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
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

<table>
<thead>
<tr>
<th>Goals</th>
<th>2015 Target</th>
<th>E.O. 13693 Target</th>
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<tbody>
<tr>
<td>Building Energy Use</td>
<td>30% (by 2015)</td>
<td>25% (by 2025)</td>
</tr>
<tr>
<td></td>
<td>Baseline 2003</td>
<td>Baseline 2015</td>
</tr>
<tr>
<td>Building Electric Energy and Thermal Energy</td>
<td>None</td>
<td>25% (by 2025)</td>
</tr>
<tr>
<td>Renewable Energy Use</td>
<td>30% (by 2020)</td>
<td>30% (by 2025)</td>
</tr>
<tr>
<td>Water Use</td>
<td>14% (by 2020)</td>
<td>36% (by 2025)</td>
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<tr>
<td></td>
<td>Baseline 2007</td>
<td>Baseline 2007</td>
</tr>
<tr>
<td>GHG Reduction</td>
<td>28% (by 2020)</td>
<td>40% (by 2025)</td>
</tr>
<tr>
<td></td>
<td>Baseline 2008</td>
<td>Baseline 2008</td>
</tr>
<tr>
<td>Sustainability</td>
<td>11% (by 2015)</td>
<td>15% (by 2025)</td>
</tr>
<tr>
<td>Efficient Investment</td>
<td>$3.97 B (by 2016)</td>
<td>$3.97 B (by 2016)</td>
</tr>
<tr>
<td>Vehicle Fuel Use</td>
<td>18% (by 2025)</td>
<td>None</td>
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<tr>
<td></td>
<td>Baseline 2005</td>
<td></td>
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<tr>
<td>Vehicle Alternative Fuel Use</td>
<td>136% (by 2025)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Baseline 2005</td>
<td></td>
</tr>
<tr>
<td>Vehicle GHG Reduction</td>
<td>None</td>
<td>30% (by 2025)</td>
</tr>
<tr>
<td></td>
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<td>Baseline 2014</td>
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</table>
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 investment of energy efficiency technologies
- Innovation and partnerships between the Federal Government and the private sector
**PPCC Status Update**

**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
- **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

Data from April 15, 2015
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
**ePB for UESCs**

**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 ≥ 100 kW) by at least 25% within 5 years and share their results.

Data Center Partners
Agencies can Now Apply for Technical Assistance

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.
Cybersecurity for Buildings

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)

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
FEMP 400 - Large Campus Initiative

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

Top 450 Federal Campuses Energy Use Versus Total Federal Energy Use

- Top 450 Foreign/Dom Campus Energy Use (BBTU): 32%
- Remaining Total Federal Energy Use (BBTU): 68%
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
Energy Exchange 2015

Federal Sustainability for the Next Decade

August 11-13, 2015
Phoenix Convention Center
Phoenix, AZ

Website: femp.energy.gov/energyexchange
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.
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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