

Performance Contracting 101

FEMP Summer Camp

T01 – S01, August 5th, 2025





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Agenda

- Session Learning Objectives
- Overview of Performance Contracting
- Key Elements of Energy Savings Performance Contracts (ESPCs) and Debunking ESPC Myths
- Key Elements of Utility Energy Service Contracts (UESCs)
- Choosing a Performance Contracting Vehicle: Interactive Discussion
- FEMP Resources and Getting Started
- Question and Answers

Session Learning Outcomes

- 1. Recognize the fundamentals of energy performance contracting and its application within federal agencies.
- Identify the various procurement-based mechanisms available for implementing energy and water management projects.
- 3. Explore best practices and strategies for evaluating performance contracting options.
- Assess the suitability of different performance contracting vehicles for specific federal projects.
- 5. Recognize alternative procurement methods such as power purchase agreements, enhanced use leases, and utility privatization.



Performance Contracting Overview



Kurmit Rockwell, PE, CEM, LEED AP, PMVA

Team Lead, Performance Contracting

Department of Energy (DOE) / Federal Energy Management Program (FEMP)

FEMP Mission

The Federal Energy Management
Program (FEMP) helps the country's
largest energy consumer—the federal
government—achieve efficient, secure,
and resilient energy use in mission-critical
facilities and fleets, saving billions in
taxpayer money.

FEMP has helped the federal government achieve a 50% energy intensity reduction in federal buildings since 1975.

The U.S. government is on track to reach \$60 billion in taxpayer savings by 2030.

Energy Performance Contracting Provides Value

All federal projects (ESPC and UESC) since 1998:

\$2 billion
in annual cost-savings
with \$38.6 billion
cumulative

More than
\$18 billion
in project investments
awarded

More than
142,000
job-years created
(direct jobs)

Data analysis as of July 18, 2025

What are Energy Performance Contracts?

A type of *performance-based services* contract, authorized by statute, that permits agencies to implement energy and water efficiency projects with little to no up-front costs or appropriations from Congress.

- Capital costs for a variety of measures are paid through financing and available agency funds
 - o Infrastructure upgrades
 - o Replacement of aging, inefficient equipment
 - On-site energy systems
- Annual contract payments are made from savings due to reduced consumption and improved efficiency
- Energy Performance Contracts include Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs)





Why Energy Performance Contracts?



Improve Facilities & Reduce Costs Without Upfront Spending

Capital costs paid by the contractor. Payments made from cost savings, so agencies can improve facilities without needing extra budget.



Fix Old Equipment & Reduce Maintenance

Replace outdated systems like lighting or HVAC with modern, efficient technology, lowering energy use and avoiding expensive repairs.



Meet Requirements & Support Federal Energy Goals

ESPCs/UESCs make it easier to meet federal energy targets while improving facilities.



Cut Energy Bills for the Long Term

New systems reduce energy waste, helping facilities save money year after year.

Energy Performance Contracting by the Numbers



Actual Savings¹:

- Average performance contracts reduce site energy use by at least 20%
- On average, performance contracts save approximately 2,750 BTU per dollar invested
- \$2.1M median annual cost savings per project



Potential Savings:

- Average investment opportunity of ~\$2.5M in lifecycle cost effective energy and water conservation measures identified in agencyreported Energy Independence and Security Act (EISA) audits²
- Estimated average annual savings of ~\$300K/site.



Maximizing Investment

- Over \$18 billion³ in project investments to date
- Applying appropriations to an ESPC or UESC can as much as double the impact of funds as compared to standard, fully funded project.

1. DOE ESPC IDIQ awards 2014 to 2025, not counting contract modifications | 2. 2025 Compliance Tracking System Data, only accounting for nonexpired EISA evaluations | 3. Inclusive of all performance contracting projects through Fiscal Year Q3 FY 2025

How Do Energy Performance Contracts Work?



Select contractor

Pre-qualified Energy Service Company (ESCO) for ESPC Serving distribution Utility for UESC



Conduct assessments to evaluate energy/water savings opportunities

Contractor identifies cost effective ECMs



Implement ECMs

ESCO/Utility secures financing and installs measures



Make payments from energy and cost savings

Contract term of up to 25 years to pay for ECMs

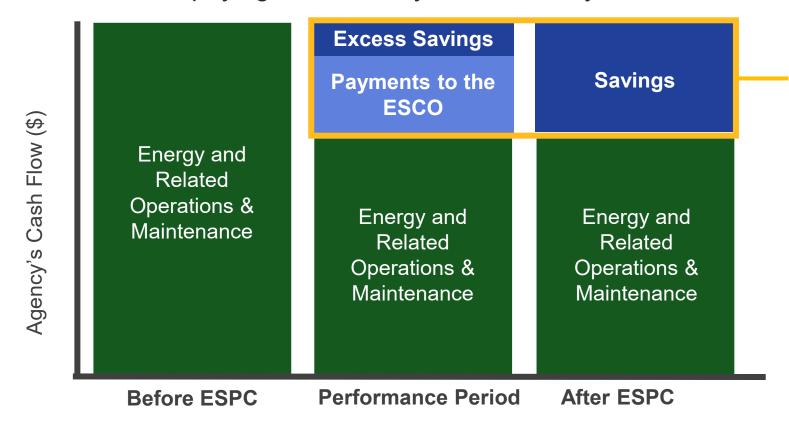


Monitor and sustain savings

Via operations and maintenance/measurement and verification

Reallocate Agency Utility Bill

Stop paying for wasted energy and water consumption. Start paying for efficiency and resiliency solutions.



Energy and documented O&M savings as a result of the performance contract

Funding Legislation

Agencies are authorized to use "any combination" of appropriated funds and financing to pay for energy performance contracts.

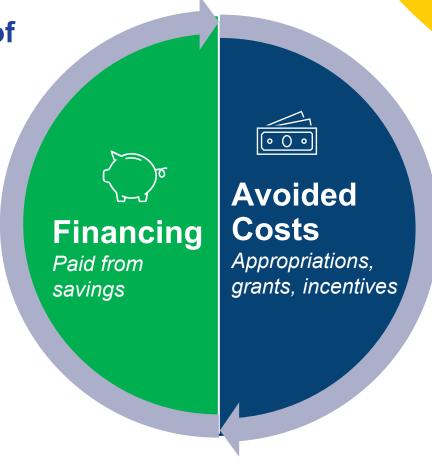
ESPCs: 42 U.S.C. § 8287(a)(2)(E)

UESCs: 42 U.S.C. § 8253(f)(10)(B)



What is an avoided cost?

Energy- or water-related appropriations, grants, or incentives that are counted as savings because they constitute offsets to capital expenses in the project.

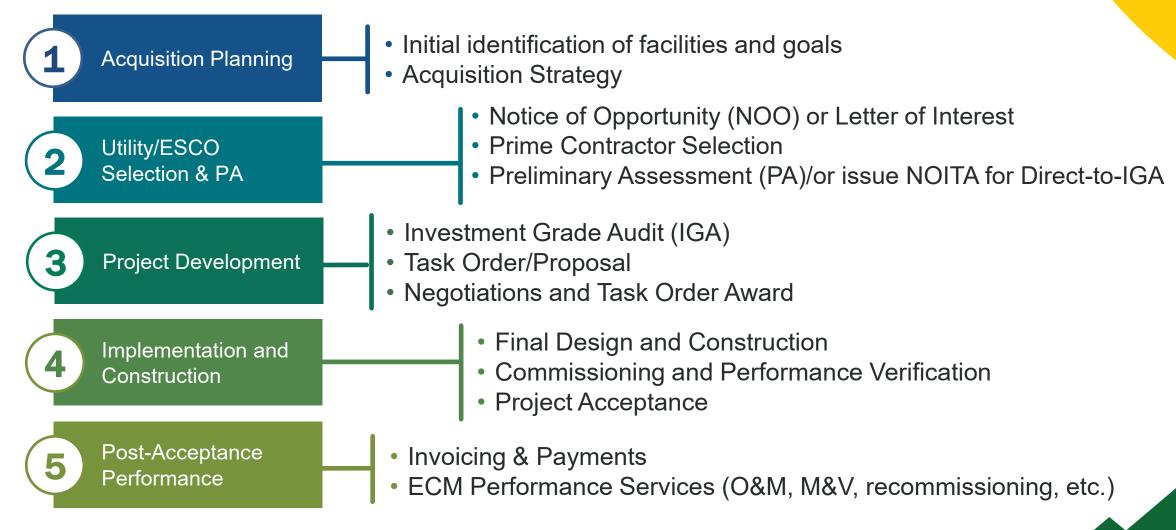


Energy Performance Contracts Comparison

	DOE IDIQ Energy Savings Performance Contracts (ESPC)*	Utility Energy Service Contracts (UESC)	ESPC Energy Sales Agreements (ESA)
Contract Type	Task Orders under DOE ESPC IDIQ contract	GSA Areawide Contracts; Basic Ordering Agreement or separate contract	ECM in DOE ESPC IDIQ, or site- specific/stand-alone
Partner	Energy Services Company (ESCO)	Serving distribution utility (electric, gas or water)	ESCO on DOE Qualified List
Eligible Facilities	Federally-owned and leased worldwide	Federally-owned and leased facilities	Federally-owned leased facilities or on Federally-owned land
Project Size	\$2 million or larger	Any size	Typically, at least 1 MW
Savings Guarantee / Performance Assurance	Savings guarantee required	Performance assurance plan required; Savings guarantee not required but negotiable	Savings guarantee required; metering (Option B) is recommended

^{*} Other agencies have ESPC contracts that may have different characteristics (e.g., Army MATOC, VA IDIQ)

Project Process and Key Milestones



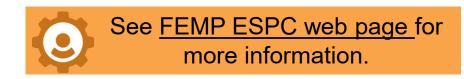
ESPC Key Features and Debunking ESPC Myths



John Shonder

Director of Business Development Lindahl Reed

ESPC Authorizing Legislation





Authorized and encouraged by legislation since EPACT 1992



ESPC statute: <u>42 U.S.C. § 8287</u>



Regulations governing ESPCs

DOE Rule: 10 CFR 436 Subpart B

FAR Part 23.2



Latest: Energy Act of 2020 §1002

Implement 50 percent of ECMs identified through Energy Performance Contract (EPC), 42 U.S.C. § 8253(f)(4) and ESPC amendments strengthening and clarifying the authority

Key Features of ESPCs

- DOE FEMP ESPC IDIQ contracts awarded competitively to ESCOs
 - Agencies award task orders (TOs) under the IDIQs
 - ESCO is responsible for obtaining financing
 - ESCO is responsible for performance of an ECM regardless of who performs O&M
- US Army Corps of Engineers Huntsville National Center (CEHNC) ESPC Multiple Award Task Order Contract (MATOC) awarded competitively to ESCOs
- Max contract term is 25 years (includes construction and performance period)
- Can cover multiple sites, worldwide, multiple states, and/or multiple utility service areas
- Financing and appropriations may be combined
- Savings guarantees and M&V are required savings must equal or exceed payments each year
- Allows for Operation and Maintenance (O&M) savings
- Contracts are firm-fixed-price

Savings Guarantees

- Specified level of cost savings (subject to measurements and agreed-to parameters) and measure of performance (e.g., temperature, lighting levels)
- Key Contract Documents:
 - Risk, Responsibility, and Performance Matrix (RRPM)
 - Measurement and Verification (M&V) Plan
- FEMP Life of Contract Services
 - Oak Ridge National Laboratory reviews active DOE IDIQ ESPC projects semi-annually, provides feedback to agencies through semi-annually check-ins
 - Proactively identify project issues
 - Provide data for agencies to use in Base/ESCO discussions

Energy Conservation Measures (ECMs)*

ECMs must produce measurable energy, water, or demand reduction













- Boiler and chiller plants
- Energy management control systems
- Building envelope
- HVAC
- Chilled/hot water and steam distribution
- Lighting
- Electric motors/drives
- Refrigeration
- Distributed generation

- Renewable energy
- Energy/utility distribution
- Water and sewer
- Electrical peak shaving/ load shifting
 - Rate adjustments
- Energy-related process improvements
- Commissioning
- Advanced metering
- Appliance/plug load reductions

*List taken from DOE ESPC IDIQ but has broad applicability.

20 DOE ESPC IDIQ Gen 4 ESCOs

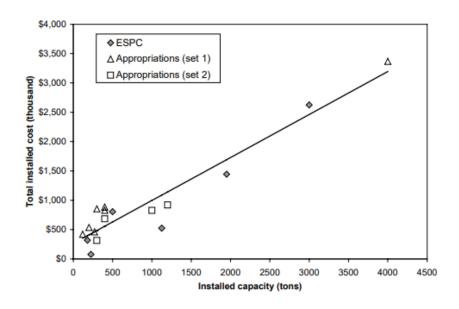
ABM Facility Support Services, LLC	Honeywell International, Inc
AECOM Technical Services, Inc.	Johnson Controls Government Systems, LLC
Ameresco, Inc.	NORESCO, LLC
The Brewer-Garrett Company	RWE Clean Energy Solutions, Inc
CEG Solutions LLC	Schneider Electric Buildings Americas
Centrica Business Solutions Services (Formerly SmartWatt Energy)	SitelogIQ Government Solutions, LLC
CMTA Inc	Southland Industries
Constellation NewEnergy, Inc.	The Efficiency Network, Inc
Energy Systems Group, LLC	Trane U.S. Inc.
ENGIE Services Inc.	Veregy, LLC

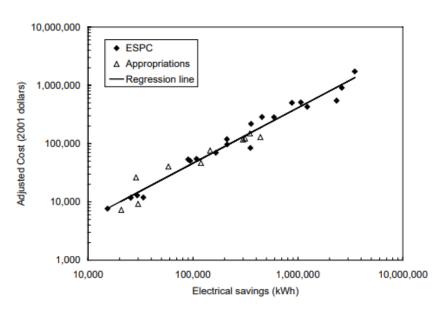
18 Army ESPC MATOC IV ESCOs

AECOM Technical Services, Inc.	Green Generation Solutions	
Ameresco, Inc.	Honeywell International, Inc	
The Brewer-Garrett Company	Johnson Controls Government Systems, LLC	
CEG Solutions LLC	M.C. Dean	
Centrica Business Solutions Services	NORESCO, LLC	
CMTA Inc	Schneider Electric Building Americas	
Constellation NewEnergy, Inc.	Southland Industries	
Energy Systems Group, LLC	Trane U.S. Inc.	
ENGIE Services Inc.	Veregy, LLC	

Myth: ECMs Cost More in a Performance Contract

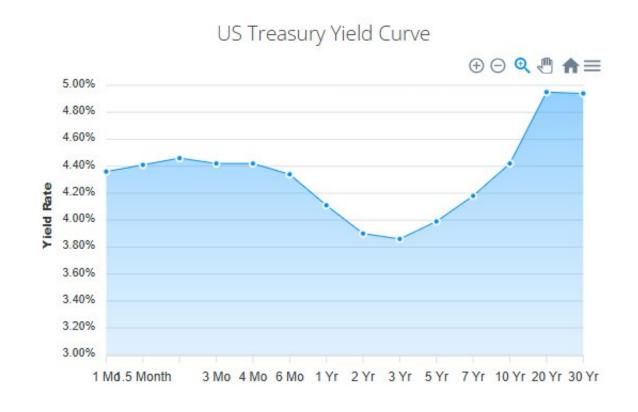
- Comparing pricing in different projects requires careful analysis
- When that analysis has been done, it's shown that underlying ECM prices are the same
- Multiple bids for equipment and installation are solicited in both ESPC and appropriationsfunded projects





Myth: Appropriations Projects Incur No Interest

- The marginal dollar of federal funding is borrowed through the sale of Treasury Securities
- These instruments pay interest to investors
- Foreign investors do not pay tax on the interest
- Appropriations-funded projects require construction loans as well



Myth: Appropriations should be Used for Quick Payback ECMs

- Nothing could be further from the truth
- When available, appropriations should always be combined with ESPC
 - ESPCs allow savings from short-payback ECMs to be capitalized, allowing further investment
- Using appropriations to fund short-payback ECMs outside of ESPC has a detrimental impact on the project
- Contributing \$1 in appropriations in an ESPC generates \$2 in additional capital
 - Savings generated by the \$1 are capitalized into another \$1 of investment

Myth: Performance Contracts Don't Reduce Costs

- It's true that most of the utility savings is paid to the ESCO during the contract, but:
- ESCOs don't guarantee all of the savings government-wide, ESCOs achieve 105% to 109% of guaranteed savings
- When the contract ends, all savings goes to the government
- Had existing equipment not been replaced, performance would have degraded, with higher utility costs, maintenance costs, and potential equipment failure
- NIST utility price escalation rates are conservative
- Result is that actual benefits to the government are on the order of double the guaranteed savings

Myth: Resilience ECMs not Viable with ESPC

- ESPC has been used to fund resilience measures across the federal government
 - On-site generation/CHP
 - Solar PV
 - Microgrids
 - Energy storage
- Depends on utility rate/structure, availability of capital contributions, and other factors
- Efficiency measures contribute to resilience as well
- The most resilient kW is the one you don't use

Conclusion: ESPCs Make Sense for the Government

- No up-front capital required
- No need to apply/wait for appropriations
- Savings are measured and guaranteed in ESPC
- Projects generate savings beyond the guarantee
- O&M can be included
- Reduce exposure to fluctuations in energy prices

Utility Energy Service Contracts (UESCs)



Jeff Gingrich

Project Manager, ESPC & Utility Program Support National Renewable Energy Laboratory (NREL)

UESC Authorization and Definition

Authorized and encouraged under the Energy Policy Act of 1992 (42 U.S.C. § 8256 - Incentives for agencies and 10 U.S.C. § 2913)

- Defined as a limited-source acquisition between a federal agency and serving utility for energy management services, including:
 - Energy efficiency improvements
 - Water efficiency improvements
 - Demand reduction services
 - Distributed energy
- Agencies are authorized to participate in utility incentive programs and accept any financial incentives, goods, or services generally available



Unique Features of UESCs

Contracts are awarded competitively with a utility (electric, gas, water) who serves the location

- Task Orders typically awarded via GSA Areawide Contract (most common or Basic Ordering Agreement
- Utility is responsible for obtaining financing
- If multiple sites, the same utility must serve all sites
- Not applicable OCONUS
- Utility companies often partner with ESCOs to implement the work
- Contracts are firm-fixed-price

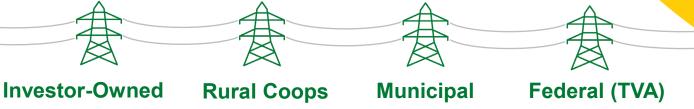
Performance Assurance/Savings Guarantee: Required to establish plan for ensuring long-term savings (savings guarantee negotiable with utility, not required)



Eligible Utility Contractors



Competition is limited to utility companies that own the wires and pipes for distribution of electricity, natural gas, or water in the geographic area where the site is located.



- Site(s) must be located within the utility's franchise service territory
- Water utilities typically don't offer UESCs
- Energy commodity suppliers are not eligible
- Utility Privatization contractors may be eligible, specific to Department of Defense (DoD) facilities
- Solutions are fuel neutral

References: 42 USC 8256 (c) and FAR Part 41

Utilities Offering UESCs

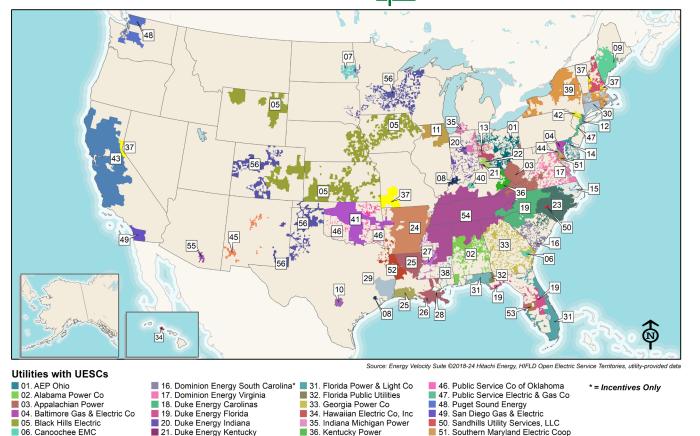


■ 52. Southwestern Electric Power Co

■ 54. Tennessee Valley Authority

53. Tampa Electric

Electric Utilities



07. Cass County Electric Coop

■ 08. CenterPoint Energy

09. Central Maine Power Co

■ 10. City Public Service Energy

11. Commonwealth Edison Co

12. Consolidated Edison New York

■ 13. Dayton Light & Power Co

■ 14. Delmarva Power & Light Co 15. Dominion Energy N. Carolina

26. Entergy Louisiana 27. Entergy Mississippi 28. Entergy New Orleans

22. Duke Energy Ohio

24. Entergy Arkansas

23. Duke Energy Progress

25. Entergy Gulf States Louisiana

29. Entergy Texas 30. Eversource Energy

37. Liberty Utilities 38. Mississippi Power Co

39. National Grid 40. Nolin Rural Electric Coop

55. Tucson Electric Power ■ 41. Oklahoma Gas & Electric Co ■ 56. Xcel Energy* 42. Orange & Rockland Utilities

43. Pacific Gas & Electric Co 44. Potomac Electric Power Co 45. Public Service Co of New Mexico

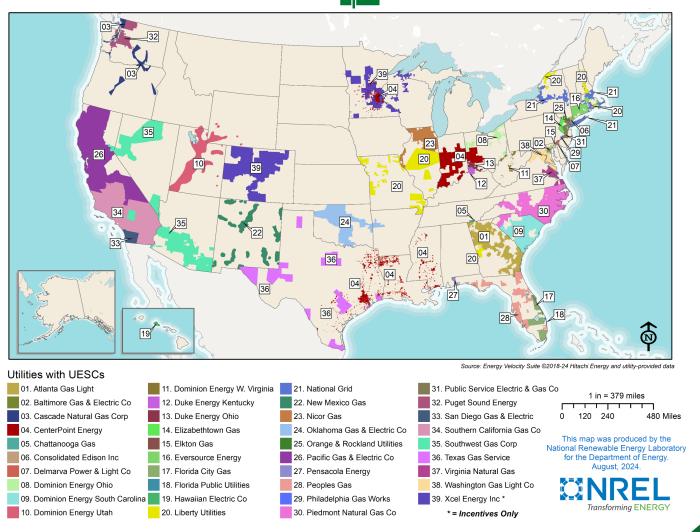
This map was produced by the National Renewable Energy Laboratory for the Department of Energy



Utilities Offering UESCs



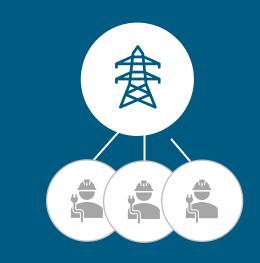
Gas Utilities



Utility Responsibilities and Implementation Approach

Utility may self-perform or assign implementation responsibilities to an ESCO

- Analysis and assessments (PA, IGA, etc.)
- Engineering and design
- Performance Assurance Plan development
- Competitive subcontractor selection
- Obtaining financing (as needed)
- Project management and construction
- Performance period services (as assigned in the TO)



- Utility is always the prime contractor
- ESCOs should be competitively selected

Performance Assurance

The Performance Assurance Plan establishes protocols, responsibilities, and requirements for monitoring, measuring, and sustaining long-term ECM performance.

- Reduces uncertainty of savings and ensures compliance with legislative and OMB requirements:
 - 42 U.S.C. § 8253(f)(5) Follow-up on Implemented Measures
 - OMB Memo 12-21 (Sep. 2012)
 - 42 U.S.C. 8258 Federal Agency Annual Reports
- Performance Assurance Plan Highlights:
 - ECM baselines and key performance indicators
 - Commissioning at installation and recommissioning
 - O&M and repair & replacement (R&R)
 - Measurement and verification (M&V)
 - ECM training



Savings guarantees are not required for UESCs (by legislation)

- May be negotiated as part of performance assurance plan
- A plan for measurement and verification of savings should be developed regardless

UESC Case Study: DOD, Fort Bliss (2022)

Location: Fort Bliss, Texas

Utility Partner: New Mexico Gas Company

Contract Term: 24 years

Investment Value: \$58.3M

Grants/Incentives: \$1M AFFECT* Grant

• Savings: ~\$132.8M estimated over performance period

Energy Conservation Measures:

- Micro-grid serving 142 buildings (102 mission critical)
- 14 MW of distributed energy resources (DERs)
- 8 MW of battery storage
- LED lighting upgrades
- Refurbishment of existing water well and transmission lines
- Retrofit over 500 domestic plumbing fixtures



Awarded in June 2022, the project is intended to improve resilience, address critical infrastructure needs, and decrease energy and water consumption.

Supports the utility's broader service area by supplying more available capacity to serve utility customers during critical peak load events.

For more information, see the **ESG** press release.

^{*} AFFECT = Assisting Federal Facilities with Energy Conservation Technologies grant

Upcoming UESC Events

Cutting Costs and Advancing Resilience: UESC Success Stories

Thursday, August 21st | 1:00-2:30 PM

- Where: Webinar
- What: VA and Army will discuss how recent UESCs are helping them meet federal energy priorities by enhancing resilience and reducing costs, including sharing best practices and lessons learned to replicate success across the federal government.
- Registration: https://www.wbdg.org/course/femplw08212025a

Utility Open House with Pepco

Thursday, September 4th | 10:00 AM-12:30 PM

- Where: Hybrid (in-person and virtual) hosted at Pepco HQ in downtown D.C.
- What: Event co-hosted with FEMP to help federal customers learn about Pepco's UESC program and other incentives that support federal energy goals
- **Registration:** https://www.wbdg.org/course/femplw09042025

Register Soon!

In-Person attendance is limited

Choosing a Performance Contracting Vehicle



Scott Wolf

FEMP Federal Project Executive
Oak Ridge National Lab (ORNL)



Kurmit Rockwell

Team Lead, Performance Contracting DOE/FEMP

Pathways to Consider: ESPC and UESC

- Factors to consider when choosing a contracting option:
- Geographic scope multi-site or single facility; locations of sites (dispersed or in same utility territory)
- Risk tolerance savings guarantee vs performance assurance
- Serving Utility UESC program availability and strength
 - Not all utilities offer programs
 - Not all utilities have the same level of experience with performance contracts
- Simple ECMs vs complex
- Energy Sales Agreement ECMs only possible via ESPC

Determining Pathway: Example A

- Site Info: 2 large campus locations, ~100 miles apart
 - Mission critical tasks related to food safety
- ECMs/Priorities under considerations:
 - Site 1: address failing steam boiler, leaking distribution system, and gain resiliency
 - Site 2: replace failing rooftop PV units, onsite generation
- Other Factors:
 - Have had success with both ESPC and UESC
 - Interested in working with a utility
 - Would like to take advantage of available land to add PV, especially if the ESA is possible
 - Sites are served by different utilities

The site would like to engage a utility.

Do you think that is a good idea or should they consider an ESPC?

Determining Pathway: Example B

- Site Info: Large DOD facility (20,000+ acres)
 - 50+ buildings, ~20 million SF of conditioned space
 - Building types residential, industrial, commercial
- ECMs/Priorities under considerations:
 - Objective to minimize energy/water consumption, minimize costs
 - Lighting conversion from T8 to LED, BAS upgrades, HVAC improvements, building envelope improvements, water conservation measures
 - Renewable energy opportunities, including ESAs
- Other Factors:
 - Limited appropriations available

Which performance contract vehicle might best fit?

Determining Pathway: Example C

- Site Info: Facility with light industrial-type activities, offices and dormitories
 - 40 buildings with varying degrees of building condition, backlog of deferred maintenance
 - Overall spend of about \$12M on utilities (natural gas, electricity and water)

ECMs under consideration:

- Old steam system, outdated pneumatic controls steam tunnels in terrible condition with many leaks
 Need a steam trap maintenance program because our guys can't keep up on the repairs
- Boiler plant at the end of its useful life; some newer chillers that don't operate as efficiently as they
 could. Several cooling towers need to be replaced or rebuilt
- T-8 lights are ready to be replaced with LEDs
- Our backup fuel is fuel oil. Have small CHP, but studies indicate positive economics if expanded

Other Factors:

- Repair and modernization funds available to contribute
- Thinking about applying for an AFFECT grant
- Have done several performance contracts over the past 20 years, including UESCs

Considerations for Choosing a Performance Contracting Vehicle

- Is the site integrating an AFFECT grant? Other possible funds to help the project cash-flow?
- Is the site interested in DER? Resiliency? Renewables? Other advanced technologies where the best ESCOs needs to be picked?

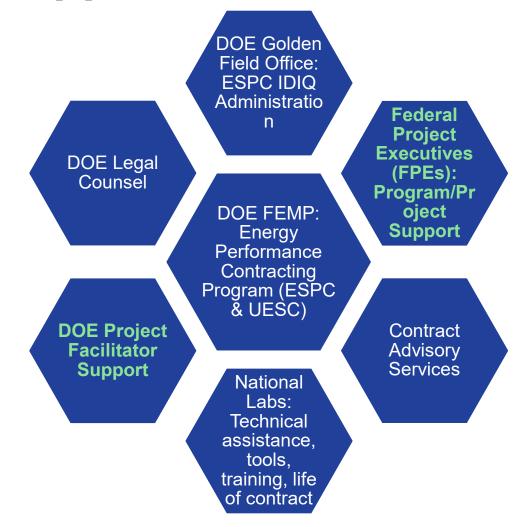
Resources and Project Support



Scott Wolf

FEMP Federal Project Executive
Oak Ridge National Lab (ORNL)

FEMP Offers Support for Performance Contacts



FEMP Project Support Services

- Help with all performance contracting: ESPC and UESCs
- Connect you with lab, subject matter experts, resources



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Questions?



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How to obtain your CEUs:

- 1. Log in to https://edu.wbdg.org/ using your WBDG credentials
 - The assessment and evaluation will be made available to attendees at 8:00am ET on Monday, August 11th
 - The assessment and evaluation will close on September 22nd
- 2. In the list of trainings you attended, click on the Visit link by the course you wish to complete
 - If the course you're looking for is not listed, click on My Account in the top right menu
 - If you still can't find your course, contact the WBDG support team to check your eligibility
- 3. Complete the assessment with a score of 80% or above
- 4. Upon passing the assessment, click the Post-Evaluation Survey button
- 5. Complete and submit the evaluation
- Click Download Your Certificate to generate your certificate of completion, which can be downloaded for your records

Questions or issues? Contact WBDG Support at wbdg@nibs.org.



What's an IACET CEU?

A continuing education unit (CEU) from the International Association for Continuing Education and Training (IACET) equals 10 hours of learning in an approved program for licensed or certified professionals.

Thank You



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