



FEMP Washington Update

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April 22, 2015

Agenda

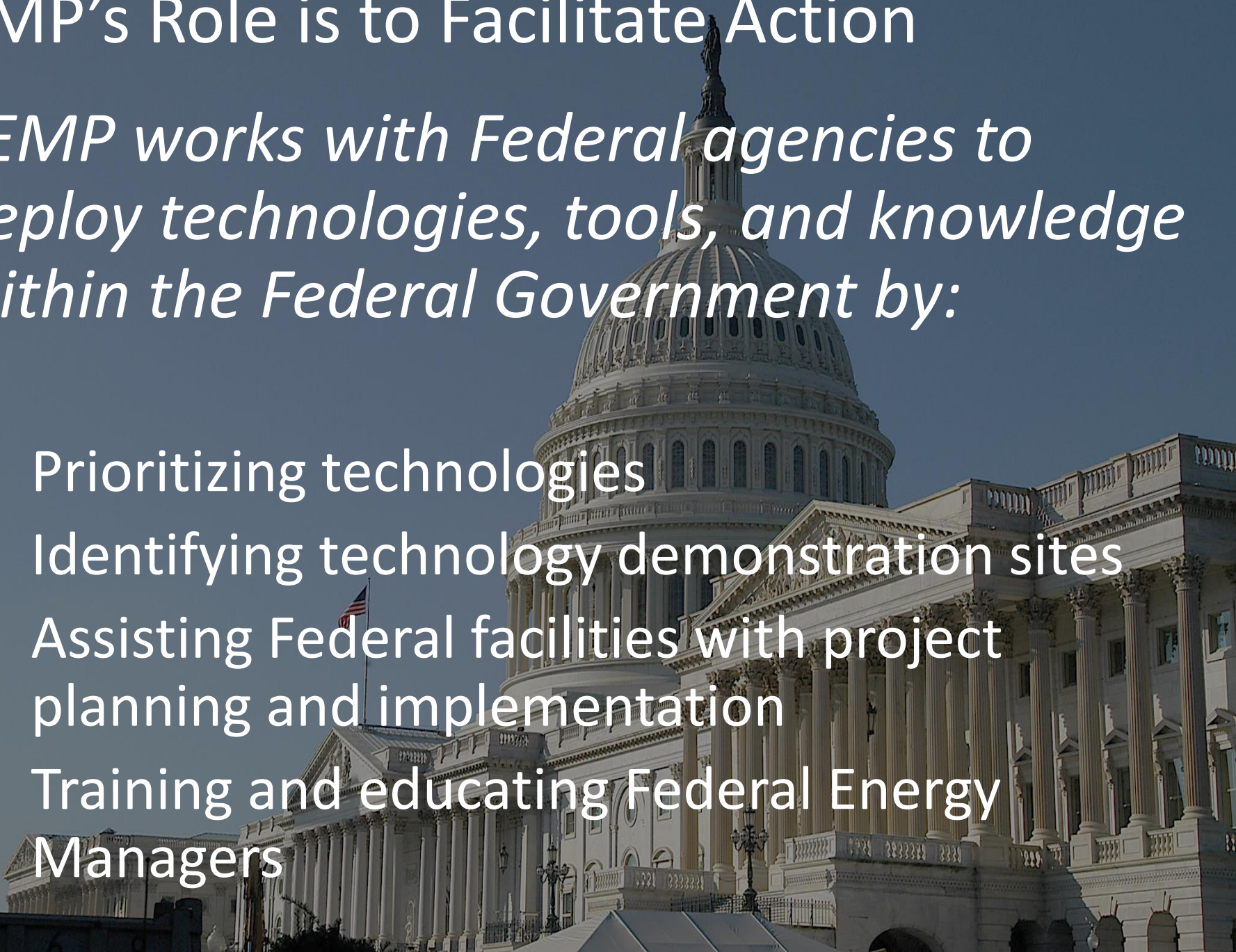
- FEMP's Role is to Facilitate Action
- Federal Energy Consumption Breakdown
- Executive Order 13693 – Planning for Sustainability in the Next Decade
- Presidential Performance Contracting Challenge (PPCC)
- Utility Energy Service Contract (UESC) Highlights
- DOE Indefinite Delivery, Indefinite Quantity (IDIQ) (DE106-16-0001)
- Measurement and Verification (M&V) Update
- eProject Builder (ePB) Update
- Capital Solar Challenge Update
- Better Buildings Data Center Challenge/Accelerator Update
- Agencies can Now Apply for Technical Assistance
- Cybersecurity for Buildings
- Microgrid Information and Technical Support
- FEMP 400
- Federal Energy Efficiency Fund (FEEF) Update
- Energy Efficiency Exchange 2015



FEMP's Role is to Facilitate Action

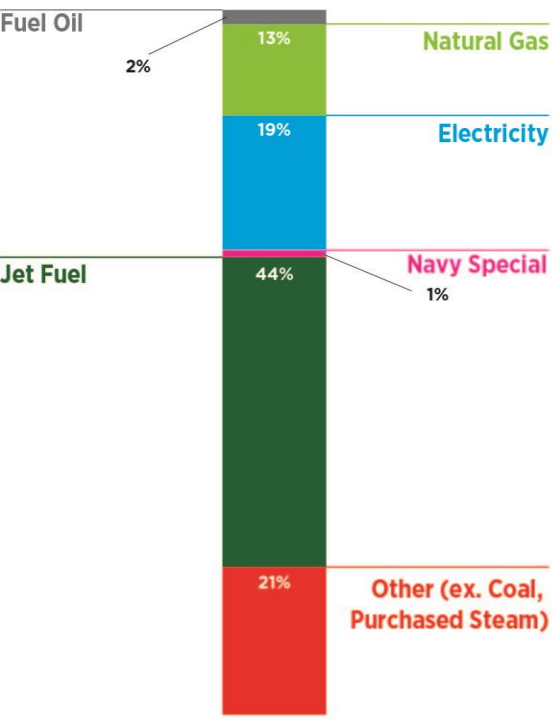
FEMP works with Federal agencies to deploy technologies, tools, and knowledge within the Federal Government by:

- Prioritizing technologies
- Identifying technology demonstration sites
- Assisting Federal facilities with project planning and implementation
- Training and educating Federal Energy Managers

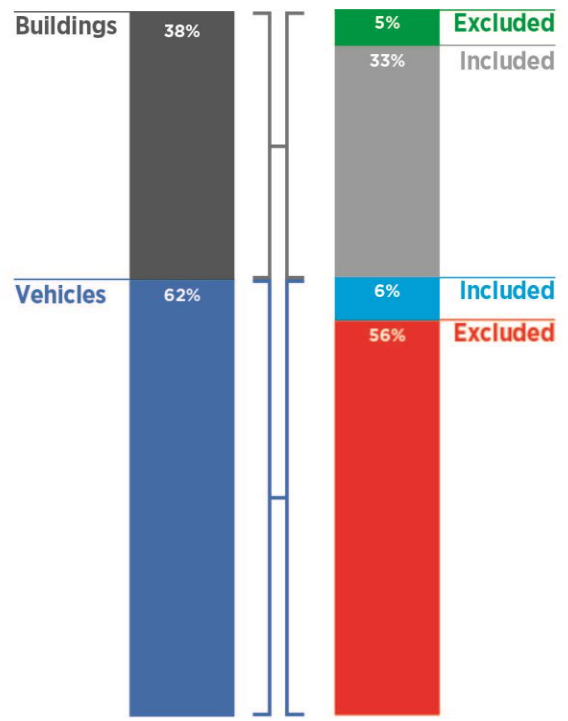


Federal Energy Consumption Breakdown

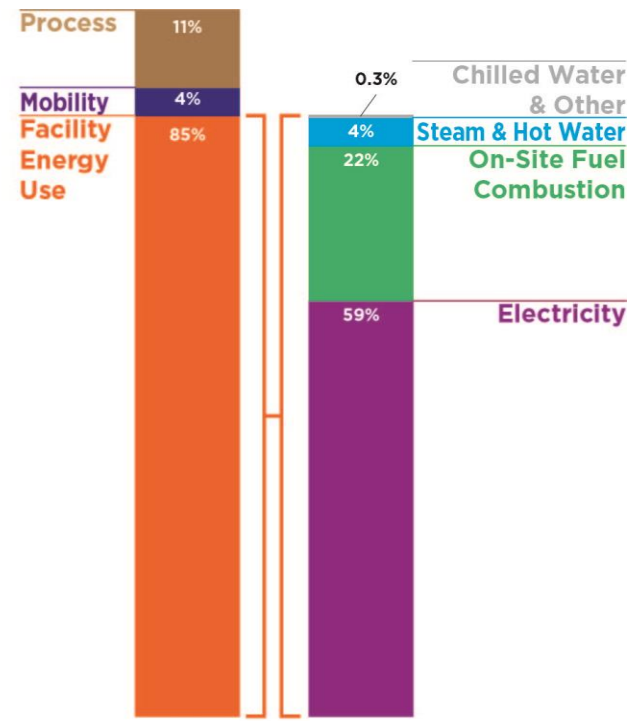
Overall Federal Energy Consumption: 0.96 QUADS; \$24 Billion



Consumption By Fuel Type



End-Use Sector



Scope 1 & 2 GHG Emissions

Executive Order 13693 – Planning for Sustainability in the Next Decade

- **Building Energy Use**
Reduce agency building energy intensity (in BTUs per square foot) by 2.5% annually through the end of FY 2025, amounting to at least a 25% reduction from a FY 2015 baseline
- **Building Electric Energy and Thermal Energy**
Use clean energy (renewable or alternative) equivalent to at least 25% of total electricity use FY2025
- **Renewable Electric Energy Use**
Use renewable electric energy equivalent to at least 30% of total electricity use FY2025
- **Water Use**
Reduce water consumption (gals/sq. ft) by 36% by FY 2025, through 2% annual reduction (2007 baseline)
- **GHG Emissions**
Agencies must propose agency-wide percentage reduction targets of Scope 1 and 2 and Scope 3 by the end of FY2025, amounting to at least a 40% reduction relative to FY2008 baseline
- **Sustainability**
At least 15% of new, existing, and leased buildings >5,000 square feet meet the Guiding Principles by 2025. Must make annual progress towards 100% conformance with the Guiding Principles
- **Efficient Investment**
\$4 billion of investment through performance-based contracts to upgrade the energy efficiency of Federal buildings and/or invest in renewable energy by 2016
- **Vehicle GHG Reduction**
Reduce per mile GHGs relative to 2014 baseline, greater than 30% reduction by 2025

FY2015 Federal Goals compared to New E.O. 13693

Goals	2015 Target	E.O. 13693 Target
Building Energy Use	30 % (by 2015) Baseline 2003	25% (by 2025) Baseline 2015
Building Electric Energy and Thermal Energy	None	25 % (by 2025)
Renewable Energy Use	30 % (by 2020)	30 % (by 2025)
Water Use	14 % (by 2020) Baseline 2007	36 % (by 2025) Baseline 2007
GHG Reduction	28 % (by 2020) Baseline 2008	40 % (by 2025) Baseline 2008
Sustainability	11 % (by 2015)	15 % (by 2025)
Efficient Investment	\$3.97 B (by 2016)	\$3.97 B (by 2016)
Vehicle Fuel Use	18 % (by 2025) Baseline 2005	None
Vehicle Alternative Fuel Use	136 % (by 2025) Baseline 2005	None
Vehicle GHG Reduction	None	30% (by 2025) Baseline 2014

The PPCC will continue to expand the use of performance-based contracts through 2016 to upgrade the energy efficiency of Federal buildings at no cost to taxpayers

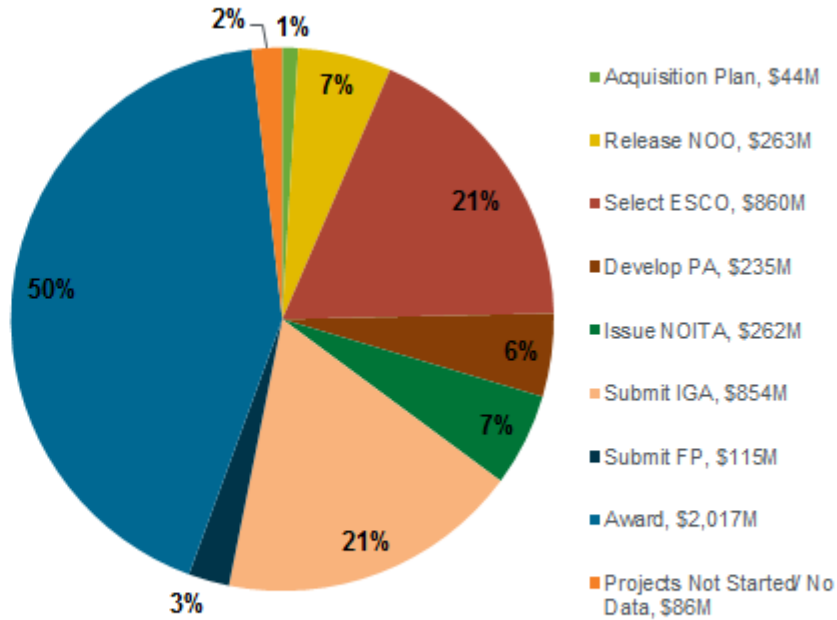
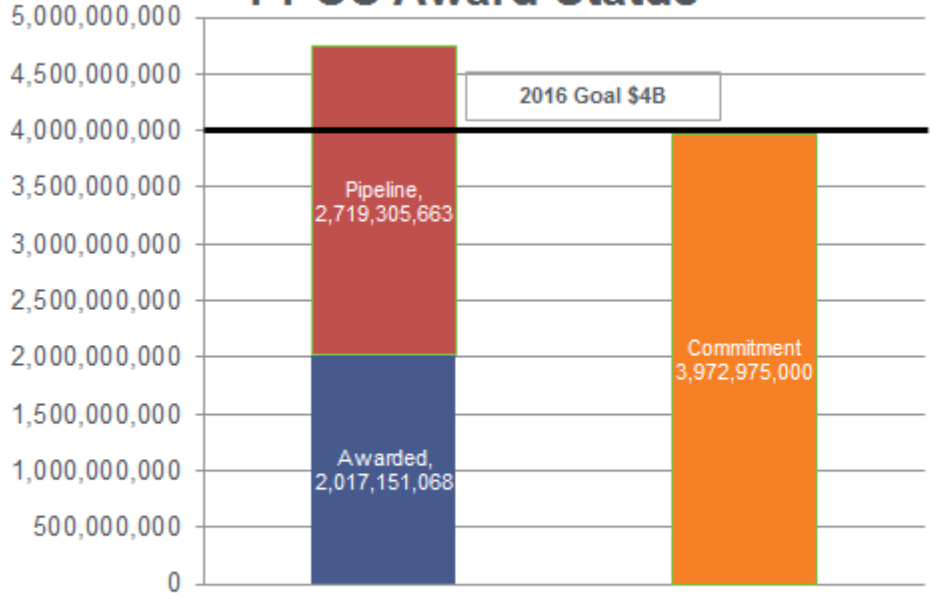
The extension of the PPCC will further drive:

- Federal invest of energy efficiency technologies
- Innovation and partnerships between the Federal Government and the private sector



PPCC Status Update

PPCC Award Status



Pipeline: Amount of project costs in procurement process and expected to award.
Awarded: Amount of project costs awarded.
Agency Commitments: Amount in project costs committed to. Total of pipeline and awarded values may exceed commitment value due to additional projects beyond original agency baselines.

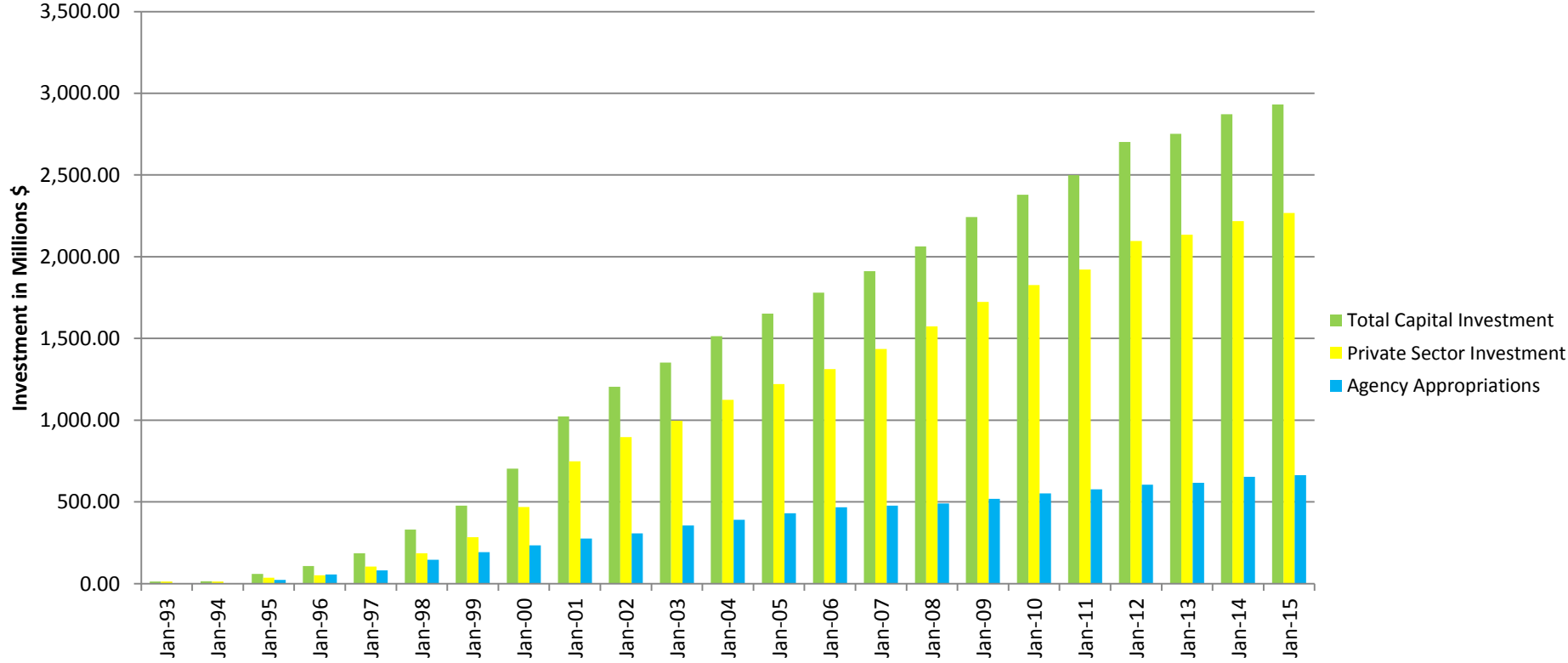
Note: Sum of percentages equals 118% due to agency pipeline development exceeding \$4B PPCC goal.

Acquisition Plan: Development of agency's acquisition
Release NOO: Release of the Notice of Opportunity to perform a performance contract.
Select ESCO: Selection of the Energy Service Company that will perform the work.
Develop PA: Development of the Preliminary Assessment outlining the work to be done.
Issue NOITA: Issuance of the Notice of Intent to Award the contract
Submit IGA: Submission of the Investment Grade Audit and cost/savings proposal.
Submit FP: Submission of the Final Proposal
Award: Awarding of the contract to the energy service company

Utility Energy Service Contract (UESC) Highlights

Current Status and Highlights

- FY14 Air Force reported: ~\$18.6M in UESC projects
- FY14 and FY15 FAA reported: ~\$19.4M in UESC projects
- 716 people attended UESC training in FY15
- Cape Canaveral, FL FUPWG Attendance: 197 Attendees



DOE has issued ESPC IDIQ Solicitation: Deadline for Response April 29, 2015

- The Department of Energy (DOE) is seeking multiple Energy Service Companies (ESCO) to arrange for financing for and to develop and install energy, water conservation, and renewable energy projects at Federally owned facilities
 - As part of these projects, the ESCO conducts a comprehensive energy audit and identifies improvements that will save energy and/or reduce utility bills at the facility
 - Competing companies must be on the DOE Qualified List, which consists of private industry firms that have submitted an application and have been qualified by a Qualification Review Board comprised of Federal Interagency Energy Management Task Force representatives and DOE staff
- Anticipated Award will be in the second quarter of FY2016
- Please visit DOE Energy Acquisition Forecast site for more information

Measurement and Verification (M&V) Update

FEMP M&V Guidelines Update will ensure savings persists throughout the life of the contract

M&V Improvement for Version 4 of FEMP Guidelines

- Strengthen Retrofit Isolation with Key Parameter Measurement by requiring annual measurement of key parameters
- Refocus Whole Facility Measurement to stress short-term applicability
- Provide prescriptive (but more concise) M&V templates for most Energy Conservation Measures
- Revise and condense FEMP M&V Guidelines
- Provide M&V report review to agencies that lack their own resources



Current Status of M&V Guidelines

- FEMP is currently coordinating with EERE's Uniform Methods Project (UMP) to ensure consistency between UMP and the FEMP Guideline
- Draft FEMP M&V Guideline 4.0 is being revised before releasing for public comment

eProject Builder (ePB) Update

ePB standardizes and streamlines ESPC and UESC documentation and data tracking, for the life of the contract, to promote efficient investment

- **Standardizes** data collection across federal, state and local projects
- **Reduces** ESPC transaction costs
- **Improves** customer confidence through transparency



Status Update for ePB?

- ePB recently named one of the “Top 14 ESPC and clean energy stories of 2014” by Energy Services Coalition
- **300+** legacy DOE-IDIQ projects to be uploaded into system
- U.S. Army Corps of Engineers projects to be uploaded into system
- **250+** individuals have received training to use eProject Builder

Can UESCs be entered into ePB now?

- Yes, with some exceptions for terminology
- Override function is available to accept any cash flow model
- Available now for testing and pilot use for a project
- Request an account: epb-support@lbl.gov
- Access to ePB: <https://epb-test.lbl.gov>

Future development plans

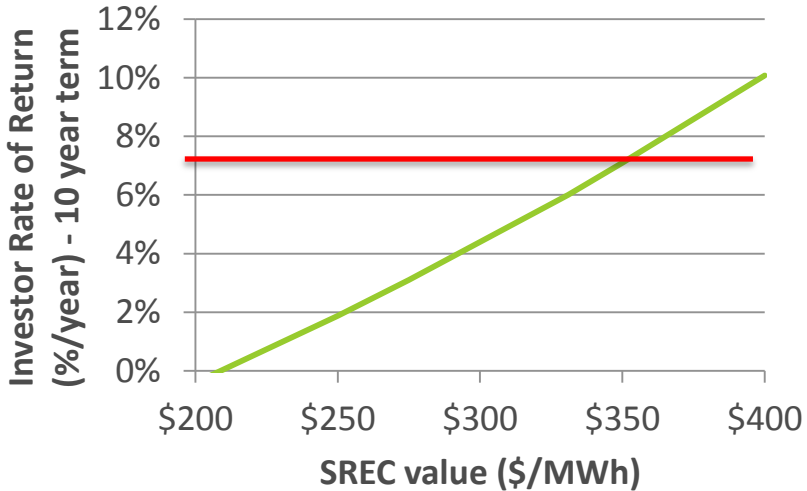
- Stakeholder engagement to prioritize future development activities
- Alignment of terminology between ESCO and UESC projects
- Evaluation of different cash flow models
- Benchmarking new UESC projects against historical data



Nation's Capital helps lead the way to meet the 30% Renewable Energy Goal by 2025 within E.O. 13693

Current Status

- Fort Detrick 18 MW PV has been awarded
- USDA Carver Center 100 kW PV has been awarded
- Goal is to have agencies release a RFP in FY2015.



Better Buildings Data Center Challenge/Accelerator Update

Organizations that own and or operate data centers can partner with DOE to lead by example in one of two ways:

Better Buildings Challenge

Partners commit to reduce the energy intensity of their portfolio (including data centers) by at least 20% within 10 years and share their results

Better Buildings Data Center Accelerator

Partners commit to reducing the energy use of at least one data center (IT load \geq 100 kW) by at least 25% within 5 years and share their results

Data Center Partners



Technical Assistance Request Portal has now opened

The Technical Assistance Request Portal allows federal agencies to request assistance with fleet management, project funding, and renewable energy projects.

The screenshot shows the top navigation bar of the FEMP Technical Assistance Request Portal. It features the U.S. Department of Energy logo and the text "Energy Efficiency & Renewable Energy". There are "Login" and "Register" buttons in the top right corner. The main heading is "FEMP Technical Assistance Request Portal". Below this is a breadcrumb trail: "FEMP Home » FEMP Technical Assistance Request Portal". The main content area contains a paragraph explaining the portal's purpose: "The Technical Assistance Request Portal allows federal agencies to request assistance with fleet management, project funding, and renewable energy projects. To proceed with a technical assistance application to the Federal Energy Management Program (FEMP), choose an action below." Below the text are three main action buttons: "Create a New Application" (which includes a "Select Service Area" dropdown and a "Start the Process" button), "Edit a Saved Application", and "View a Submitted Application". At the bottom of the main content area, there is a link for help: "Need help? Read the FEMP Technical Assistance Request Portal User Guide, or contact Patrick Shipp."

FEMP Technical Assistance Request Portal is a resource of the Department of Energy's Federal Energy Management Program.

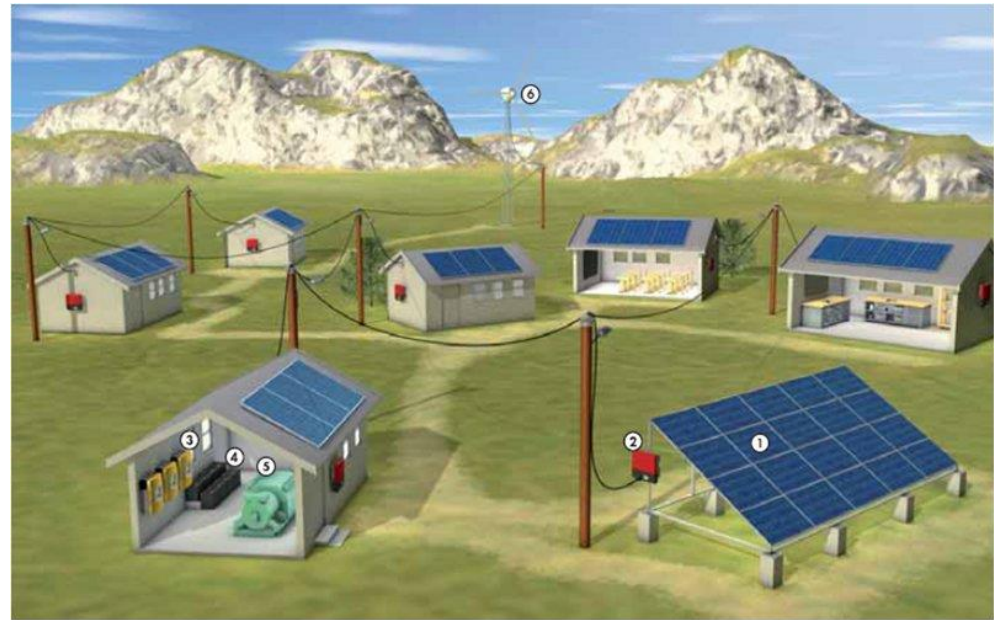
[Contact Us](#) | [Federal Energy Management Program](#) | [Office of Energy Efficiency and Renewable Energy](#)

Taking steps to understand and appropriately manage risks associated with building control systems, building communications and computing networks, and the growing number of commercial and consumer devices that are Internet-enabled



Remote Community RE (RCRE); Increase Adoption of Scalable Microgrids

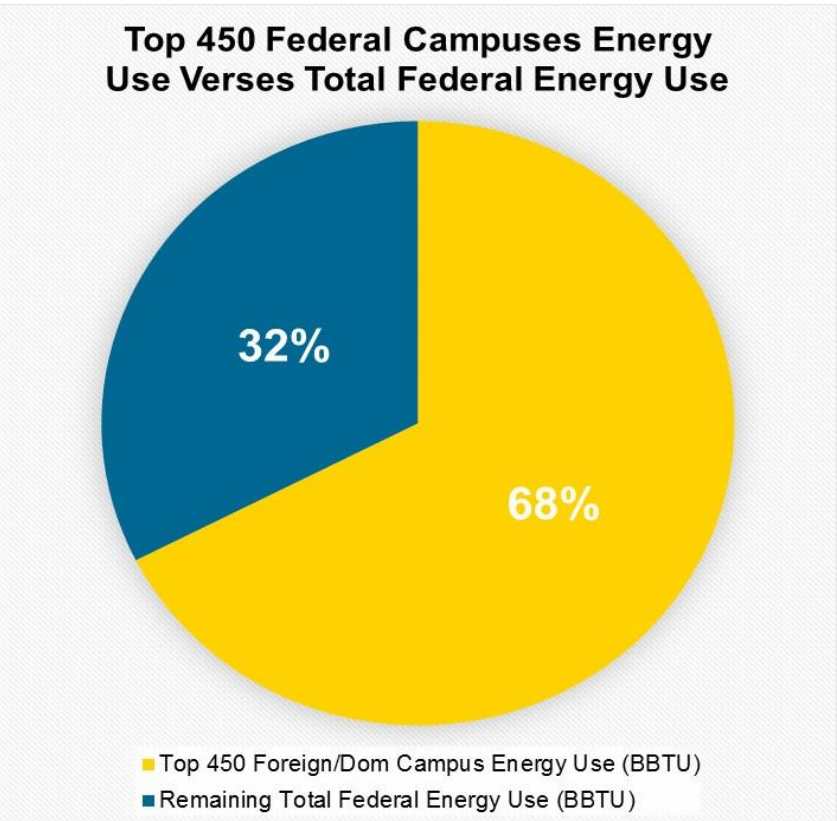
DOI and FEMP have partnered for an agency deep dive and the REopt studies for National Park Service (NPS) and Fish and Wildlife Service (FWS)



Components: 1. PV array, 2. SUNNY BOY, 3. SUNNY ISLAND, 4. Batteries, 5. Diesel generator, 6. Wind turbine system

FEMP is looking to further conduct a deeper analysis of the Parks and Wildlife Refuges off-grid diesel systems, specific focus on promoting the optimization and installation of microgrid hybrid (diesel-solar-battery) systems

Will provide technical assistance, training, and best practice information sharing for large campuses, especially top 450 within the Federal government



Federal Energy Efficiency Fund (FEEF) Update

Provide grants to U.S. federal agencies to assist in funding renewable energy projects that are incorporated into a privately financed performance contract, such as an energy savings performance contract (ESPC) or utility energy service contract (UESC), or as part of a renewable energy power purchase agreement (PPA)

Letters of intent (LOI) due by April 6, 2015

Full applications are due by May 20, 2015 Applicants must submit a LOI to be eligible to submit a full application.

To apply to AFFECT, applicants must register with and submit application materials through the [EERE Exchange](#)

Send direct questions regarding this FOA to FOA.AFFECT2@ee.doe.gov





Federal Sustainability for the Next Decade

August 11-13, 2015

Phoenix Convention Center

Phoenix, AZ

Website: femp.energy.gov/energyexchange

Energy Exchange 2015 Technical Program: Tracks 1-5

- 1. Solution Showcase:** Innovative and proven technology and service solutions to address barriers, solutions, and impacts; including replicable solutions and implementation models.
- 2. Agency Energy Manager:** Energy management from the agency energy manager perspective, including effective audits and energy procurements.
- 3. Energy Technologies:** Technologies, tools, applications, and projects for current and future energy management.
- 4. Sustainability:** Federal sustainability requirements and how they are being addressed.
- 5. Project Financing:** How to improve infrastructure and reduce energy and water consumption through the use of private financing.

Energy Exchange 2015 Technical Program: Tracks 6-10

- 6. Integrated Energy:** Cross-cutting and advanced topics to address achieving energy goals and sustainability at the facility and agency level.
- 7. Building Performance:** Techniques to address common problems inhibiting optimized building performance.
- 8. Energy Leadership:** A forum for senior agency managers to discuss leadership issues and strategies.
- 9. Institutional Change:** Methods for engaging all levels of an organization to achieve sustainability and energy management goals.
- 10. Innovation:** Selected topics on building operations, performance, planning, tracking, renewables, and sustainability.

Questions?

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