are the PA, FS, E&D, and post-installation services
FAR Clauses

FAR Part 41 – Acquisition of Utility Services
Subpart 41.501 – Solicitation and contract clauses

- Utility service terms and conditions vary from area to area
- Accommodates project uniqueness and agency procedures per FAR 52.101
- 41.501 c: “... insert in solicitations and contracts for utility services, clauses substantially the same as –
  - 52.241-2, Order of Precedence – Utilities
  - 52.241-3, Scope and Duration of Contract
  - 52.241-4, Change in Class of Service
  - 52.241-5, Contractor’s Facilities; and
  - 52.241-6, Service Provisions
  - 52.225-9/11, Buy American Act
FAR Clauses

GSA Model AWC
Article 14. Supplemental Clauses

• The AWC incorporates clauses by reference

• Among the many listed:
  – 52.203-3 Gratuities
  – 52.203-5 Covenant Against Contingent Fees
  – 52.203-7 Anti-Kickback Procedures
  – 52.222-26 Equal Opportunity
  – 52.233-1 Disputes
  – 52.244-5 Competition in Subcontracting (Dec 1996)
  – 52.249-2 Termination for Convenience of the Government (Fixed Price) (Sep 1996) Alternate I (Sep 1996)
FAR Clauses

FAR Clauses Required in ALL Government Contracts

Most of the clauses are referenced in AWCs, however, these are not listed in the Model AWC included in the UESC Enabling Documents

• 52.222-3 Convict Labor
• 52.222-25 Affirmative Action Compliance
• 52.223-6 Drug Free Workplace

What others can you think of?
FAR Clauses

FAR Clauses Referenced in the Authorization for Energy Management Services (EMSA)

1. 52.211-10 Commencement, Prosecution and Completion of Work (Apr 1984)
2. 52.232-5 Payments under Fixed-Price Construction Contracts (Sep 2002) – Supersedes provisions of payment clauses in Article 14
3. 52.2332-27 Prompt Payment for Construction Contracts (Feb 2002)
4. 52.236-5 Material and Workmanship (Apr 1984)
5. 52.241-8 Change in Rates or T&C’s of Service for Unregulated Services (Feb 1995) (Use full Text of Clause)
6. 52.243-1 Changes-Fixed Price (Aug 1987)
7. 52.249- Default

Also available at http://www.gsa.gov/portal/content/104187#Utility%20Areawide%20Contracts
BUY AMERICAN ACT

- There is no indication in FAR Part 41 for the acquisition of Utility Services that the Buy American Act applies
  - Yet, it is commonly recognized that the installation of equipment to produce the energy savings required is accomplished by companies and tradesmen who perform construction activities as described in FAR Part 36
- The conclusion has been to include the Buy American Act and corresponding clauses in the Task Order

BUY AMERICAN ACT (continued)

• Should the Contracting Officer require the Utility to identify non-compliant equipment with its submission of the Investment Grade Audit?
  – If foreign equipment is identified at this stage, the Contracting Officer can begin the process to obtain a waiver due to non-availability or unreasonable cost before award of the Task Order.
  – This will mitigate delays to the schedule and anticipated start of payment to the Lender.
Feasibility Study Review

• Technical – review each ECM in detail including description, assumptions, design intent, baseline, operating schedule, performance assurance plan, training and O&M, installation schedule, etc.
• Financial – review the financial summary, calculated savings and installation costs, incentives, return on investment, fees and markups, financing, etc.

Best Practice

• The Agency may request an on-site meeting and FS presentation by the Utility to kick-off the review
• Large and or complex projects may warrant mid-term meetings to ensure project objectives are met and to reduce time spent on ECMs that will not be included
• Determine a review schedule and a process for capturing and resolving comments
The CO must determine whether pricing is fair and reasonable

- FAR recommended techniques include competition, project comparisons, published prices, and market research

<table>
<thead>
<tr>
<th>Price Analysis (Preferred)</th>
<th>Analyze each ECM individually, including performance-period service and financing *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price competition</td>
<td>Review subcontract bids</td>
</tr>
<tr>
<td>Compare proposal to prices of similar contracted projects</td>
<td>Use when comparable project data is available</td>
</tr>
<tr>
<td>Published prices</td>
<td>Use in combination with other techniques and when actual project data is not available</td>
</tr>
<tr>
<td>Market research</td>
<td>Use in combination with published prices</td>
</tr>
</tbody>
</table>

Q: *When is an independent government estimate required?*
UESC Process: Step 2

ECM Specific Costs

Project Development
- Engineering services
- Subcontracts
  - competitive selection plan for subcontractors
- Labor, materials, equipment, rentals, etc.
- Payment and performance bond, or self-insurance
- Project management
- Proof of performance / Performance assurance

Performance Period
- Operations and maintenance (O&M)
- Continuous commissioning
- Measurement and verification
Project Costs

Markups, fees, and taxes are reviewed as a % of the installed cost and vary with project size and complexity

- Overhead and profit (OH&P) – look for a reasonable % and consider the efforts of the utility and the ESCO partner (when applicable)
- The state utility commission limits the utility’s profit
- Project Management – Request appropriate level of PM and check hourly rates
Financing

• Specialized construction & permanent financing

• Performance Risk
  – Project Construction -
    • Risk is reduced after acceptance
  – Ongoing O&M and Energy Performance Guarantees
    • Financial Strength of Utility
      – Other corporate guarantees/credit enhancements
    • Extent of Performance Guarantee
    • Project Economics and Technologies
    • Contractor Competency
Financiers Assess and Price Project Risks and Costs?

• Evaluate Strength of Utility
• Evaluate Economics, Technologies and the Extent of the Energy Performance or Savings Guarantee
• Evaluate the Contract’s Termination Language
  • Termination Schedule – based on interest rate @ time of contract
  • Formula based termination language – based on interest rate @ time of termination
• Size of Financing
• Term of Financing
• When buying down the project; evaluate pre-payment fees
Selecting Financing Solutions

- Most Utilities use financial institutions
- Select qualified contractors
- Talk to financial institutions
- Use agency resources in analysis
- Ask for alternative structures
- Be flexible on documentation
- Require strong letters of commitment
- Consider the financial risks
Why Interest Rates Vary

• Performance Risk
  – Project Construction
  – Energy Performance Guarantee (Savings Guarantees are rare in UESCs)
  – Ongoing O&M

• Contract Administration

• Project Requirements
  – Term and Size of Financing
  – Fixed or Variable Rates
  – Additional Financing Fees
Determining the Interest Rate

- Interest rate is determined by:
  - Base rate relative to market rate (Treasury Note or SWAP rate)
  - Increases for contract terms/risks (adder)

- Escrow accounts are the main type of financing structure used during construction

- Ultimately, pricing and terms are set by comparing a project’s overall risk and return to similar projects in the private sector
Components of the Interest Rate

• Base Rate
  – Currently based on Treasury Note rate or SWAP rate for payment term and mode of the contract
  – The Treasury Note rate is less volatile

• Spread
  – Basis points (1/100% or .01%) added as a result of lender’s perception of project’s risk
  – Contributing elements include participant risk (utility/customer), project risk, market dynamics and contract risk (financed amount and term, payment mode and frequency, and other terms/conditions)
## Total Interest Rate Example *

<table>
<thead>
<tr>
<th>Component</th>
<th>Treasury Note*</th>
<th>SWAP*</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Year Base Rate</td>
<td>2.14%</td>
<td>2.44%</td>
</tr>
<tr>
<td>Spread</td>
<td>1.80%</td>
<td>1.50%</td>
</tr>
<tr>
<td>Total</td>
<td>3.94%</td>
<td>3.94%</td>
</tr>
</tbody>
</table>

*An Example Only – Not Representative of Actual Rates

Websites for rates:

**Treasury Rates:**

**SWAP Rates:**
## Escrow Financing Example

### Assumptions

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rate</td>
<td>3.94%</td>
</tr>
<tr>
<td>Draw Total</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>Capitalized Finance Charges</td>
<td>$401,194.42</td>
</tr>
<tr>
<td>Total Amount Financed</td>
<td>$10,401,194.42</td>
</tr>
<tr>
<td>Monthly Payments</td>
<td>$121,007</td>
</tr>
<tr>
<td>Payment Term (in months)</td>
<td>120</td>
</tr>
<tr>
<td>Total Annual Payments</td>
<td>$1,237,692.494</td>
</tr>
<tr>
<td>Total Payments</td>
<td>$12,376,924.90</td>
</tr>
</tbody>
</table>

### Payment Mode Comparison

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Annual-in-Advance Payments</td>
<td>$12,601,282.80</td>
</tr>
<tr>
<td>Total AIA Payments</td>
<td>$1,237,692.49</td>
</tr>
<tr>
<td>Total Payment Mode Savings</td>
<td><strong>$224,237.90</strong></td>
</tr>
</tbody>
</table>
Interest Rate

Summary Key Points

• Lenders price to the risks assumed
• Lenders’ primary concern is on-time repayment of their investment
• Lenders make their return over time
How to Get the Lowest Interest Rates

• Bundle Projects
• Keep the Financing Term Under 15 Years
• Ensure the Government Contract has Desirable Termination Language
• Fix Interest Rates at Time of Award
• Focus on Performance Guarantees
• Provide Limited or No Energy Savings Guarantees
• Work Only with Companies with the Very Highest Credit Ratings
• Don’t Include Other Financing Fees in Rate
Making Payments Prior to Final Acceptance

• FAR 52.232-16: Progress Payments
  – Progress payments allow the Government to make payments for fixed-price contracts based on cost. The total amount of progress payments shall not exceed 80% of the total contract price.

• FAR 32.503-3: Initiation of Progress Payments and Review of Accounting System
  – In sound financial condition, progress payments in amounts requested by the contractor should be approved as a matter of course, when the contractor has a record of reliable, competent, satisfactory performance.
Making Payments Prior to Final Acceptance

<table>
<thead>
<tr>
<th>Agency</th>
<th>Utility</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Agency should be assured of benefit prior to committing to “date certain” or progress/partial payments</td>
<td>- Document estimated value received by agency prior to first payment</td>
</tr>
<tr>
<td>- Task Order language must be clear in reference to services received and energy and dollar savings</td>
<td>- Less risk to utility/financier since payments begin earlier</td>
</tr>
<tr>
<td>- Pay off project more quickly</td>
<td>- Less adders to base interest rate</td>
</tr>
<tr>
<td>- Avoid late payments</td>
<td>- Avoid charging late payment penalties</td>
</tr>
</tbody>
</table>
## Estimated Monetary Value of Major Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Estimated Value</th>
<th>Completion Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Preliminary assessment</td>
<td>No cost</td>
<td>2015</td>
<td>“no future obligation”</td>
</tr>
<tr>
<td>2 Feasibility study</td>
<td>$250,000</td>
<td>2015</td>
<td></td>
</tr>
<tr>
<td>3 Engineering &amp; design</td>
<td>$250,000</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>4 Equipment purchase</td>
<td>$4,500,000</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>5 ECM 1 installed</td>
<td>$450,000</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>6 ECM 2 installed</td>
<td>$250,000</td>
<td>2016</td>
<td></td>
</tr>
<tr>
<td>7 ECM n installed</td>
<td>$9,000,000</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>8 Commissioning &amp; acceptance</td>
<td>$150,000</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>9 Performance assurance</td>
<td>$150,000</td>
<td>2017 - 2022</td>
<td>1-5 years</td>
</tr>
<tr>
<td><strong>Total estimated value</strong></td>
<td><strong>$16,000,000</strong></td>
<td><strong>April 2017</strong></td>
<td>Excluding financing</td>
</tr>
<tr>
<td><strong>First payment</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>June 2017</strong></td>
<td>Annual payments</td>
</tr>
</tbody>
</table>
**UESC Process: Step 2**

**CO Requests a Firm-Fixed Price for Design and Installation (D&I)**

After the CO negotiates revisions and accepts the finalized FS,
- The Agency team will present the project to Management for approval
- The CO will document the decision
- The agency will pay for the FS or roll the cost into the TO for D&I

When approved,
- The CO will send a letter requesting a firm-fixed price for D&I

*Letter requesting a firm-fixed price for D&I — Template*
Firm-Fixed-Price Offer

The utility will respond with
• A letter showing the firm-fixed price offer
• An updated design schedule
• An updated installation schedule
• Finalized financing terms

Q: What else might the utility provide as part of their response?
Finalize the J&A

EMSA for PA

Utility conducts/agency supports & evaluates PA

EMSA for FS

Utility conducts/agency supports & evaluates FS

Agency requests firm-fixed price for D&I

Finalize J&A

Award D&I T.O.

Report project to FEMP & GSA
UESC Process: Step 2

Award Task Order

1. EMSA for PA
2. Utility conducts/agency supports & evaluates PA
3. EMSA for FS
4. Utility conducts/agency supports & evaluates FS
5. Agency requests firm-fixed price for D&I
6. Finalize J&A
7. Award D&I T.O.
8. Report project to FEMP & GSA
Award for Design and Installation – Contents

- The award for a fixed-price contract typically includes
  - Award letter
  - SF-26 Award/Contract (see FAR 41.204 c(3), in Enabling Docs p.59)
  - The EMSA (specific to the AWC)
  - Attachments
  - Other documents by reference
Award Letter

• States that the Task Order executes a contract under the AWC
• May provide authorization to proceed with the project (notice to proceed)
• Lists attachments
• Requests confirmation or update of schedule for design and installation
• Sets time and location for kick-off meeting
• Provides name and contact information of the Contracting Officer and the Contracting Officer’s Representative
Task Order Award

• Attachments
  – Scope of work, specifications, and performance standards
  – Terms and conditions
  – Agency-specific clauses not in AWC or Master Agreement
  – Templates for invoicing, price schedule & termination schedule

• By reference
  – Specific Areawide Contract with the partner utility
  – Specific Master Agreement if developed
Congressional Notifications

• In accordance with FAR Part 17.108, Congressional notifications are required at least 30 days prior to award of multi-year contracts in excess of $13.5 million

• For DOD, NASA, and the U.S. Coast Guard FAR Part 17.108 establishes a similar Congressional notification requirement for multi-year contracts that include a cancellation ceiling in excess of $135.5 million
Business Clearance Memorandum

• The Business Clearance Memorandum (BCM), or the Non-competitive Pre/Post-Negotiation Business Clearance Memorandum sample may be found in FEMP’s UESC Guide.

• The BCM typically includes acquisition background, technical and financial evaluation outcomes, a pre-negotiation position, request to negotiate and approval to negotiate, and a determination of reasonable pricing and recommendation to award the contract.
Agency Awards Task Order!

- EMSA for PA
- Utility conducts/agency supports & evaluates PA
- EMSA for FS
- Utility conducts/agency supports & evaluates FS
- Agency requests, firm-fixed price for D&I
- Finalize J&A
- Award D&I T.O.
- Report project to FEMP & GSA
UESC Process: Step 3

Step 1: Acquisition Planning through Utility Selection

Step 2: Project Development

Step 3: Design & Installation

Utility submits design / Agency reviews and approves

Utility installs ECMs / Agency provides oversight

Utility provides O&M training and proves ECM performance through commissioning and performance assurance plan activities

Agency accepts project

Step 4: Post-Acceptance
UESC Process: Step 3

**Design Activities**

1. Agency sends Notice to Proceed with Design
2. Utility completes design
3. Agency approves design
4. Utility submits schedule and equipment cut sheets
5. Agency approves schedule
UESC Process: Step 3

Installation Activities

Agency sends Notice to Proceed with installation

Utility performs installation of ECMs

Agency monitors installation
UESC Process: Step 3

Installation

- Government oversight is critical
- Due diligence requires agencies to trust and verify
- Ensure the installed ECMs meet design and performance requirements

Best Practice

- Provide knowledgeable, dedicated staff, and complete reviews and approvals in a timely manner
UESC Process: Step 3

Pre-Acceptance Performance Assurance

Utility performs / Agency monitors Commissioning of each system and ECM

Utility provides / Agency reviews Report

Utility provides / Agency receives ECM training and equipment manuals

Utility provides / Agency reviews proof of performance and documentation
UESC Process: Step 3

Project Acceptance

After all ECMs are installed, tested, and commissioned and all deliverables are received

- The CO will sign a Certificate of Completion *(with checklist and statement allowing payments to begin)*

Best Practice

When beneficial to the project,

- Accept individual ECMs after commissioning
- Begin invoices/payments on individual ECMs after acceptance
Agency Accepts Project!

1. Utility submits designs; agency reviews/approves
2. Utility installs ECMs; agency provides oversight
3. O&M training, performance assurance, commissioning, etc.
4. Acceptance
5. Report project to GSA and FEMP
UESC Process: Step 4

Step 1: Acquisition Planning through Utility Selection

Step 2: Project Development

Step 3: Design & Installation

Step 4: Post-Acceptance

Invoices & payments

Performance assurance and verification of savings

Close out contract at end of term
# UESC Process: Step 4

## Post-Acceptance Activities

<table>
<thead>
<tr>
<th>Utility</th>
<th>Agency</th>
</tr>
</thead>
</table>
| Invoices  
[Assignment of Claims to Financier] | Review and Pay Invoices |
| Post-Acceptance Services  
[as included in the T.O.] | Perform or Monitor  
Post-Acceptance Services  
[according to T.O.] |
| **Contract Close-out**  
[after all invoices have been paid] | Annual Reporting |
Payments

• Timely payment is critical
• Payment frequency is defined in Task Order
  – Annual payments at beginning of year save $
• Identify the funding account during acquisition planning
  – Invoices can be paid as part of the utility bill
• Pay via proper accounting, budgeting, and invoicing procedures
UESC Process: Step 4

Post-Acceptance Performance Assurance Activities

The performance assurance plan prescribes the post-acceptance activities

- When Agency is responsible
- When Utility is responsible

1. Invoices & payments
2. Agency performance assurance activities – O&M, continuous commissioning
3. Utility performance assurance activities – per TO
4. Reporting
5. Contract Close-out at end of term
6. Develop next project
UESC Process: Step 4

Reporting

- GSA – report on use of AWC and service agreements including the Authorization for Energy Management Services
- FEMP UESC Data Collection
- Reporting at Award is to GSA and FEMP
- Annual Agency reports include UESC project information

<table>
<thead>
<tr>
<th>Agency</th>
<th>Facility</th>
<th>Utility</th>
<th>Contract Type</th>
<th>Contract Term</th>
<th>Task Order/ Delivery Order</th>
<th>Award Date</th>
<th>Completion Date</th>
<th>ECMs Implemented In Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project’s capital cost</th>
<th>% of total cost financed</th>
<th>Rebate amount ($)</th>
<th>Estimated annual cost savings</th>
<th>Estimated Annual kWh saved</th>
<th>Estimated annual natural gas savings</th>
<th>Estimated annual oil savings</th>
<th>Estimated annual water savings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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GSA – report on use of AWC and service agreements including the Authorization for Energy Management Services
FEMP UESC Data Collection
Reporting at Award is to GSA and FEMP
Annual Agency reports include UESC project information
In Closing
In Closing

GSA Guidance can be downloaded from the internet

First, search: “GSA Energy Center of Expertise Library”

Then, follow the link labeled “Utility Areawide Contracts” to access:

– Utility Areawide Users Manual
– Procuring Energy Management Services with the Utility Areawide contract
– GSA Areawide Public Utility Contract Listing
– Sample GSA Utility Areawide Contract

For additional GSA Service information visit:
http://www.gsa.gov/portal/content/104187
In Closing

FEMP UESC Website

- Enabling Documents book
- Types of contracts
- Laws and regulations
- Getting the Best Value
- Technology resources
- Case Studies
- Training Opportunities
- Introductory DVD
- UESC Maps
- UESC FAQs
- Awarded UESC projects

Please visit our website:
http://energy.gov/eere/femp/utility-energy-service-contracts-federal-agencies
In Closing

Project Example: Patrick AFB & Florida Power and Light

Partnership
Patrick AFB and FP&L charted a course to meet or exceed federal goals by 2015

FP&L performed a base-wide audit of buildings and systems, then developed a holistic approach to improve energy efficiency in 5 phased projects

Completion of the 5 phased projects would result in an estimated $1.5 million in annual savings

Program Objectives
Execute ECMs with positive 10-yr present value

Streamline the project phases:
1. Survey target facilities
2. Feasibility study of selected ECMS
3. Provide a firm-fixed price
4. Implement ECMs
5. Monitor and evaluate ECMs
6. Provide post-installation M&V
In Closing

Project Example: Camp Lejeune and Piedmont Natural Gas

**Partnership**
implemented a UESC by the Naval Facilities Engineering Command Mid-Atlantic (NAVFACMIDLANT)

$27.5 million comprehensive steam decentralization project awarded in March 2015

Project Benefits:
Enhanced efficiency
$37 million in savings over a 15-year term
No upfront capital needed
Shut down of 3 less efficient central steam plants (two coal-burning)

**Project Scope**
Design, construction and commissioning of energy savings upgrades for 37 buildings
High efficiency boilers, hot water heating systems, HVAC upgrades and water treatment equipment

*This project is the first UESC for Piedmont Natural Gas*
In Closing

Project Example: Brookhaven National Lab and National Grid

**Partnership**

DOE’s Brookhaven Lab issued a Task Order under the GSA Areawide with National Grid

Preliminary Study and Investment Grade Audit for the basis for the firm fixed pricing

**Program Objectives**

$14.85 million in comprehensive capital improvements and $626,475 incentive

$1.3 million in annual savings

7000 metric tons in greenhouse gas reductions, $626 million rebate

**Energy Conservation Measures**

- Lighting upgrades
- Energy management controls and retrocommissioning in 9 buildings
- New 1250 ton chiller and related components at Chilled Water Facility
In Closing

Project Example: VA Hampton and Dominion Virginia Power

Partnership
Implemented campus-wide comprehensive UESC including energy efficiency, water conservation and renewable energy measures

$11.5 million project with no upfront capital needed

Project Benefits:
$876,000 in annual savings over the project term

Project Scope
Design and construction
Campus-wide lighting upgrades with LEDs (interior and exterior)
Chiller plant controls optimization
Compressed air upgrades in 5 buildings
1,120 tons of chiller replacements, and 50-tons heat recovery
Transformer and condenser replacements
Chapel window insulation
Solar hot water (dining facility)
Rain water collection & water conservation ...and more
In Closing

Project Example: U.S. Coast Guard Base Portsmouth and Dominion Virginia Power

Partnership
Implemented comprehensive UESC including energy efficiency, water conservation and retro-commissioning

$8.4 million project with no upfront capital needed

Project Benefits:
$744,900 in annual energy savings over the project term

Project Scope
Design and construction
Microgrid analysis
Natural gas line extension to the Base
New high efficiency/hot water boilers/burners
New infrared heaters
Electric rate change
1.4 MW generator for peak shaving/load shifting
Switchgear replacement (under evaluation)
United States Coast Guard Petaluma Case Study

U.S. Coast Guard partnered with Pacific Gas & Electric to implement a UESC at TRACEN Petaluma, the Coast Guard’s largest training center on the West Coast

$4.4 million comprehensive project using the GSA Areawide and BOA

Project Benefits Include:
- Replaced cast iron boilers with condensing hot water boilers
- Base-wide EMCS and utility meter dashboard
- Programmable thermostats and lighting upgrades and controls
- Low flow water fixtures and kitchen hood demand control ventilation

$450K in annual energy savings
- Rooftop unit controls upgrade
- Annual project savings ~ 1.8 kWhrs, 10,000 MMBtu, and 5,000 kgal

Project Scope:
- 13 energy conservation measures across multiple TRACEN buildings (39 buildings at site)
UESC Enabling Documents

- Legislative & Executive Actions
- Legal Opinions
- Agency Guidance
- Sample Documents

UESC Guide for Contracting Officers

- Resource for Contracting Officers Working on UESC Projects
  - Contacts
  - Flowchart
  - Checklist
  - Templates
  - Samples

http://energy.gov/eere/femp/downloads/utility-energy-services-contracts-guide-0
In Closing

Additional Training Opportunities

In-person
  FEMP Training Calendar
  https://www4.eere.energy.gov/femp/training/training-calendar

Webinar
  Monthly “Introduction to UESC” webinars
  http://apps1.eere.gov/femp/training

On-line
  e-Training
  https://www4.eere.energy.gov/femp/training/?keyword=launching%20a%20uesc&tid_3[0]=23
  Launching a UESC: Getting to Yes! [3 hours, 0.40 CEUs]
In Closing

- See FEMP Website for Dates – UESC Training for Utility Representatives [https://www4.eere.energy.gov/femp/training/training-calendar](https://www4.eere.energy.gov/femp/training/training-calendar)

- See FEMP Website for Dates – Place UESC Task Orders with the GSA Areawide Webinar

In Closing

FEMP provides assistance to UESC projects

**FEMP UESC Team**
- DOE/FEMP Program Lead
- National Laboratory Staff
- FEMP Federal Financing Specialists

**Assistance and Direct Project Support**

- **Assistance**
  - Develop resources and tools to enhance and streamline projects
  - Provide workshops and other training opportunities for agencies and utilities
  - Support partnership building and collaborations

- **Direct Project Support**
  - Advise and consult: provide team training, legislation and policy documents, and contracting templates and samples
  - In-depth support: along with advise and consult, provide technical and financial reviews and other technical analyses such as RE screening
Thank you for joining us!

Tracy Logan
U.S. DOE-FEMP
202.431.7601
Tracy.logan@ee.doe.gov

Karen Thomas
NREL
202.488.2223
karen.thomas@nrel.gov