

ESPC ESA Webinar Series: ESPC ENABLE Contract Vehicle Overview

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Webinar Logistics

- **This webinar is being recorded. The Q&A portion will not be made publically available.**
- **Your phone will be muted throughout the webinar.**
- **Enter any questions in the Question Box throughout the webinar.**
- **Instructions to take the quiz will be provided at the end of webinar.**
- **Slides will be sent out afterwards to those who attend the entire webinar**

Webinar Overview

Agenda

- | | |
|------|---|
| I. | Introduction and Recap of Webinars #1 - 3 |
| II. | ESA using ESPC ENABLE Discussion |
| III. | NIST ESPC ENABLE ESA Case Study |
| III. | Resources and Q&A |

Learning Objectives

- Understand the benefits of using ESPC ENABLE to implement ESAs
- Learn the process for developing an ESPC ENABLE ESA project
- Understand key considerations to ensure success
- Learn about available resources to help with an ESPC ENABLE project that includes an ESA ECM

Webinar Team



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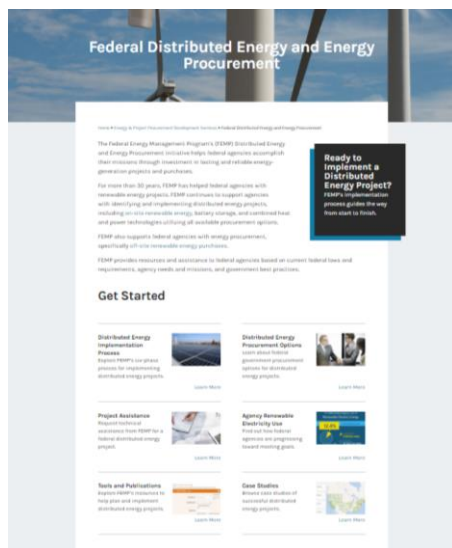
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FEMP's Distributed Energy Program

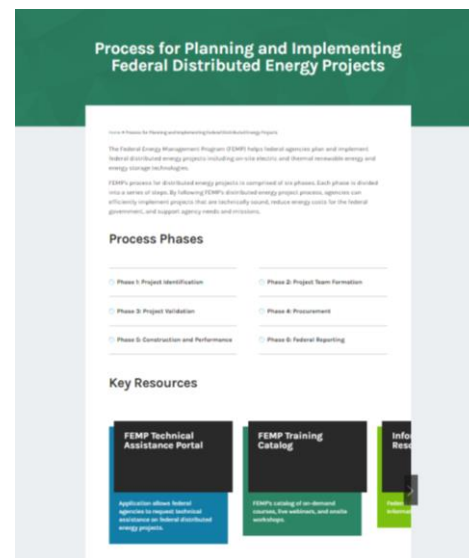
FEMP's Distributed Energy (DE) Program facilitates the implementation of cost-effective on-site renewable energy, energy storage, and combined heat and power technologies for federal agencies.



FEMP's Distributed Energy Program Website



FEMP's Distributed Energy Program Factsheet



FEMP's Distributed Energy Implementation Process Website

ESPC ESA Webinar Series

Webinar #1

- ESPC ESA Overview and Requirements (March 12, 2019)

Webinar #2

- PV Project Considerations (April 23, 2019)

Webinar #3

- ESPC ESA Site-Specific/Stand-Alone (July 23, 2019)

Webinar #4

- ESPC ENABLE with an ESA (October 8, 2019)

Webinar #5

- ESPC IDIQ with an ESA (December 10, 2019)

ESPC ESA Webinar #5

Join our next ESPC ESA Webinar on December 10: DOE IDIQ ESPC with an ESA

- This webinar will provide instructions and resources for financing ESAs through the DOE IDIQ ESPC contract vehicle
- Topics covered include:
 - Overview of DOE IDIQ contract vehicle
 - ESA specific considerations for IDIQ ESPCs
 - Specific use cases

Register on the WBDG website:

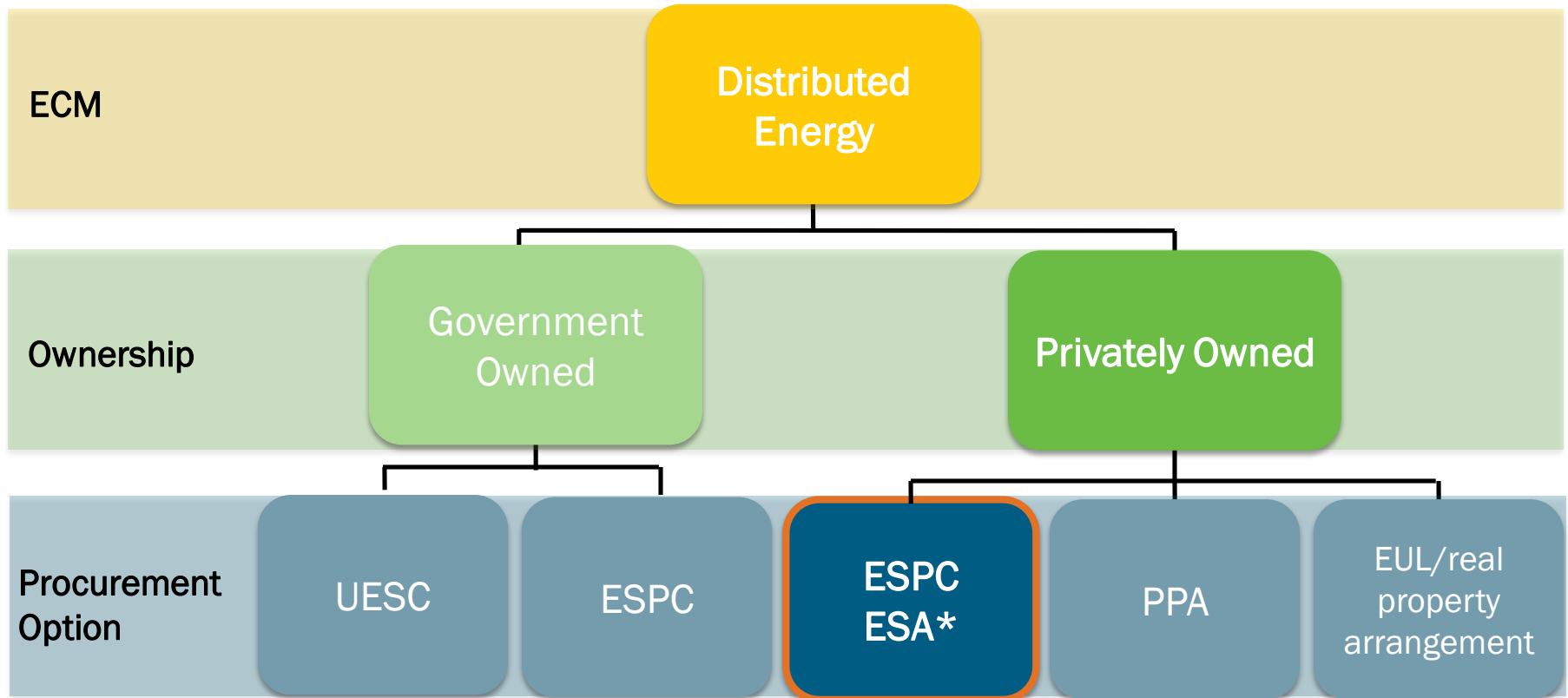
<https://www.wbdg.org/continuing-education/femp-courses/femplw12102019>



Webinars #1, #2, and #3 Recap



Privately Owned DE Project Procurement Options



Legend & Abbreviations

ECM	Energy Conservation Measure	ESPC ESA	ESPC Energy Sales Agreement
UESC	Utility Energy Service Contract	PPA	Power Purchase Agreement
ESPC	Energy Savings Performance Contract	EUL	Enhanced Use Lease

*System is privately owned initially, government must retain title by end of the contract (OMB Memo requirement)

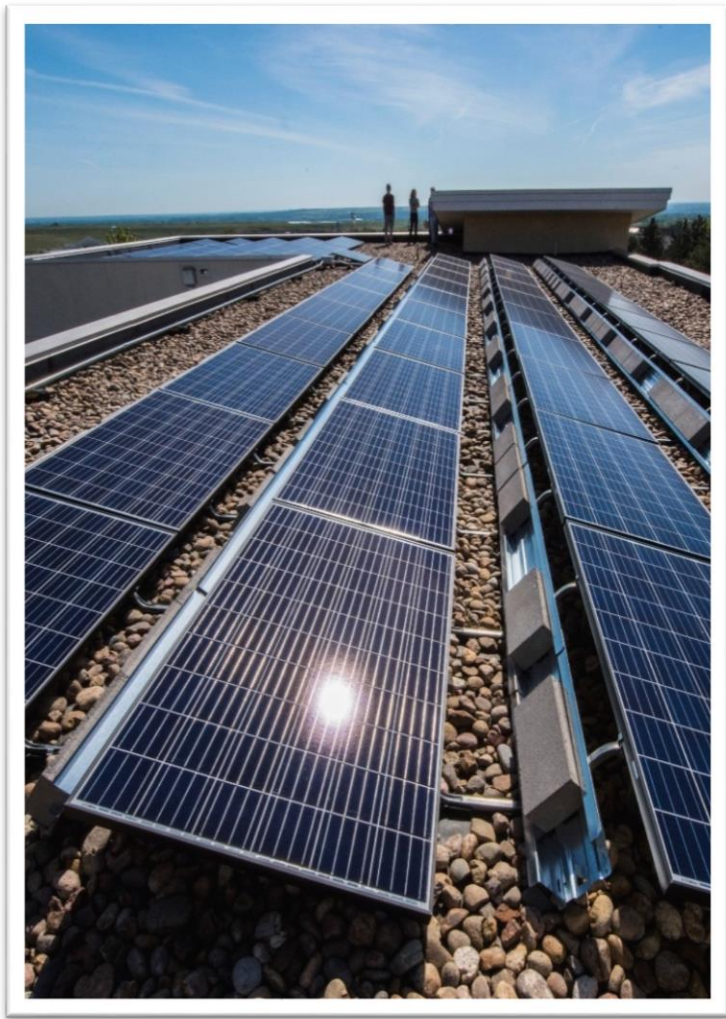
ESPC Energy Sales Agreement (ESA)

An energy savings performance contract energy sales agreement - referred to as an ESPC ESA or ESPC with an ESA ECM - is a project structure that uses the multiyear ESPC authority to implement distributed energy projects on federal buildings or land.

A federal agency should consider an ESPC ESA if they:

1. Are interested in a cost-effective distributed energy ECM (ESA ECM)
2. Have limited long-term contracting authority options
3. Lack upfront capital for a project
4. Think the intended project would benefit from tax incentives

ESPC ESA Basics



- ESA ECM initially privately owned; agency purchases the electricity; O&M/repair & replacement provided by the ESCO
- Similar to PPA but uses long-term ESPC authority
- OMB: Agency must retain equipment title by end of contract for annual scoring
- For tax incentives, safe harbor provided by IRS*
- Differences from typical ESPC:
 - Payment is based on kWh generation; price is in ¢/kWh
 - Private ownership initially, allowing tax incentives to be captured
 - Maximum contract term is 20 years

**ESCO is responsible for tax incentive due diligence*

ESPC ESA Requirements

The ESPC ESA must meet all ESPC authority requirements.*



Payments must come from cost savings (ESPC ESA cost must be less than utility cost each year of contract)



Project must be on federal land or building



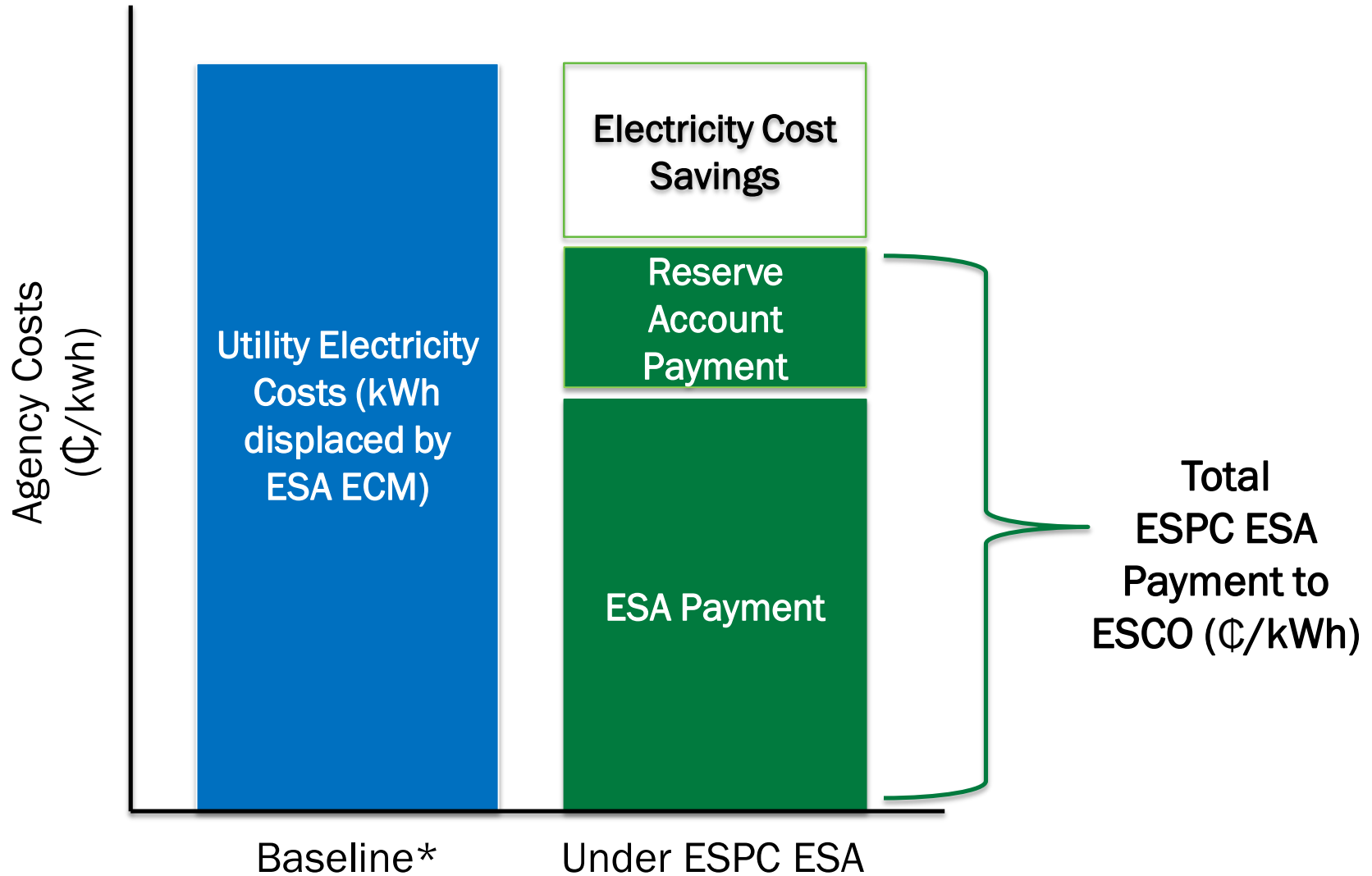
ESCO must be on DOE qualified list by time of award



ESA must meet all other ECM requirements under 42 USC 8259

**See e.g., 42 U.S.C. § 8287 et seq.*

Cost Savings With ESPC ESAs



*Either the blended rate or a rate that only considers costs offset by the ESA ECM.

PV Investment Tax Credit (ITC) Fact Sheet

Describes considerations for privately owned PV on federal land and buildings

- The solar ITC is for developers (federal agencies are not eligible)
- The ITC will decline from 30% to 10% by 2022
- Solar ITC amount is based on the “commence-construction” year. See table below and [IRS Notice](#)*:

Solar Investment Tax Credit Deadlines

Year of Commence Construction	Deadline for Placement in Service	ITC Amount
2019	End of 2023	30%
2020		26%
2021		22%
2022 onward	2022 onward	10%

Act now for highest credit!

*The third-party project owner should seek tax advisor advice when applying this IRS Notice



Investment Tax Credit Requirements for Privately Owned Solar Photovoltaic Systems on Federal Sites

The federal investment tax credit (ITC) is an economically valuable tax incentive offered to taxable business entities that invest in certain energy technologies.¹ The ITC is based on a percentage of the qualifying upfront capital costs of a project and directly reduces a business's tax liability (i.e., the taxes paid).

This fact sheet focuses on ITC considerations for privately owned solar photovoltaic (PV) projects on federal land and buildings, although some of the considerations may be applicable to other technologies² and non-federal entities.

Benefits of Privately Owned PV Systems on Federal Sites

Although federal agencies are not eligible for the ITC, they can still benefit from the tax credit if the PV system is on a federal building or land and is privately owned. These systems can be procured under financing mechanisms such as energy savings performance contract energy sales agreements (ESPC ESAs) and power purchase agreements (PPAs).



A nearly 15,000-panel solar PV array was installed under an ESPC ESA at the U.S. Department of Commerce's National Institute of Standards and Technology (NIST) in Gaithersburg, Maryland. The installation will be privately owned for the 20-year ESPC ESA term for tax incentive purposes and NIST will purchase the electricity produced. The array is predicted to save NIST a minimum of \$3.5 million in its first 20 years of operation. Photo courtesy of NIST.

There are several benefits to private ownership of PV systems on federal land or buildings:

- Federal agencies are not required to provide upfront capital investment.
- The private owner is responsible for all operations, maintenance, and equipment repair and replacement until the end of the contract.³
- The private owner can monetize the tax benefits and pass these savings on to the federal agency in the form of a lower contract price for electricity.

Solar ITC Value and Stepdown
The 2019 value of the solar ITC available to private owners is 30% of the qualifying upfront capital costs of a project.

Based on current legislation, the ITC incentive amount for PV projects is set to decline from a 30% value to 26% by 2020, 22% by 2021, and 10% thereafter. Projects located at a federal site must be privately owned to qualify for the ITC.

ITC Stepdown Schedule

In order for a project to be eligible for the ITC amount in a specific year, it needs to meet the IRS requirements for “commence construction” in 2019–2021.⁴ The commence construction deadlines for PV projects, and the corresponding ITC amounts, are shown in Table 1. All projects that commence construction by the end of 2021 must be placed in service (i.e., begin normal operation) by the end of 2023 in order for the private owner to secure a tax credit greater than 10%.

Year of Commence Construction	Deadline for Placement in Service	ITC Amount
2019	End of 2023 ⁵	30%
2020		26%
2021		22%
2022 onward	2022 onward	10%

⁵ The IRS has extended the placement in service requirement to the end of 2023 for projects that commence construction by the end of 2021.

¹ As set forth in Section 48 of the Internal Revenue Code, ITC-eligible technologies include solar, geothermal, fuel cells, microturbines, combined heat and power, small wind (under 100 kW), and governmental energy technologies. The ITC amount varies by technology.
² Energy storage (both combined with PV or other qualified energy technologies) could benefit from the ITC as well.
³ For ESPC ESAs, the federal agency is responsible for those tasks after the end of the contract.
⁴ For IRS Notice 2019-09 see additional detail.

Available on [ESPC ESA website](#)

ESPC ESA – PV Project Considerations*



Legality of Third-Party Electricity Sales



Project Goals



Economic Viability




Agency Mission & Approval Requirements



Utility Coordination




Land, Building, & Electrical




Project Acceptance



Cybersecurity



Construction



Operation & Maintenance

*Not a comprehensive list. Only topics in green were covered in webinar #2.

Site-Specific/Stand-Alone ESPC ESA Overview

- ESCO selected through an RFP process
 - ESCO must be on the DOE Qualified List prior to award
- Allows companies not on IDIQ or ENABLE ESCO lists to compete
- No preliminary assessment or IGA is required
 - Requires more up-front project development work by the agency compared to other contract vehicle options
- Best if ESA is the only ECM
- [ESPC ESA Toolkit](#) available on the FEMP website

ESPC ESA Contract Vehicle Options

All requirements apply regardless of ESPC ESA contracting option.

DOE Indefinite-Delivery, Indefinite-Quantity (IDIQ)

- A streamlined master contract that allows federal agencies to work with 21 DOE qualified ESCOs holding the current DOE ESPC IDIQ contract.

DOE ESPC ENABLE

- A standardized and streamlined procurement process to implement basic ECMs under an ESPC. There are over 20 DOE qualified ESCOs on GSA's Federal Supply Schedule 84, SIN 246-53.

Site-Specific/Stand-Alone

- An ESCO is selected through a request for proposal (RFP) process. The selected ESCO must be on DOE's Qualified List of ESCOs prior to contract award. The Qualified List currently includes over 100 ESCOs.

Army Corps MATOC (IDIQ, DOD Only)

- The U.S. Army Corps of Engineers' ESPC program awards master ESPCs and multiple award task order contracts (MATOCs).

DOE ESPC ENABLE with an ESA



ESPC ENABLE Overview

ESPC ENABLE is an alternative energy performance contracting program:

- Intended for smaller projects at federal facilities
 - Is suitable for facilities under 200,000 square feet
 - Project size \$200k - \$11 million (average: \$3 million)
 - *No fixed minimum or maximum facility or project size*
- Standardized, streamlined process to award projects and realize savings using GSA Schedule 84, SIN 246-53
 - No Preliminary Assessment; uses templates and IGA Tool
- Targets simple, straight-forward ECMs
- Prescriptive measurement and verification plan and reports (M&V)
 - Primarily Option A
 - **Solar PV and chillers use Option B**

ESPC ENABLE: ECM Summary

ECM	Included	Outside IGA Tool/Hybrid Approach
Lighting	<ul style="list-style-type: none"> Lamps, Ballasts, Fixtures Controls: Occupancy, Day lighting (on/off, dimming) 	<ul style="list-style-type: none"> Solar Lighting (off-grid installations allowed)
Water	<ul style="list-style-type: none"> Sanitary plumbing fixtures: sinks, toilets, urinals, showers Irrigation Leak repair Domestic/commercial hot water heaters Water based appliances: dishwasher, ice machine, clothes washer, etc. 	<ul style="list-style-type: none"> Heating/Cooling system improvements (cooling towers, once through cooling, condensate reclaim)
HVAC Controls	Whole building control strategies including: <ul style="list-style-type: none"> Time/Temperature Set-back Demand/Night Ventilation 	<ul style="list-style-type: none"> Advanced Controls ¹: Energy Management Control Systems (EMCS) / Building Automation Systems (BAS)
HVAC Equipment	Basic whole building/system one-for-one replacement ² of: <ul style="list-style-type: none"> Window AC units / Electric Baseboard heat Split AC/Furnace Heat Pumps Packaged Terminal Air Conditioner (PTAC) Packaged Single Zone Air Conditioner (PSZ) Roof Top Units (RTU) Single building Boiler/Chiller 	<ul style="list-style-type: none"> Central Boiler/Chiller Plants Retro-commissioning based activities Non-building related heating/cooling/ventilation
Solar PV	<ul style="list-style-type: none"> ESA ECMs Ground, Roof, Parking Canopy mount Fixed and Tracking Arrays, Grid Tied and Off-grid 	<ul style="list-style-type: none"> Solar Thermal (Hot Water) Hybrid PV/Hot water systems

- Advanced Controls may be considered, however savings calculations within the ENABLE IGA tool are limited to time/temp set-back, demand/night ventilation
- Current ENABLE IGA tool is presently configured to model one-for one replacement of whole system(s) across an entire building with “like” systems (ex: replace (3) RTU's with (3) higher efficiency RTU's.)
- Hybrid Approach - Agency and ESCO must come to agreement about how ESCO will calculate savings outside of IGA Tool for non-ENABLE ECMs. ESCO must also propose an M&V methodology for ECMs for non- ENABLE ECMs.

ESPC ENABLE: Eligible ESCOs as of Sept. 2019

ABM Facility Support Services	*	Legatus6	**
AECOM Technical Services	*	METCO Engineering	**
AMERESCO Federal Solutions	*	Onix, Inc.	**
Brewer-Garrett Co	*	Orion Energy Systems	
CCI Group		Pacific Lighting Management	**
Constellation NewEnergy	*	Siemens Industry	* ¹
CTI Energy Services	**	Signify North America (formerly Philips Lighting N.A. Corp.)	
The Efficiency Network	**	SitelogIQ (formerly ADI Energy)	**
ENGIE Services U.S.	*	Stronghold Engineering Inc.	
Enovity, Inc.		Trane U.S.	*
Green Generation Solutions	**	Utility Systems Solutions	**
Honeywell International	*	Williams Electric Co	
Johnson Controls		Woodstone Energy	**

* = DOE IDIQ ESPC ESCO

** = Small Business

¹ Same parent company as IDIQ contractor

ESPC ENABLE: Program Status as of Sept. 2019

ESCOs in the Program

- 26 qualified ESCOs under GSA Schedule 84
 - 10 Small Business contractors
 - 3 Disabled Veteran contractors
 - 9 IDIQ contractors

Project Status

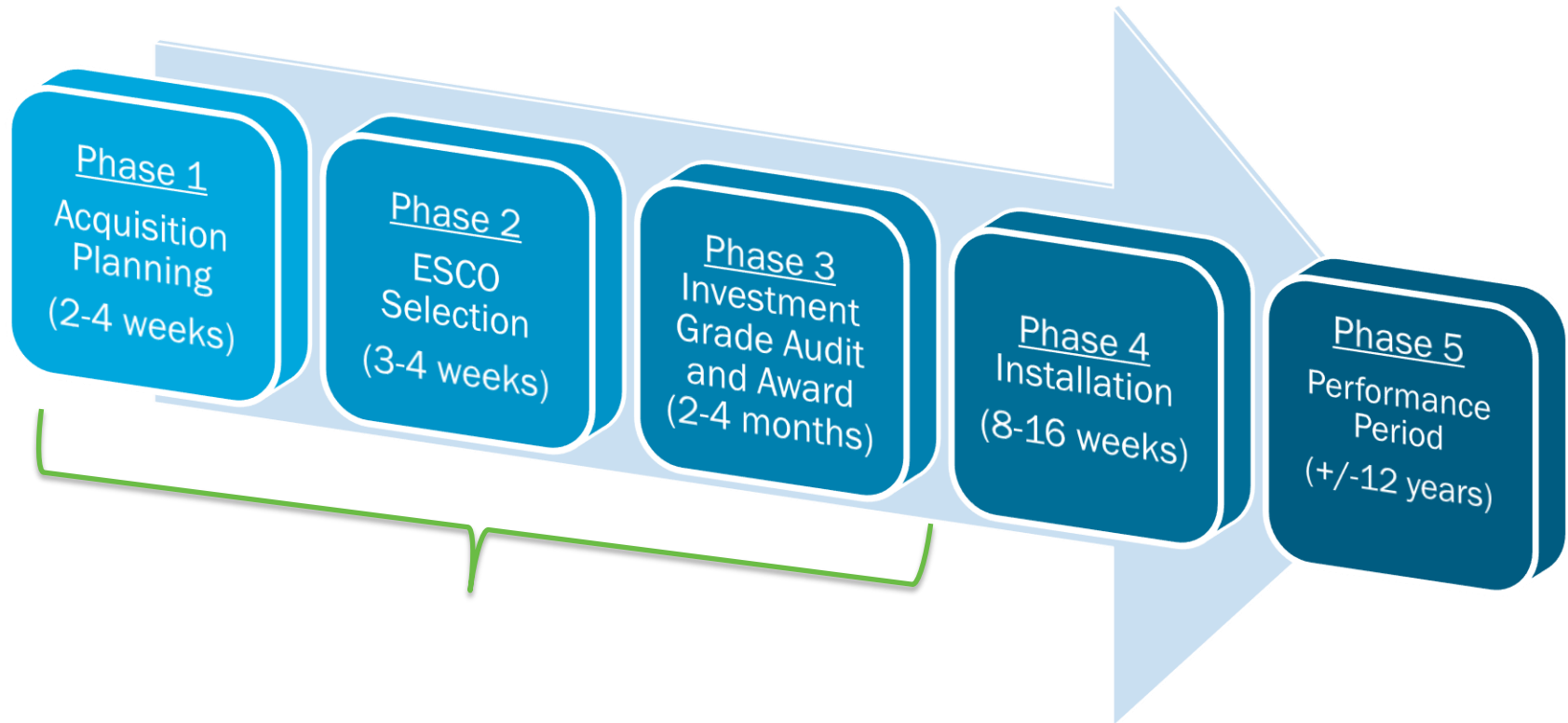
- 20 projects awarded across 13 agencies (investment range: \$0.2-\$12m)
 - **2 solar PV projects with ESA ECM**
 - Awards have gone to 5 small business ESCOs (including 2 Disabled Veteran ESCOs), 5 ESPC IDIQ ESCOs
- Multiple projects underway (Pipeline: 11 projects, 11 agencies)
- Scopes range from one to multiple ECMs

Why Use ESPC ENABLE for your ESA?

- **If you are looking to implement an onsite distributed energy project in a streamlined, relatively quick process**
 - Can be bundled with other basic ECMs
 - Can be the only ECM
- **If you have a good understanding of ECMs/upgrades needed at your facility**
 - Pre-screening has been completed
 - Small facility with relatively simple equipment
- **If a simplified prescriptive approach would meet your needs**

Reminder: There is a 20-year term limit for ESA ECMs

ESPC ENABLE: Process Cycle



- *Projects awarded in about 6 months*
- *Energy/cost savings in 8-12 months*

Available ESPC ENABLE Templates

Acquisition Planning

- Acquisition Plan
- **Kick-off Agenda***
- **Request for Quotation/ Notice of Opportunity (RFQ/NOO)***

ESCO Selection

- **ESCO Expression of Interest (NOO Attachment)***
- Unsuccessful Offerors Letter
- Notice of Intent to Award (NOITA)

IGA and Award

- **IGA Kick-off agenda***
- **Scope of Work (SOW)***
- Final Proposal
- Task Order award

Installation

- Commissioning
- **M&V Plan****
- Agency Acceptance

Performance Period

- M&V Report (Outline)

* Draft PV ESA ECM templates are available for these documents

** PV ESA ECM shall use M&V Option B. Actual Annual Production could be normalized based on actual solar insolation for the purposes of comparing to the Guaranteed Annual Production

Phase 1: Acquisition Planning

Activities: Estimated timeline – 2-4 Weeks



Acquisition
Planning

- Essential members of the acquisition team are identified
- Hold acquisition team kickoff meeting**
- Procure Project Facilitator
- Develop an Acquisition Plan*
- Develop the Request for Quotation/Notice of Opportunity**
- ESA Considerations:
 - Determine land, parking lot, and/or roof areas available for PV
 - Determine NEPA requirements
 - Discuss site access requirements
 - Discuss plans with Utility

**Indicates FEMP-provided template*

*** Indicates ESPC ESA specific template*

Best Practices for an Effective ESA NOO

- Use ESPC ESA NOO template and involve FEMP Federal Project Executive
- Provide as much relevant information as possible
 - ECMs desired, current utility rates, facility energy use and cost, area available for PV ESA ECM
- For PV ESA ECM: request ESCO to propose \$/kWh if sufficient information available, and how incentives will be applied
- Require ESCO to describe technical expertise in PV and other desired ECMs
- See [DOE ESPC ENABLE website](#) for complete list of recommendations

ESPC ESA NOO Template

- Assumes ESA bundled with other ECMs (modify if ESA only)
- Includes ESA-specific requirements/considerations (2012 OMB Memo title retention requirement, etc.)
- ESCO response requirements:
 - Qualifications and experience with PV systems
 - Technical knowledge
 - Past performance
 - Price component
 - Pricing for last three ESPC (with ESA or PV) or similar projects
 - Project financing and plans to maximize tax incentives benefits
 - Economic structure – PV ownership and mark-ups
 - SREC plans, including SREC price risk management
 - PV ESA price (cents/kWh) and variables that will impact final pricing
 - *If agency has sufficient information regarding the desired PV project*

Phase 2: ESCO Selection

Activities: Estimated timeline – 3-4 Weeks



ESCO
Selection

- Agency issues Request for Quotation/Notice of Opportunity**
- ESCOs expression of interest (EOI)*
- Evaluate responses based on best value criteria outlined in the RFQ/NOO**
- Notify unsuccessful offerors* and issue the notice of intent to award (NOITA)*

**Indicates FEMP-provided/required template*

*** Indicates ESPC ESA specific template*

Tools can be found at [ESPC ENABLE Process and Resource Website](#)

ESCO Selection Criteria



ESCO
Selection

Example Criteria from ESPC ESA NOO Template

- **Qualifications and Experience:** ... designing, constructing, commissioning, owning, operating, maintaining, and repairing PV systems
- **Technical Knowledge:** ... initial estimate of the amount of solar PV (in kW DC) that can be installed cost-effectively within the constraints given in this NOO and the potential performance contract. The PV size estimate will be refined during the IGA
- **Price:** ... PV ESA pricing information for their last three ESPC or similar projects awarded, including the following element(s): PV system price per installed kW (DC) and/or cents/kWh
 - Application of ITC, SRECs, other incentives

Phase 3: IGA to Award



IGA and Award

Activities: Estimated timeline – 2-4 Months

- Agency prepares Scope of Work (SOW)**, and hosts Investment Grade Audit (IGA) kickoff meeting
- ESCO performs IGA using FEMP-provided survey tools*
 - Verifies potential PV size, utility interconnection requirements, installation schedule, costs, incentives, and savings
- ESCO submits final proposal* for agency review and final negotiations
 - Includes end of contract FMV estimate
- Complete NEPA requirements for ground-mount PV
- Agency awards task order

**Indicates FEMP-provided template*

*** Indicates ESPC ESA specific template*

ESPC ESA SOW Template

- ESA-specific definitions
- Section C
 - O&M and R&R requirements, including manuals and training
 - SRECs, tax, and other incentives - ESCO responsible for eligibility due diligence
 - Interconnection requirements and agreement
 - Metering specifications
 - Structural analysis (for roof-top systems)
 - Vegetation management
- Section E: Inspection and Acceptance
 - Electrical drawings, system acceptance testing procedures

Consult FEMP “[Procurement Specifications Templates for On-Site Solar Photovoltaic: For Use in Developing Federal Solicitations](#)” for code and other technical requirements

ESPC ESA SOW Template cont'

- Section F: 20 year max contract term for PV ESA ECM
- Section G
 - Comparison of Actual Annual Production to Guaranteed Annual Production: Shortfall calculation adjusted based on “Unforeseeable Events” and associated “Excused Production”
- Section H
 - Special Purpose Entity (SPE) creation and novation
 - ESCO’s reserve account, FMV appraisals and title transfer at FMV
 - Final Proposal requirements
 - eProject Builder and financial schedule recommendations
 - Site access
 - Insurance and payment/performance bonds
- Schedule 1A - ESA Payments

ESPC ENABLE Investment Grade Audit (IGA) Tool

- **Intended Users:** ESCOs
- **Purpose:**
 - Standardize energy and cost savings methodology across the set of ENABLE ECMs
 - Standardize outputs for inclusion in prescribed final proposal outline
- **Intention:** Minimize time for agency review of proposals
- **Functionality**
 - Estimates baseline energy use and costs, and post-installation savings, for the project via embedded equations using Energy Plus
 - **Uses PV Watts to estimate energy production for PV ECMs**
 - Generates a Summary Project Report
 - Outputs form the basis for contract documents
 - Summary data tables by ECM for M&V Plan
 - Completed TO Schedule #4 (data needed for entry into ePB)
 - ECM equipment summaries (quantities by type)



Phase 4: Installation and Acceptance

Activities: Estimated timeline – 8-16 Weeks

Installation

- Installation
 - Ensure utility requirements are understood
- Commissioning*
- Measurement and Verification (M&V)*
 - Verify PV output matches expectations
- Utility and other approvals for PV
 - Interconnection, permission to operate
- Agency Acceptance*



** Indicates FEMP provided plan templates and report outlines*

Phase 5: Performance Period



Performance
Period

Activities: Payments, O&M, M&V audits, Fair Market Value estimates

- ESCO or agency must perform annual audit
 - ECM inspections per M&V plan to verify performance and savings
 - **ESCO monitors PV output for ESA (Option B)**
- ESCO performs O&M for PV ESA ECM
- Annual M&V Report* generated by the ESCO and submitted to the agency
- For ESA, include interim FMV estimates for PV system

** Indicates FEMP provided report outline*

End of Contract Term

ESA Consideration:

- FMV appraisal occurs near end of term and prior to title transfer
- ESCO transfers title to agency for FMV
- Agency assumes ownership of equipment, along with O&M/R&R responsibility
 - Consider ESCO-provided training for agency as needed
 - O&M contract is an option



EXAMPLE 1: DEA Facility (El Paso, TX)

Agency	Drug Enforcement Administration (DEA)
Location	El Paso, TX
System	2.5 MW-DC, fixed-tilt ground-mounted PV system
Contract Vehicle	ESPC ENABLE with an ESA and other ECMs (lighting, water)
Estimated First Year Production	~4.4 million kWh
Guaranteed Annual Cost Savings from PV	~\$288,000
Contract Term	20 years



Project Timeline



Kick-Off
Oct. 2016



Awarded
Sept. 2017



Accepted/Completed
Aug. 2018

ESPC ENABLE with ESA Project Example:

National Institute of Standards and Technology (NIST) Gaithersburg, MD



Background

- NIST awarded larger ESPC (\$45M) with 4 ECMs the previous year (June 2015)
- Non-selected ECM was fixed-tilt, ground-mounted solar array on federal property
 - Forecasted cash flow wouldn't payback within 25 years
 - Principal solar array developer was subcontractor to prime ESCO; prime's O/H and profit too much burden unless NIST provided 7-digit upfront cash infusion
- Tried 1 year later as sole ECM using ESPC ENABLE; avoids tacked-on O/H, profit burden
 - Issued NOO using GSA Federal Supply Schedule 84, SIN 246-53
 - Initially pursued government ownership option: NIST owns & responsible for O&M, repair/replacement costs following commissioning and acceptance
 - No need for Preliminary Assessment
 - Price was most important evaluation criteria – 65%

Selection Criteria

- Had 4 separate GO – NO GO criteria:
 - Safety (EMR) rating of 1.0 or less
 - Proof of experience on PV systems larger than 1 MW in size
 - Attend (in person) site visit to NIST Gaithersburg, MD campus
 - Offer an “all in” unit electric rate < 10 cents/kWh, which was rate that NIST was currently paying to local utility
- Six ESCOs submitted bids
- 5 of 6 rec'd GO on each of 4 criteria
- Price evaluation - lowest unit rate; highest first year cost savings
- Written responses to questions - past performance, management plan & structure, strengths, design/implementation team

New Option – Added Step, Reduced Price

- It was clear cut who to choose as Down Select single ESCO and move forward to IGA phase; offered all-in unit rate was 15% lower
- **Hold the presses** – IRS publishes Revenue Procedure 2017-19, providing new guidance regarding tax credits for private ownership option
- NIST was almost ready to proceed down govt ownership path when IRS 2017-19 was issued; NIST chose to explore both govt & private options
- Remaining 5 ESCOs queried – submit price component for private ownership option given IRS guidance, or only interested in govt owned?
- 4 ESCOs provided private ownership all-in unit rate; one declined
- 4 offers evaluated again against price criteria – lowest unit rate, highest first year cost savings

The Offer

- Clear cut again who to choose as Down Select single ESCO to move forward to IGA phase; offered unit rate was 40% lower than what NIST was paying local utility provider
- ESCO with best govt ownership offer compared against ESCO with best private ownership offer
- All-in unit electric rate:
 - Government ownership – 8.5 cents
 - Private ownership – 5.9 cents (31% lower than govt ownership option)
- First Year and Life cycle cost savings:
 - Government ownership - \$98K and \$1.56M (adjusted to \$4.08M for 20 years)
 - Private ownership - \$304K and \$5.98M (202% and 283% higher than govt ownership option)

Selection, IGA, and Award

- ESCO that offered best private ownership option continued on in the process to conduct IGA
- Normal process – IGA received, SOW reviewed/finalized in partnership with ESCO, Final Proposal, allowable price adjustments negotiated, contract award
 - *Advice – if price is primary evaluation factor, request that ESCOs include information in their NOO responses regarding how the market and other changes (such as SREC prices) will impact their final unit price offered in IGA.
- Final unit price: 7.1 cents; impacts of solar panel tariff, SREC market, utility connection requirements raised IGA offered rate of 5.9 cents
- Timeline– not any faster by using ESPC ENABLE: kick-off July 2016; award May 2018; operational December 2018
 - *Advice – engage NREL and DoE/FEMP subject matter experts; use them actively throughout the entire process. A wealth of useful help.

Summary

- In the end, private ownership 31% cheaper than govt ownership option
- Project size – 5 MW (DC); 15 acres; 11 football fields; 14,700 panels; \$10.2M; provides 4% of NIST’s electric load
- 20-year contract term, ESCO responsible for all operations, maintenance, repair, replacement costs
- Developed revocable, no-cost license agreement for non-federal use of NIST’s real property
- PV contractor gets tax credits (ITC, MACRS), solar REC
- NIST purchases array at end of 20-year term at fair market value
 - Interim FMV appraisals at 5, 10, 15 years. Final appraisal at time of title transfer
 - All-in unit rate that ESCO charges per kWh includes a reserve account payment. Total of account at end of 20 years = final appraised fair market value; so no add’l funds needed
 - Projected 10 more years of solar energy generation
 - In all, estimated ~ \$12M savings

Resources



FEMP Assistance

FEMP Resources Available to Federal Customers

- Assistance to build an ESPC ENABLE ESA project
- Tools and guidance to train, educate, and motivate
- Project management support to guide you through the ESPC ENABLE ESA process*
- Procurement and technical subject matter experts to support project execution*
 - ESA: Pre-screening for PV/Battery Energy Storage opportunities
- ESPC ENABLE webpage resources, including training
<http://energy.gov/eere/femp/espc-enable>

*Note: Project Facilitators are optional. Agencies may procure PFs directly or via DOE/FEMP. If via FEMP, agencies must sign an inter-agency agreement (IAA) with FEMP stipulating that the agency will either reimburse FEMP via up-front payment, or via guaranteed savings built into the project contract.

Available ESPC ENABLE Templates

Acquisition Planning

- Acquisition Plan
- *Kick-off Agenda**
- *Request for Quotation/ Notice of Opportunity (RFQ/NOO)**

ESCO Selection

- *ESCO Expression of Interest (NOO Attachment)**
- Unsuccessful Offerors Letter
- Notice of Intent to Award (NOITA)

IGA and Award

- *IGA Kick-off agenda**
- *Scope of Work (SOW)**
- Final Proposal
- Task Order award

Installation

- Commissioning
- *M&V Plan***
- Agency Acceptance

Performance Period

- M&V Report (Outline)

* Draft PV ESA ECM templates are available for these documents

** PV ESA ECM shall use M&V Option B. Actual Annual Production could be normalized based on actual solar insolation for the purposes of comparing to the Guaranteed Annual Production

ESPC ESA Website

- [ESPC ESA overview](#)
- [ESPC ESA fact sheet](#)
- [Solar PV ITC fact sheet](#)
- [NIST ESPC ESA Case Study](#)
- DEA ESPC ESA Case Study (*coming soon*)

ESPC ESA Contract Options

- [DOE IDIQ ESPC](#)
- [Site-Specific/Stand-Alone ESPC](#)
- [DOE ESPC ENABLE](#)
- [U.S. Army CoE MATOC](#) (DOD only)

Energy Savings Performance Contract Energy Sales Agreements

Home • Energy & Project Procurement Development Services • Distributed Energy • Procurement • Energy Savings Performance Contract Energy Sales Agreements

An energy savings performance contract energy sales agreement (ESPC ESA) is a project structure, similar to a power purchase agreement, that uses the multiyear ESPC authority to implement distributed energy projects—referred to as ESA energy conservation measures (ECMs)—on federal buildings or land. The ESA ECM is initially privately owned for tax incentive purposes, and the federal agency purchases the electricity it produces with guaranteed cost savings. An ESPC can be used for the acquisition of utility services per 48 CFR § 41.102(b)(7) (2015).

ESPC ESA RESOURCES

- ESPC ESA Fact Sheet
- ESPC ESA Webinar Series
- ESPC ESA Toolkit

Benefits of ESPC ESAs

- ESPC ESAs do not require any upfront capital from a federal agency for the ESA ECM.
- ESPC ESAs provide guaranteed cost savings, and a federal agency only pays for the electricity that is generated, minimizing federal risk.
- The energy service company (ESCO) may be able to take advantage of federal and other tax incentives and can sell the renewable energy certificates generated by the ESA ECM to reduce the ESPC ESA price.
- The ESCO is responsible for ESA ECM operations and maintenance, and for equipment repair and replacement, which also reduces federal risk.

ESPC ESA Contract Vehicle Options

DOE IDIQ ESPC

Master contract that allows federal agencies to work with 21 DOE Qualified ESCOs holding the current DOE IDIQ ESPC contract.

ESPC ENABLE

Procurement process to implement basic ECMs under an ESPC. More than 20 DOE Qualified ESCOs are on Federal Supply Schedule 84, SIN 246-53.

Site-Specific/Stand-Alone

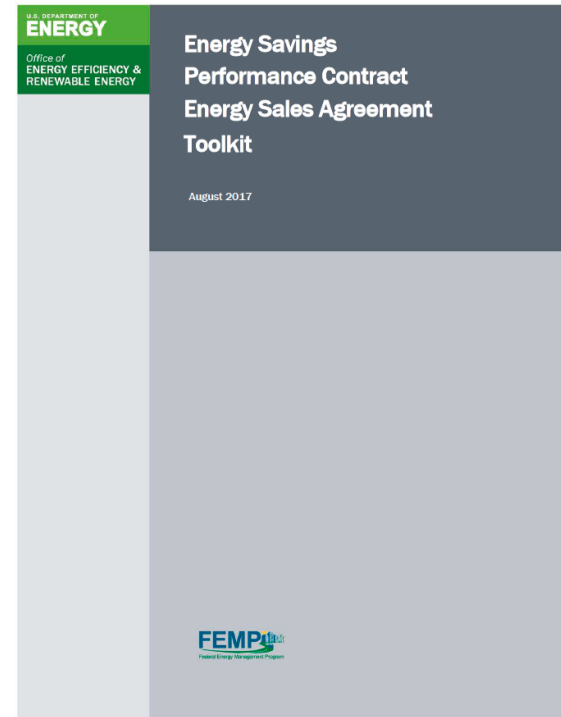
ESCO is selected through a request for proposal process. Selected ESCO must be on the DOE Qualified List.

U.S. Army Corps of Engineers MATOC

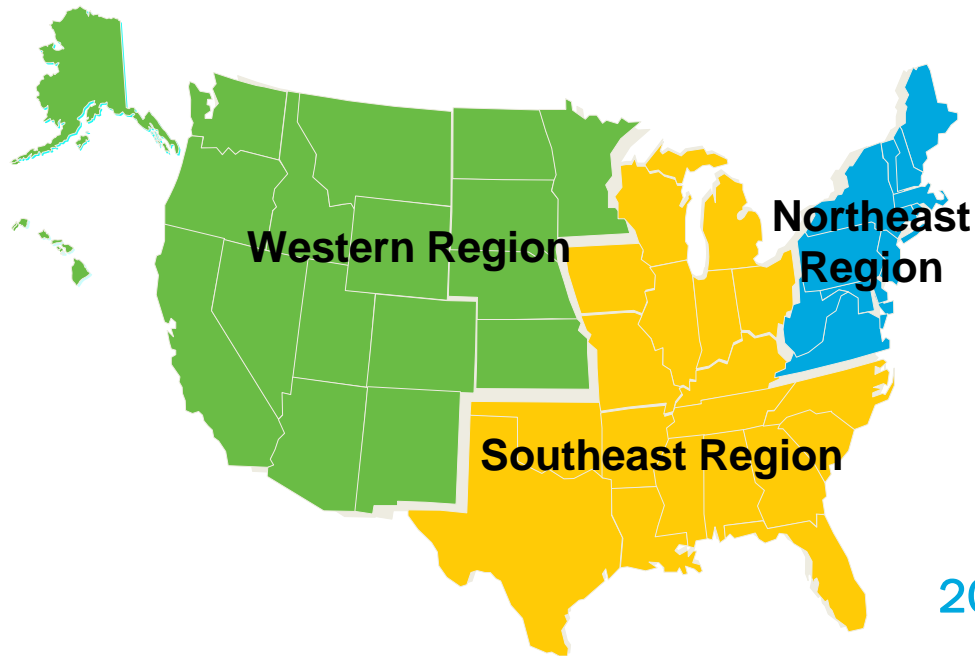
ESPC program awards master ESPCs and multiple award task order contracts (MATOCs) for only the U.S. Department of Defense.

ESPC ESA Key Resources

- [“Procurement Specifications Templates for Onsite Solar Photovoltaic: For Use in Developing Federal Solicitations”](#)
- [OMB Memo M-12-21](#)
- IRS Revenue Procedure 2017-19 published in [Internal Revenue Bulletin 2017-07](#)
- [DSIRE](#) (Database for State Incentives for Renewables and Efficiency)
- [DSIRE Third Party PPA Policies](#)
- [ESPC ESA Toolkit](#) (for site-specific stand-alone ESPC, including editable templates to download)



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Ask for Project Assistance

- Request help with your project today!
- Fill out a quick and easy application through the FEMP portal

Submit a Request
[Here](#)

The screenshot shows the top navigation bar with the ENERGY.GOV logo and the Office of Energy Efficiency & Renewable Energy. The main header is the Federal Energy Management Program. Below the header, there is a breadcrumb trail: FEMP Assistance Request Portal » FEMP Technical Assistance for Distributed Energy Projects. The main heading is FEMP Technical Assistance for Distributed Energy Projects. A paragraph explains that users should fill out the fields in the three form categories below, and a FEMP project specialist will review the request and contact them shortly. A link to Contact FEMP is provided. A note indicates that fields marked with an asterisk are required. The form is divided into three sections: Contact Information, Project Information, and Project Description and Status. The Project Information section includes fields for Project Name, Project Location, and Project Description and Status. The Project Description and Status section includes a text area and a note to briefly describe the project and its current status. The Project Champion and Team Members section is partially visible at the bottom.

ENERGY.GOV
Office of
ENERGY EFFICIENCY &
RENEWABLE ENERGY

Federal Energy Management Program

FEMP Assistance Request Portal » FEMP Technical Assistance for Distributed Energy Projects

FEMP Technical Assistance for Distributed Energy Projects

To request technical assistance for federal distributed energy projects, fill out the fields in the three form categories below. A FEMP project specialist will review your request and contact you shortly. [Contact FEMP](#) with questions.

* Required

+ Contact Information

Project Information

Project Name *

Project Location *

Project Description and Status *

Briefly describe the project you are pursuing and the current status of it.

Project Champion and Team Members



IACET Credit for Webinar



The National Institute of Building Sciences' (NIBS) Whole Building Design Guide (WBDG) hosts the FEMP training program's learning management system (LMS).

The WBDG LMS:

- Allows for taking multiple trainings from multiple organizations through one platform.
- Houses the assessments and evaluations for all accredited courses.
- Allows you to:
 - Track all of your trainings in one place.
 - Download your training certificates of completion.
- Eases the CEU-achievement process.

Visit the WBDG at www.wbdg.org to view courses and create an account

IACET Credit for Webinar

To receive IACET-Certified CEUs, attendees must:

- Attend the training in full (no exceptions).
 - If you are sharing a web connection during the training, you must send an e-mail to Elena Meehan (elena.meehan@ee.doe.gov) and indicate who was on the connection and who showed as connected (will reflect in the WebEx roster).
- Complete an assessment demonstrating knowledge of course learning objectives and an evaluation **within six weeks of the training**. A minimum of 80% correct answers are required for the assessment.

To access the webinar assessment and evaluation, visit:

<https://www.wbdg.org/continuing-education/femp-courses/femplw10082019>

If you have a WBDG account and enrolled previously, simply log in and click the *Continuing Education* tab on the user account page. Click *Proceed to Course* next to the course title.

COURSE TYPE KEY

LO Live Online

LOS Live On-Site

OD On-Demand

COURSE TITLE	SPONSOR	TYPE	ENROLLED		
ESPC ESA Webinar Series: Site-Specific Stand-Alone Contract Vehicle Overview	FEMP	LO	07-22-2019	PROCEED TO COURSE	UNENROLL

Disclaimer

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