FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

April 12-13, 2017
Savannah, Georgia

Demonstration Projects and UESCs
Environmental Security Technology Certification Program (ESTCP)

Hosted by:

FEMP
Federal Energy Management Program

Southern Company
Outline

• Overview of ESTCP
• Integrating Demonstration Projects w/UESCs
About ESTCP

• Established in 1995 to:
  – Improve DoD’s environmental performance
  – Reduce costs
  – Enhance and sustain mission capabilities

• Demonstration & validation focus

• Promote Implementation

• Energy & Water is one of five ESTCP Program Areas

- Energy & Water
- Environmental Restoration
- Resource Conservation & Climate Change
- Weapons Systems & Platforms
- Munitions Response
DoD Energy Use – ESTCP Focus

DoD Facility & Operational Energy
Cost: $16.7B (FY15)

Military Installation Energy Consumption

- Electricity: 48%
- Natural Gas: 31%
- Fuel Oil: 8%
- Coal: 6%
- Steam: 2%
- LPG: 1%
- Other: 0.1%
- Fleet Fuel: 4%

Operational Energy: 77%
Facility Energy: 23%

ESTCP Test Bed Focus

Operational Energy: $12.8B
Facility Energy: $3.9B
Energy and Water

• Smart and secure installation energy management
  – Microgrids
  – Energy storage
  – Ancillary service markets

• Efficient integrated buildings and components
  – Design, retrofit, operate
  – Enterprise optimized investment
  – Advanced components
  – Intelligent building management
  – Non-invasive energy audits

• Distributed generation
  – Cost effective
  – On-site
  – Emphasis on renewables
Active and Completed EW Projects - Project Count

Total Funded: 129
Active: 70

- Water: 5
- Benchmarking Tools: 9
- Design Tools: 1
- Investment Tools: 4
- Envelope: 7
- HVAC: 27
- Lighting: 7
- Building Management Systems: 15
- Microgrid: 17
- Cybersecurity: 4
- Storage: 3
- Demand Response/Ancillary Services: 4
- Distributed Generation: 13
## Annual Solicitation Cycle

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<th>Project Start</th>
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Demonstration Process

Demonstration Site

Formal Demonstration Plan

Approval

Demonstration

- Baseline, Installation, Data acquisition

Reporting

- Final Report, Cost & Performance Report
Disposition of Equipment

• Remove and replace to pre-demonstration condition
• Abandon in place
★ Transfer property to installation for ongoing operation
Benefits of Integration with UESCs

• Continued operations of Installed technology.
• Efficient project execution.
• Utilities/ESCOs gain experience with new technology.
• Accelerated deployment of new technology.
Energy Efficiency Technology Demonstrations Integrated with Utility Energy Service Contracts – BAA Only

- Demonstrate innovative technologies and approaches to improve the energy and water efficiency of buildings on military installations.
- Demonstrations must be coordinated and integrated with utility energy services contracts (UESCs) in development at military installations to leverage common efforts.
- Demonstrations should be of technologies that would not otherwise be included in the UESC due to a lack of cost and performance data or related concerns.
- Project leads must be utilities that serve the military installation where the UESC and demonstration project will be performed.
- Demonstrations with the following characteristics are preferable:
  - High likelihood of adoption in future UESC projects within one year of conclusion of demonstration
  - High calculable energy and cost savings
  - Potential for high savings-to-investment ratio and short simple payback
  - Minimal additional technology development required for deployment after the demonstration
  - Cost sharing
FY18 Solicitation Summary

- Lots of interest.
- Good ideas for project integration.
- Continue to learn through evaluation/selection process.
- Intend to include UESC topic in future solicitations.
Contact Info

Tim Tetreault
ESTCP Energy and Water Program Manager
Timothy.j.Tetreault.civ@mail.mil
571-372-6397