

Office of ENERGY EFFICIENCY & RENEWABLE ENERGY

ESPC ESA Overview and Requirements

Rachel Shepherd (FEMP), Chandra Shah (NREL), and Karlynn Cory (NREL) ESPC ESA Webinar Series

March 12, 2019





- 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 Chat or 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		
l. –	ESPC ESA Introduction	
П.	Capitalizing on Renewable Energy Benefits and Current Tax Incentives	
III.	ESPC Energy Sales Agreement (ESA) Overview	
IV.	ESPC ESA Contract Vehicles	
V.	Contract Vehicle Comparison, Best Practices & Case Studies	
VI.	Resources and Q&A	

Learning Objectives

- Recognize how on-site PV can benefit a federal agency;
- Appreciate why it is important to act now tax incentive decreases will impact project economics;
- Understand the ESPC ESA project structure and requirements;
- Grasp the different approaches for implementing ESPC ESA projects: site-specific/stand-alone, IDIQ and ENABLE; and
- Learn about other FEMP services and resources (currently available and planned) for ESPC ESA project support for all of the project implementation approaches.

Webinar Team



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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

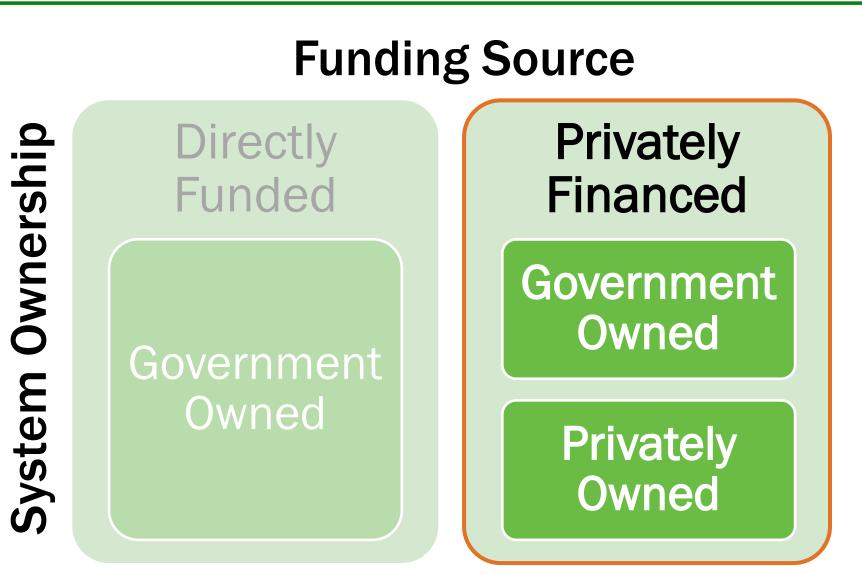
ESPC ESA Webinar Series

Webinar	 ESPC ESA Overview and
#1	Requirements (March 12, 2019)
Webinar	 PV Project Considerations
#2	(April 23, 2019)
Webinar	 ESPC ESA Site-Specific/Stand-
#3	Alone (July 2019)
Webinar	 ESPC ENABLE with an ESA
#4	(October 2019)

ESPC ESA Introduction



Considerations for a Distributed Energy Project

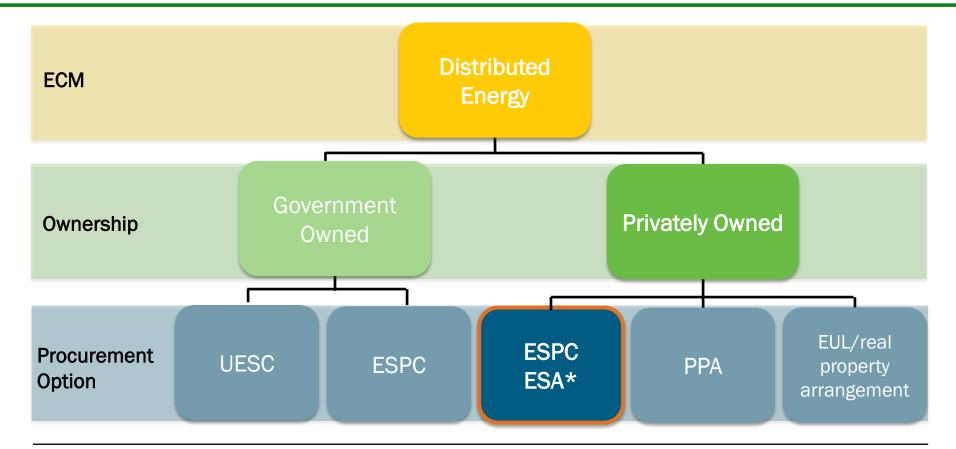


Considerations for a Privately Financed DE Project

	Privately Financed	
Questions to Consider	Government Owned	Privately Owned
Is upfront funding required?	No	No
Can the project take advantage of tax incentives?	No	Yes
Are there financing costs associated with the project?	Yes	Yes
Is the government responsible for operation & maintenance (O&M)?	Yes ¹	No
Can the associated renewable energy certificates (RECs) be sold to improve the project economics?	Depends on the agency ²	Yes

¹Unless specified otherwise ²Yes, if GSA owns the system

Considerations for a Privately Owned DE Project



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 - 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
- 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

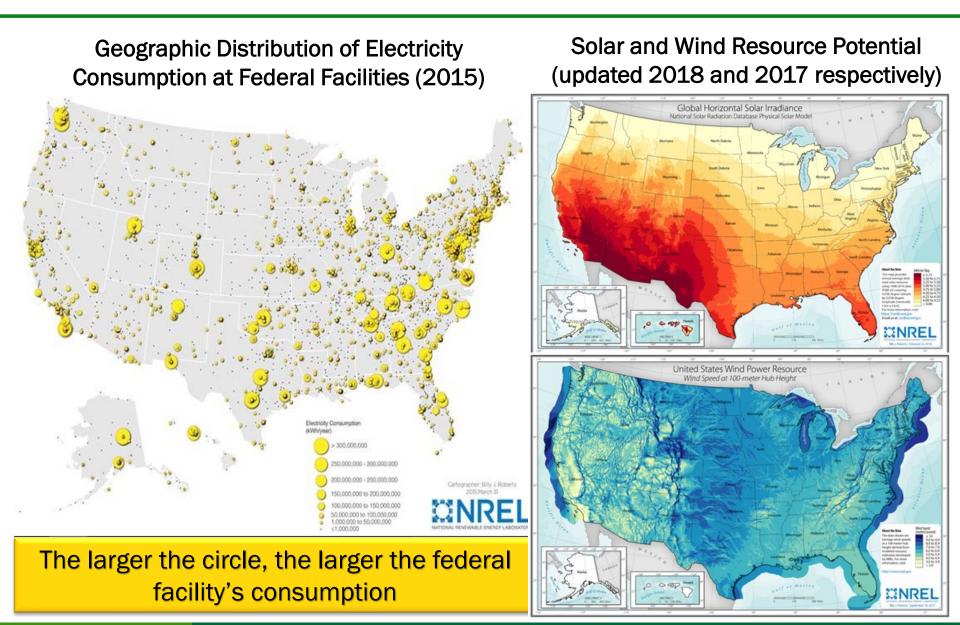
Capitalizing on Renewable Energy Benefits and Current Tax Incentives



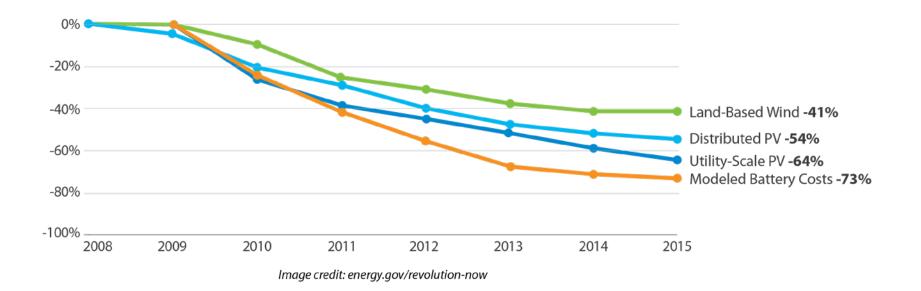
Key Renewable Energy Project Benefits

- Realize cost savings
- Stabilize electricity costs
- Enhance site resilience (if configured to operate during a grid outage)
- Meet statutory renewable energy requirements
- Lead by example
- Take advantage of federal renewable energy potential
- Contribute to national energy security and support agency mission

Federal Renewable Energy Potential Is Tremendous!



Dramatic Energy Cost Decreases



Costs are decreasing significantly, resulting in lower contract prices

U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, *Revolution Now – Accelerating Clean Energy Deployment*. DOE/EE-1478, September 2016. <u>https://energy.gov/eere/downloads/revolutionnow-2016-update</u>.

Federal Solar Investment Tax Credit (ITC)

- The solar ITC is for developers (federal agencies are not eligible)
- The ITC will decline from 30% to 10% by 2022
- The table below shows the ITC amount based on when a project is placed in service. However, projects can qualify for a higher ITC amount if construction commences (see next slide)

Year of Placement in Service	ITC Amount*
2019	30%
2020	26%
2021	22%
2022 onwards	10%

Solar ITC Placement in Service Schedule



*The ITC amount is a percentage of the total qualifying solar project cost basis.

Solar ITC Commence-Construction Deadlines

Solar ITC amount is based on the "commence-construction" year. See table below and <u>IRS Notice</u>*:

Solar ITC Deadlines

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

Commenceconstruction before the end of 2021 to secure a tax credit higher than 10%.

*The private project owner should seek tax advisor advice when applying this IRS Notice ** There is a placement in service extension to the end of 2023 for projects that commence construction between 2019-2021.

ESPC Energy Sales Agreement (ESA) Overview

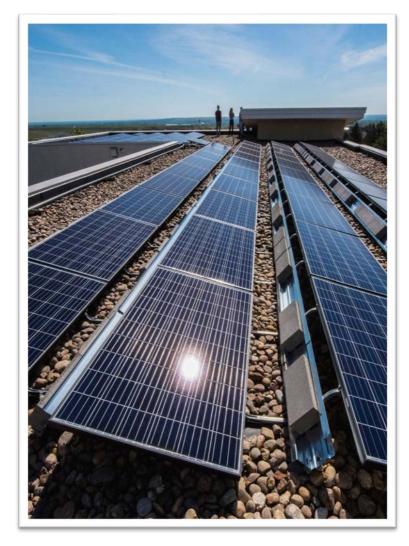


An ESPC ESA is a project structure using ESPC authority for:

- Distributed energy projects (referred to as ESA ECMs)
- On federal buildings or land
- Where the ESA ECM is initially privately owned and the agency purchases the electricity
- ESA ECM could be bundled with other ECMs



ESPC ESA Basics



- Similar to PPA but uses long-term ESPC authority
 - One of limited civilian agency options for distributed energy projects
- Differences from typical ESPC:
 - Price is in ¢/kWh; payment is based on kWh generation
 - Private ownership initially, allowing tax incentives to be captured
 - O&M is always provided by the ESCO (may not be for typical ESPC)
- FAR Part 41 authorizes use of ESPCs for the acquisition of utility services (48 CFR § 41.102(b)(7))

ESPC ESA Benefits

- Long-term contract mechanism
- Statutory cost savings requirement
 - Savings come from ESPC ESA cost that is less than your utility cost
- No up-front capital for equipment



- Energy service company (ESCO) may be eligible for tax incentives (government is not) and can sell the project RECs if valuable to reduce the ESPC ESA price
- O&M, repair/replacement provided
- Known price for load displaced by ESA
- Minimal risk to government

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.

ESPC ESA: Unique Requirements/Considerations

- Government must retain equipment title by end of contract for annual scoring
 - 2012 Office of Management and Budget Memo M-12-21
- Tax incentives: safe harbor provided by IRS
 - IRS will not challenge treatment of an ESPC ESA as a service contract under §7701(e)(3) of Internal Revenue Code
 - IRS Revenue Procedure 2017-19 published in <u>Internal Revenue</u> <u>Bulletin 2017-07</u>
 - Section 4 contains ESPC ESA contract requirements, including 20-year maximum term



ESPC ESA Contract Structure Recommendations

Recommendations to satisfy ESPC authority requirements, the OMB title retention requirement and to facilitate use of the tax incentives*:

- Contract term 20 years or less for the ESA ECM
- Federal agency does not operate project at any time during the contract term
- ESPC ESA electricity price is not reduced if operating costs diminish
- ESCO bears financial risks for non-performance
- Payments must come from energy cost savings



*Tax incentive eligibility due diligence is the ESCO's responsibility

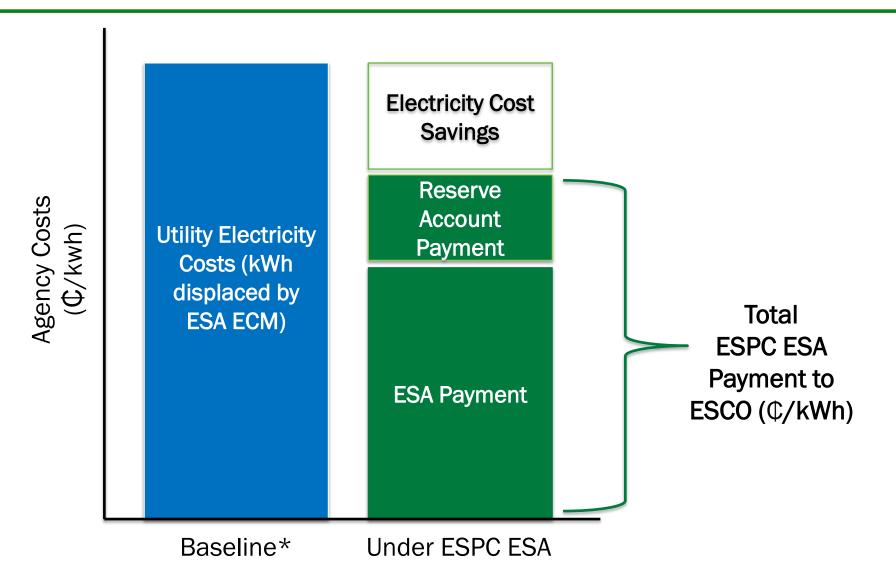
ESPC ESA Contract Structure Recommendations (cont'd)

- ESA ECM initially privately owned, equipment title transfers to federal agency by end of contract at fair market value (FMV), appraised at the time of the title transfer
- ESCO transfers a portion of the payments it receives into a reserve account held by the ESCO for the future FMV title transfer



- Reserve account payment based on estimated/appraised future FMV
- Periodic FMV estimates/appraisals, with contract modification to adjust reserve account payment*
- * The ESPC ESA electricity price is fixed, it is not impacted by reserve account payment changes.

Cost Savings With ESPC ESAs



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

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.

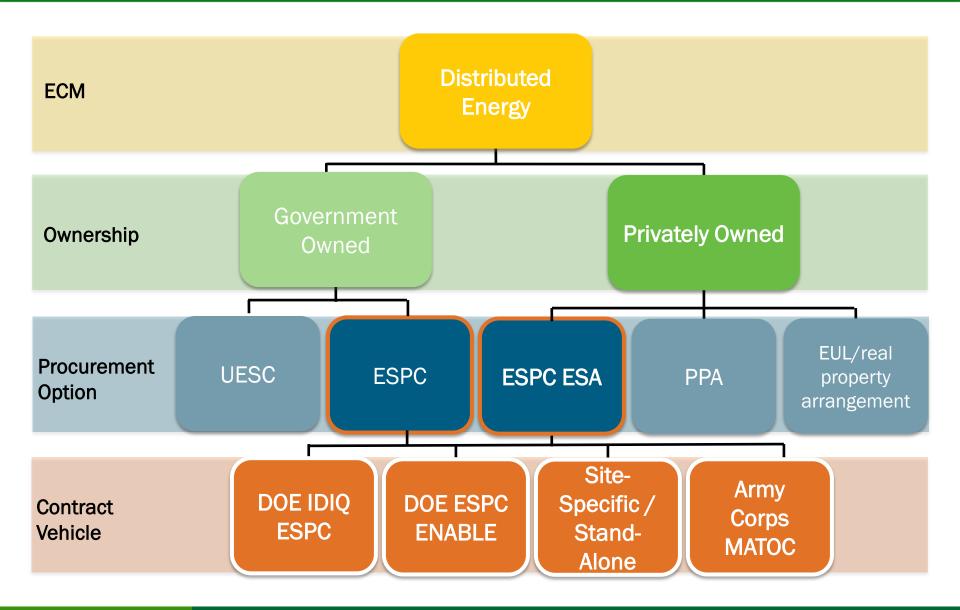
Site-Specific/Stand-Alone

• 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.

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).

ESPC ESA – Contract Vehicles



ESPC ESA Contract Vehicle: DOE IDIQ ESPC



DOE IDIQ ESPC with an ESA: Overview

- IDIQ contracts awarded competitively to 21 ESCOs by DOE
- Agencies negotiate and award task orders (TOs) under the IDIQ
- ESCO may be selected based on qualifications or Preliminary Assessments (PA)
- Investment Grade Audit (IGA) required
- DOE-approved Project Facilitator is required
- ESA can be single ECM or bundled with other ECMs

DOE IDIQ ESPC ESA Templates

ESPC Process		ESA Templates*
Phase 1	Acquisition Planning	No ESA-specific templates
Phase 2	ESCO Selection & Preliminary Assessment	Notice of Opportunity (NOO, using ESCO selector tool) Preliminary Assessment Kickoff Agenda (with ESCO) Risk & Responsibility Matrix
Phase 3	Project Development and Task Order Award	IGA Kickoff Agenda (With ESCO) Task Order RFP (TO RFP)
Phase 4	Project Construction & Acceptance	No ESA-specific templates
Phase 5	Performance Period	No ESA-specific templates

*See the FEMP IDIQ website for other templates and tools

ESPC ESA Contract Vehicle: DOE ESPC ENABLE



DOE ESPC ENABLE with an ESA: Overview

ENABLE is an alternative ESPC program:

- Intended for smaller federal projects, although there is no fixed size or cost limit
- Targets straight-forward ECMs including solar PV
 - Other ECMs can be implemented under a "hybrid" approach
- Uses GSA Supply Schedule 84, SIN 246-53 (over 20 ESCOs)
- Only IGA required, no PA
- Uses the IGA tool
- ESA can be single ECM or bundled with other ECMs
- Two ENABLE projects with PV ESAs have been awarded

DOE ESPC ENABLE ESA Templates

	ESPC Process	ESA Templates*
Phase 1	Acquisition Planning	Project Kick-Off Agenda (Gov't Only)
Phase 2	ESCO Selection	Request for Quotation/Notice of Opportunity (RFQ/NOO) Risk & Responsibility Matrix
Phase 3	IGA and Award	IGA Kickoff Agenda (With ESCO) Scope of Work (SOW)
Phase 4	Project Construction & Acceptance	No ESA-specific templates
Phase 5	Performance Period	No ESA-specific templates

*See the FEMP ENABLE website for other templates and tools

ESPC ESA Contract Vehicle: *Site-Specific/Stand-Alone*



ESPC ESA Site-Specific/Stand-Alone Overview

- ESCO selected through an RFP process
- Allows companies not on IDIQ or ENABLE ESCO lists to compete
- ESCO must be on the DOE Qualified List of ESCOs by time of award
- No preliminary assessment or IGA is required (only a proposal is required)
- Best if ESA is the only ECM

ESPC ESA Site-Specific/Stand-Alone Toolkit

A resource focused on ESPC ESA projects*

- Assumes site-specific/stand-alone contract vehicle used
- Process diagram, checklist, team responsibility chart
- Project validation considerations
- Authorizing legislation and other applicable information
- Editable templates
- Separate technical specifications document: "Procurement Specifications Templates for Onsite Solar Photovoltaic: For Use in Developing Federal Solicitations"
- <u>Toolkit</u> and <u>Tech Specs</u> available on the FEMP website

* Some information in the Toolkit may be useful for other types of projects or ESPC ESAs using one of the other ESPC ESA contract vehicles.



ESPC ESA Site-Specific/Stand-Alone Templates

ESPC ESA Process		ESA Templates
Phase 1	Form a Strong Project Team	Process Diagram, Team Responsibility Chart and Checklist
Phase 2	Project Validation	No ESA-specific templates
Phase 3	Acquisition Planning	Acquisition Plan (available to federal agencies only) Small Business Sources Sought
Phase 4	RFP Development	Source Selection Plan (available to agencies federal only), Sample Request for Information, RFP, Site Access Agreement
Phase 5	Procurement	No ESA-specific templates
Phase 6	Proposal Evaluation & Contract Award	No ESA-specific templates
Phase 7	Construction & Performance Period	No ESA-specific templates

Contract Vehicle Comparison, Best Practices & Case Studies



Comparison of ESPC ESA Contract Vehicles

Contract Vehicle	DOE IDIQ ESPC	DOE ESPC ENABLE	Site-Specific/Stand-Alone
Contract type	TOs under DOE IDIQ	GSA Supply Schedule 84 (SIN 246-53)	RFP is basis for the contract
ESCO selection process	NOO	NOO	RFP
Private-sector partner	One of 21 ESCOs	One of over 20 ESCOs on GSA Supply Schedule 84	ESCO must be on DOE's Qualified List of ESCOs by the time of award
Project size	\$2 million or larger	No fixed size or cost limits; suitable for smaller projects	Distributed energy project that is typically greater than 500 kW
ECMs	Unlimited	Solar PV, lighting, water, basic HVAC controls, HVAC equipment, boilers, chillers; motors being added; other ECMs under hybrid approach	Single ESA ECM preferable
Preliminary assessment and IGA	PA and IGA required	IGA required	Not applicable, ESCOs respond to an RFP
Project development tasks	ESCO can be made responsible for most tasks	ESCO can be made responsible for most tasks	Agency must complete most, if not all tasks

General Project Development Best Practices

Obtain high-level management support early – address management priorities/problems if possible

Assign Agency project manager - may or may not be the project champion Educate project team (attend FEMP or other trainings if possible; use subject matter experts)

Develop and manage to a schedule consider financial incentive and/or other deadlines

Allow sufficient time for unexpected issues

Understand applicable review & approval requirements

Maintain complete project documentation (in case of personnel changes and/or audits) Do your due diligence – read every word of the final proposal/contract

ESPC ESA: Specific Best Practices

- Use FEMP ESA templates and/or agency examples
- Consider ESA ECM price (cents/kWh) during the ESCO selection process
- Require ESA FMV estimates/appraisals multiple times during contract term to ensure sufficient reserve account funding

Other best practices will be shared in future webinars

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	ENABLE with an ESA and other ECMs (lighting, water)
Estimated First Year Production	~4.4 million kWh
Guaranteed Annual Cost Savings from PV	~\$300,000



Project Timeline





Awarded Sept. 2017



Accepted/Completed Aug. 2018

EXAMPLE 2: NIST Campus (Gaithersburg, MD)

Agency	National Institute of Standards and Technology (NIST)
Location	Gaithersburg, MD
System	5 MW-DC fixed-tilt ground-mounted PV system
Contract Vehicle	ENABLE with an ESA for PV (no other ECMs)
Estimated First Year Production	~6.1 million kWh
Guaranteed Annual Cost Savings from PV	~\$500,000



Project Timeline





Awarded May 2018



Accepted/Completed Dec. 2018

Resources



Finding ESPC Resources on FEMP's Website

Energy Savings Performance Contracts for Federal Agencies ESPCs



Scroll Down to

Start a Project

- Learn about federal ESPCs.
- Contact a federal project executive.
- See the ESPC process.
- Find ESPC training.
- Read ESPC project case studies.
- Browse ESPC resources.

ESPC Landing Page

https://energy.gov/eere/femp/energy-savingsperformance-contracts-federal-agencies

- Starting Projects (Contacts, Process, Resources)
- Energy Service Companies
- Awarded ESPC Projects, ESPC Performance Reports

Browse ESPC Resources

https://energy.gov/eere/femp/resourcesimplementing-federal-energy-savingsperformance-contracts

ESPC ESA Website

- ESPC ESA overview
- ESPC ESA fact sheet
- Contract vehicle options and links to ESPC ESA Toolkit and ESA-specific templates
 - DOE IDIQ ESPC
 - DOE ESPC ENABLE
 - <u>Site-Specific/Stand-</u> <u>Alone</u>
- ITC fact sheet (coming later this year)

Energy Savings Performance Contract Energy Sales Agreements

Home > Energy & Project Procurement Development Services > Distributed Energy > 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 § 4.102(b)(7) (2015).

Benefits of ESPC ESAs

ESPC ESA RESOURCES

ESPC ESA Fact Sheet

ESPC ESA Webinar Series

- ESPC ESA Toolkit
- · 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.

Site-Specific/Stand-Alone

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

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.

U.S. Army Corps of Engineers MATOC

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

ESPC ESA Key Resources

- <u>ESPC ESA Toolkit</u> for site-specific/stand-alone contract vehicle, including editable templates to download
- <u>"Procurement Specifications Templates for Onsite</u> <u>Solar Photovoltaic: For Use in Developing Federal</u> <u>Solicitations"</u>
- DSIRE
- DSIRE Third Party PPA Policies
- <u>OMB Memo M-12-21</u>
- IRS Revenue Procedure 2017-19 published in Internal Revenue Bulletin 2017-07

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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

FEMP Project Assistance Portal

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 <u>www.wbdg.org</u> 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 (<u>elena.meehan@ee.doe.gov</u>) 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/femplw03122019

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.



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This work was authored in part by the National Renewable Energy Laboratory, operated by Alliance for Sustainable Energy, LLC, for the U.S. Department of Energy (DOE) under Contract No. DE-AC36-08G028308. Funding was provided by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy's Federal Energy Management Program. The views expressed in the presentation do not necessarily represent the views of the DOE or the U.S. Government. The U.S. Government retains and the publisher, by accepting the presentation for publication, acknowledges that the U.S. Government retains a nonexclusive, paid-up, irrevocable, worldwide license to publish or reproduce the published form of this work, or allow others to do so, for U.S. Government purposes.

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NREL/PR-7A40-80297