

FEDERAL UTILITY PARTNERSHIP WORKING GROUP SEMINAR

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Old School Solutions for New School Problems

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Hosted by:



New School Solution – Utility Energy Service Contracts (UESCs)

- **UESC Authorities**

- 42 USC 8256 (all Federal Executive Agencies; *since 1992, 25 years old!*)
- 10 USC 2913 & 10 USC 2866 (all DOD Agencies; *since 2007, 10 years old!*)

- **Objective:** Increase participation in programs offered by serving utilities, accept rebates and negotiate to address unique needs

- **Energy Conservation Measure (ECM) Criteria**

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

- Direct improvements make physical changes to the facility (e.g., lighting and HVAC replacements)
- Indirect improvements do not make physical changes to the facility or equipment or systems (e.g., assessments, recommissioning, control sequence optimization)
- EMCs intended to demonstrate an overall energy usage or cost reduction

Old School Solution – Utility Energy Service Contracts (UESCs)

- **USC Authority – Federal Property and Administration Action of GSA Authorization for Electric/Natural Gas Service; since 1949, 68 years young!**
 - Congressional Authorization for GSA to establish Areawide Contracts (AWCs) to be used by all federal agencies to procure utility service within the utilities franchised service territory (GSA is the lead agency!)
- **Projects may include:**
 - Advanced metering
 - Convert utilities to underground
 - Emergency and back-up generation
 - Upgrade customer-owned substation and distribution
 - Emergency restoration/repairs
 - Redundant/alternate feeds
 - Microgrids
 - Distributed energy resources - Renewable energy systems
 - Energy storage
 - Infrastructure for electric vehicles

- **USC projects do not have to be life cycle cost effective**
- **If offered, USC service may be paid for with appropriations or via a facilities charge on the monthly utility bill**
- **Agencies may take full advantage of tariff services offered by the regulated utility utilizing Exhibit “A”**

New School Problems

- Mission assurance
- Energy resilience
- Constrained federal resources
- Energy storage
- Islanding capability
- Microgrids and microgrid analysis
- Cybersecurity
- Assess vulnerabilities

These new school problems are actually opportunities to strengthen and expand Federal Utility Partnerships!

Representative Energy Conservation Measures (ECMs)

- Addition of Liquid Refrigerant Pumps to Reciprocating Air Conditioning Units;
- Air Distribution Improvements;
- Boiler Control Improvements;
- Chiller Retrofits;
- Construction of New Cogeneration Facilities;
- Cooling Tower Retrofits;
- Daylighting Controls;
- Distributed Generation Installation;
- Economizer Installation;
- Electric / Gas Service Entrance Construction;
- Energy Consulting Services;
- Load Shaving Techniques;
- Motor Replacement with High Efficiency Units;
- Network Protectors;
- New HVAC Design and Construction;
- Occupancy Sensors;
- Packaged Air Conditioning Unit Replacement;
- Photovoltaic System Installation;
- Re/Retro-Commissioning Activities;
- Reflective Solar Window Tinting;
- Refrigerator Replacement with High Efficiency Units;
- Renewable Energy Projects;

Representative Energy Conservation Measures (ECMs)

- Energy Management Control Systems;
- Exit Sign Upgrades;
- Facility Management System Replacement or Alteration;
- Fans and Pump Replacement / Impeller Trimming;
- Fuel Cell Installation;
- Ground Source Heat Pumps;
- HVAC Controls Upgrades and Techniques;
- Ice Storage Cooling Methods;
- Instantaneous Water Heating;
- Insulation Installation;
- Interior & Exterior Lighting Replacement;
- Lighting Control Improvements;
- Other Measures that Reduce Energy Consumption, Demand, or Water Consumption Related Costs.
- Replacement and/or Conversion of HVAC Systems;
- Solar Air Preheating System;
- Solar Domestic Hot Water System;
- Steam Trap Maintenance and Replacement;
- Transformer Replacement;
- Upgrade of Natural Gas-Fired Boilers with New Controls ;
- Variable Speed Drive Utilization;
- Water Conservation Device / Fixture Installation;
- Weatherization;
- Window Air Conditioning Replacement;
- Window Covering and/or Awning Installation;
- Window / Door Replacement; and