Federal Utility Partnership Working Group
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UESC Case Study

Philadelphia Navy Yard

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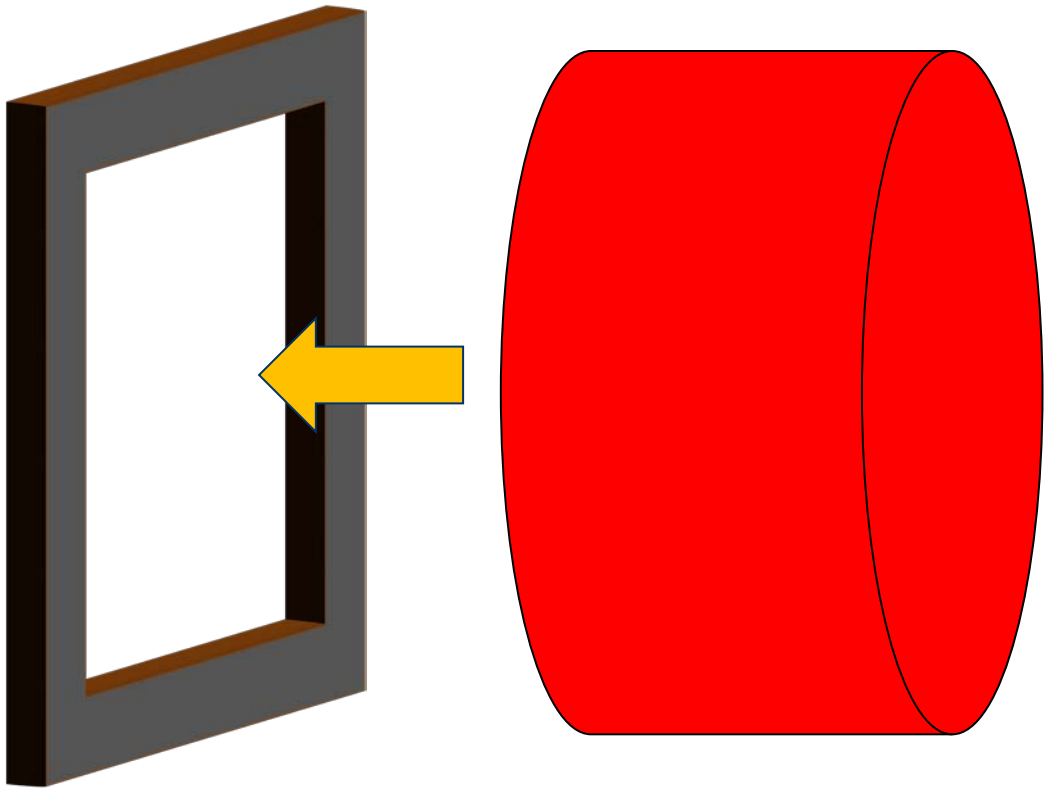
UESC Financed Energy Projects – Basics

Aligning NAVFAC Business Practices with Federal Energy Management Program Processes

Sometimes things are difficult, but hard work overcomes obstacles !!!!!

NAVFAC BMS 5.1.3 UESC Process



FEMP UESC Process

Financed Energy Projects - Challenges

- Financed Energy Project Challenges
- General Issues
  - Financed projects are designed to save energy costs but overarching goals are set up to reduce energy usage and energy intensity.
    - Financed projects favor regions or bases with higher utility rates.
    - Financed projects cannot be utilized in cases where energy consumption is reduced substantially but energy cost savings is marginal.
    - Conversely, financed projects are more difficult to utilize in cases where energy consumption is reduced marginally but energy cost savings are substantial.
    - Bundling ECMs is difficult. Policy requires that each energy conservation measure (ECM) within a project stand on its own in terms of economic payback. This conflicts with FEMP guidance on EISA 2007 where "agencies are encouraged to bundle individual ECMs" to allow longer payback ECMs "that achieve other mandated sustainability goals such as water efficiency, renewable energy generation, and greenhouse gas reduction."

- Utility Energy Services Contracts (UESCs)
  - There are inconsistencies between legislative mandates, legal interpretations, and FEMP guidelines with the NAVFAC UESC BMS process.
    - Navy energy policy is sometimes more restrictive than EOs and legislated reduction goals.
    - Current policy does not allow UESC feasibility study costs to be rolled into project financing.
    - Buydown and buyout procedures acceptable to other Federal agencies are not allowed.
    - The BMS process guidelines cause procedural difficulties in procurement, limit project scope to maximize project effectiveness, and deviate from FEMP guidelines slowing or completely shutting down projects.
    - Customer Commands must fund pre or post award activities for Development, Planning, Project Management, and local FEAD support for each task order phase.

UESC Measurement and Verification

- M&V Resources
  - NAVFAC Energy Office Shore Energy Bulletin—28 Feb 2011—Policy
  - FEMP M&V Guidelines: Measurement and Verification for Federal Energy Projects Version 3.0
  - NAVFAC Guidance on Performance Verification—29 MAR 2011
  - NAVFAC Guidance on EISA Compliance and Energy Tracking
  - NAVFAC BMS B-5.1.3 UESC Projects
  - Department of Navy Energy Manager's Handbook
- M&V Steps as Defined in NAVFAC Process (BMS)
  - Step 1: Develop a Project-Specific M&V Plan
  - Step 2: Identify Appropriate M&V Technique
    - Options A, B, or C
  - Step 3: Incorporate Costs for M&V in Project Planning Process
    - Metering & follow up performance verification
  - BMS Step 4: Benchmarking to Define the Baseline
  - BMS Step 5: Monitor Post-Installation Verification Activities
  - BMS Step 6: Perform Follow-up M&V Activities
  - BMS Step 7: Perform M&V Data Collection & Reporting

Philadelphia Navy Yard (PNY) UESC

- The scope consists of decentralizing PNY from using purchased steam by installing localized HVAC & DHW equipment & running natural gas lines.
- The original scope included lighting upgrades & building envelope improvements but simple paybacks were too long & energy measures can't be bundled under current NAVFAC policy.
- Difficult issues include working in historic buildings, obtaining air permits, accomodating two bill payers & having an extremely tight construction schedule.

Philadelphia Navy Yard UESC

- Implementation Cost: $16.6 million
- Annual Cost Savings: $2.3 million
- Annual Energy Savings: 108,000 MBTU (Source)
- Simple Payback: 7:35 years
- Project Size: 1.35 million square feet
- Financed Term: 15 years or less
- M&V: Required for entire financed term

Contact Information

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