

# Federal On-Site Carbon Pollution-Free Electricity Purchase Contracts

Nichole Liebov (FEMP), Douglas Gagne (NREL), Chandra Shah (NREL), John Myhre (NREL)

July 11, 2022



# Webinar Logistics

- Call in for the best audio connection!
- Please ensure your phone/computer is muted throughout the webinar
- Logistical issues: [wbdg@nibs.org](mailto:wbdg@nibs.org)
- Don't hesitate to ask questions!
  - Send questions to all panelists in the Q&A window
  - Feel free to contact us through the [FEMP Assistance Request Portal](https://www7.eere.energy.gov/femp/assistance/node/add/application-combined) (<https://www7.eere.energy.gov/femp/assistance/node/add/application-combined>)



# Training Overview

## Agenda

- |      |   |
|------|---|
| I.   | On-Site CFE Purchasing Options Overview   |
| II.  | Authorities and Contract Term Limitations |
| III. | Strategies for Successful Procurements    |
| IV.  | Case Study, Resources and Q&A             |

## Learning Objectives

- Identify federal procurement authorities available for on-site CFE purchases (DoD and civilian)
- Understand limitations associated with on-site CFE purchase contracts
- Execute strategies for successful procurements
- Leverage available FEMP and other resources to help agencies meet CFE goals

**Disclaimer: We recommend that agencies perform due diligence to ensure that their purchases will count toward the goals they are seeking to meet and refer to the EO 14057 Implementing Instructions once they have been issued.**

# FEMP's Distributed Energy Program Training Team



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# DOE Federal Energy Management Program

## Mission

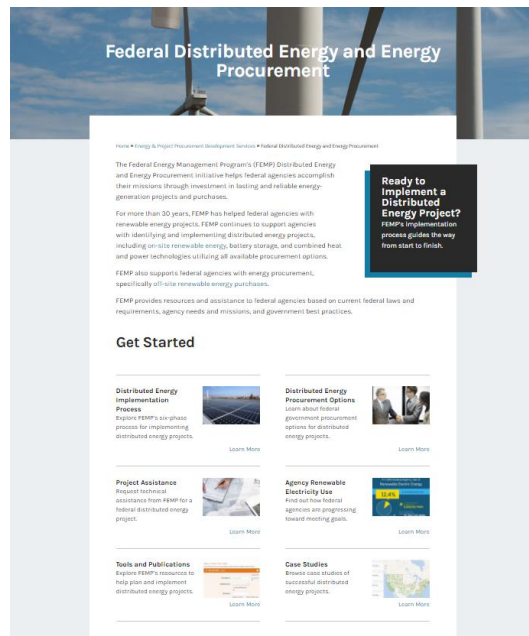
The Federal Energy Management Program (FEMP) works with its stakeholders to:

- Enable federal agencies to meet energy-related goals
- Identify affordable solutions
- Facilitate public-private partnerships
- Provide energy leadership to the country by identifying and leveraging government best practices

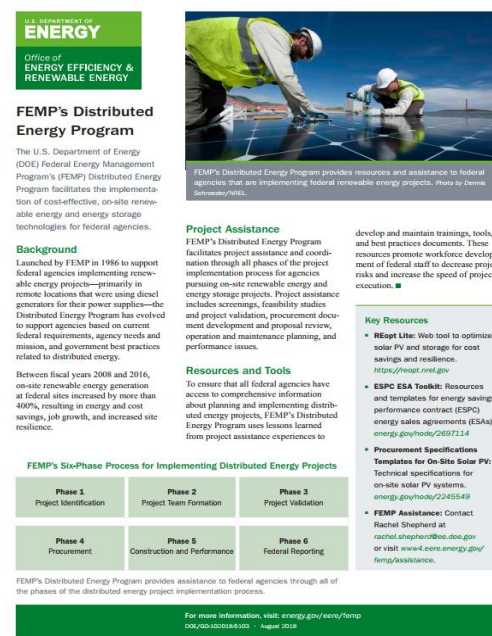


# FEMP's Distributed Energy Program

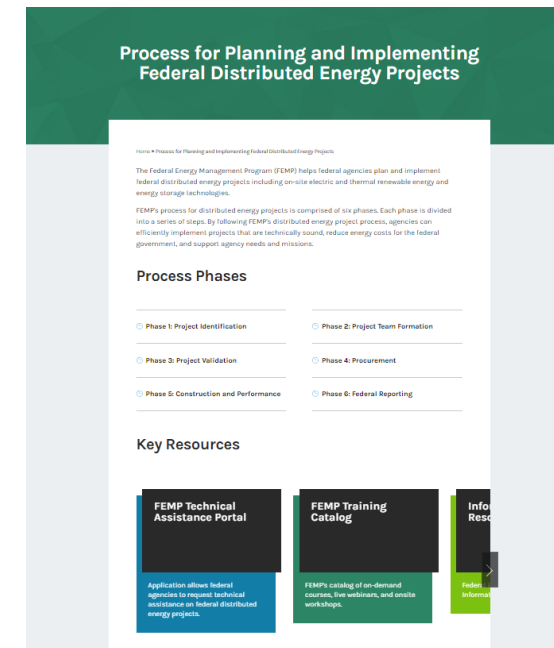
FEMP's Distributed Energy (DE) Program facilitates the implementation of cost-effective on-site renewable energy, energy storage, and combined heat and power technologies for federal agencies.



[FEMP's Distributed Energy Program Website](#)



[FEMP's Distributed Energy Program Factsheet](#)



[FEMP's Distributed Energy Implementation Process Website](#)

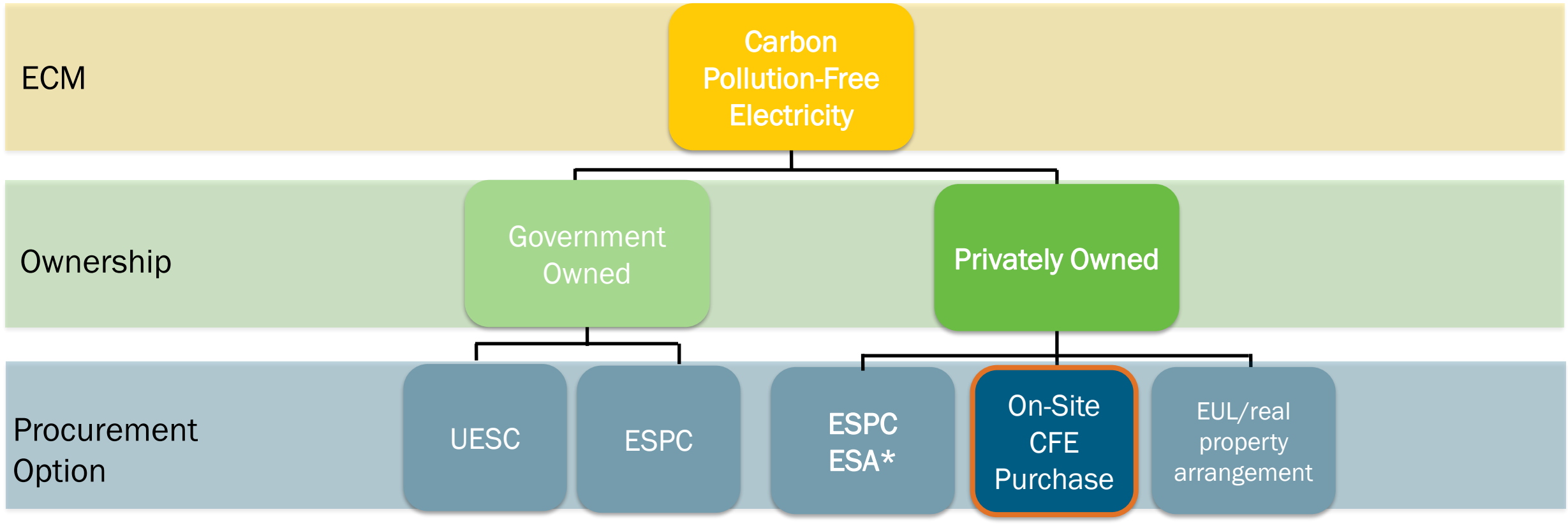
# Poll-Everywhere Instructions

- We will be using live polling in our session today. Please either use the link in the chat box or type in the URL, <https://PollEv.com/lcrow118>, into your mobile device.
- When prompted to enter your name please select “skip” as all responses will be anonymous.
- If you have issues accessing the poll, please let us know in the Q&A box.
- Please leave your voting window open, as we have several polling questions throughout today’s presentation.

# On-Site CFE Purchasing Options Overview



# CFE Implementation Options



## Legend & Abbreviations

ECM	Energy Conservation Measure	ESPC ESA	ESPC Energy Sales Agreement
UESC	Utility Energy Service Contract	CFE	Carbon Pollution-Free Electricity
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)

# Privately-Financed Project Considerations

Questions to Consider	Privately Financed	
	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	No

# Federal Solar Investment Tax Credit (ITC)

- For developers (federal agencies are not eligible)
- Will decline from 26% currently, to 10% by 2024
- Table below shows ITC amount based on a project's placed in service date. However, projects can qualify for a higher ITC amount if construction commences in earlier years.

## Solar ITC Placement in Service Schedule

Year of Placement in Service	ITC Amount*
2022	26%
2023	22%
2024 onward	10%



\*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 [IRS Notice](#)\*:

## Solar ITC Deadlines

Year of Commence Construction	Deadline for Placement in Service	ITC Amount
2021-2022	End of 2025	26%
2023	End of 2025	22%
2024 onward	2024 onward	10%

**Commence-construction before the end of 2023 to secure a tax credit higher than 10%.**

\*The private project owner should seek tax advisor advice when applying this IRS Notice

# On-Site CFE Purchase Basics

## CFE Developer

- Purchases, installs, owns, operates, and maintains CFE generation equipment on federal land and/or buildings
- May be able to take advantage of tax incentives

## Agency

- Hosts the on-site CFE generation equipment
- Purchases electricity from the developer for the life of the contract

- Must be legal in the state/utility service territory
- Best for large systems (generally >500 kW)
- Civilian agencies have limited long term contract options

# Illustrative Contract Structure



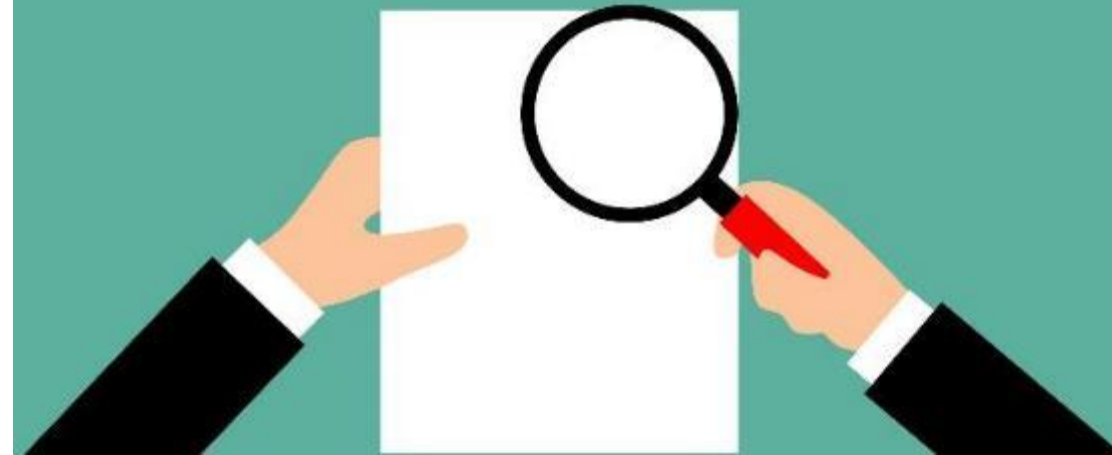
Two additional agreements are typically required:

- **Interconnection Agreement-** A signed interconnection agreement (ICA) with your utility is typically required to connect distributed energy projects. Who signs the ICA varies by utility; the federal site, CFE developer, or both may be required to sign.
- **Site Access Agreement-** CFE developers typically prefer a separate agreement for site access, although site access provisions could be included in the on-site CFE purchase contract
  - The best contract option varies by agency; common vehicles include site easements, leases and licenses.
  - FAR 52.241-5 Contractor's Facilities can also be used (grants a revocable permit or license).

# Interconnection Agreement (ICA) Overview

- ICAs may have problematic terms/conditions for federal agencies (e.g. indemnification)
- Negotiations may be necessary and can be lengthy
- GSA Areawide Contract Exhibit may be used
- [Interconnection Checklist](#)
- Questions to ask utility:
  - Who signs the ICA?
  - Is there a template (ideally federal or gov't-specific)?
  - Can ICA be modified and if so, what approvals are required?

**Bottom Line: Coordinate with utility and within your agency early; review ICA language carefully**



# Site Access Agreement Overview

## Considerations

- **Agency authorities and policies-** Agency requirements for site lease, easement, or license may vary
- **Allowable contract length-** Ensure term length matches with purchase contract term length
- **Stakeholders-** Consider site mission, conflicting land uses, and environmental/cultural restrictions
- **Agreement signatory-** Identify relevant Contracting Officer and other decision-makers
- **Expected approval timeframe-** Start site access agreement process early to avoid delays.



# CFE Purchasing Options Overview



## 10 U.S.C. 2922 (a)

- 30-year term: Department of Defense only



## 40 U.S.C. 501/FAR Part 41

- 10-year term: GSA delegation of authority required



## FAR Part 12 Commercial Items

- 5-year term

# Authorities and Contract Term Limitations

# 10 U.S.C. 2922 (a): Department of Defense Only

- Only available to the Department of Defense
- Requires Secretary of Defense approval (may be delegated to lower level)
- Contract term: 30-year maximum term



# 10 U.S.C. 2922 (a)

## Key Provisions:

- “For the provision and operation of energy production facilities on **real property under the Secretary’s jurisdiction** or on **private property** and the purchase of energy produced from such facilities.”
- “(c) The costs of contracts under this section for any year may be paid from annual appropriations for that year.”
- “(d) The Secretary concerned shall **ensure energy security and energy resilience are included** as critical factors in the provision and operation of energy production facilities under this section.”

# 40 U.S.C. 501/FAR Part 41

- GSA is authorized by [40 U.S.C. 501](#) (FAR Part 41) to prescribe policies and methods governing the acquisition and supply of utility services for Federal agencies.
- GSA delegation is required
- Contract term: 10-year maximum term



# 40 U.S.C. 501/FAR Part 41: Delegation of Authority

- GSA has delegated this authority to the Department of Defense (DOD), including DLA Energy, and the Department of Energy (DOE)
  - Department of Veteran Affairs (VA) has delegation for connection charges only
- Otherwise, the agency must request a delegation of authority from GSA.
  - Initiating a request for a delegation of authority can be sent to [energy@gsa.gov](mailto:energy@gsa.gov), per [FAR 41.301 Requirements](#).

# FAR Part 12 Commercial Items

- The Commercial Item is the electricity being purchased
- Contract length limitation is typically 5 years
- Discuss applicability with agency contracting and legal staff
- **Has not been used as primary authority to date, due to contract length limitation.**
  - May be used in conjunction with other authorities

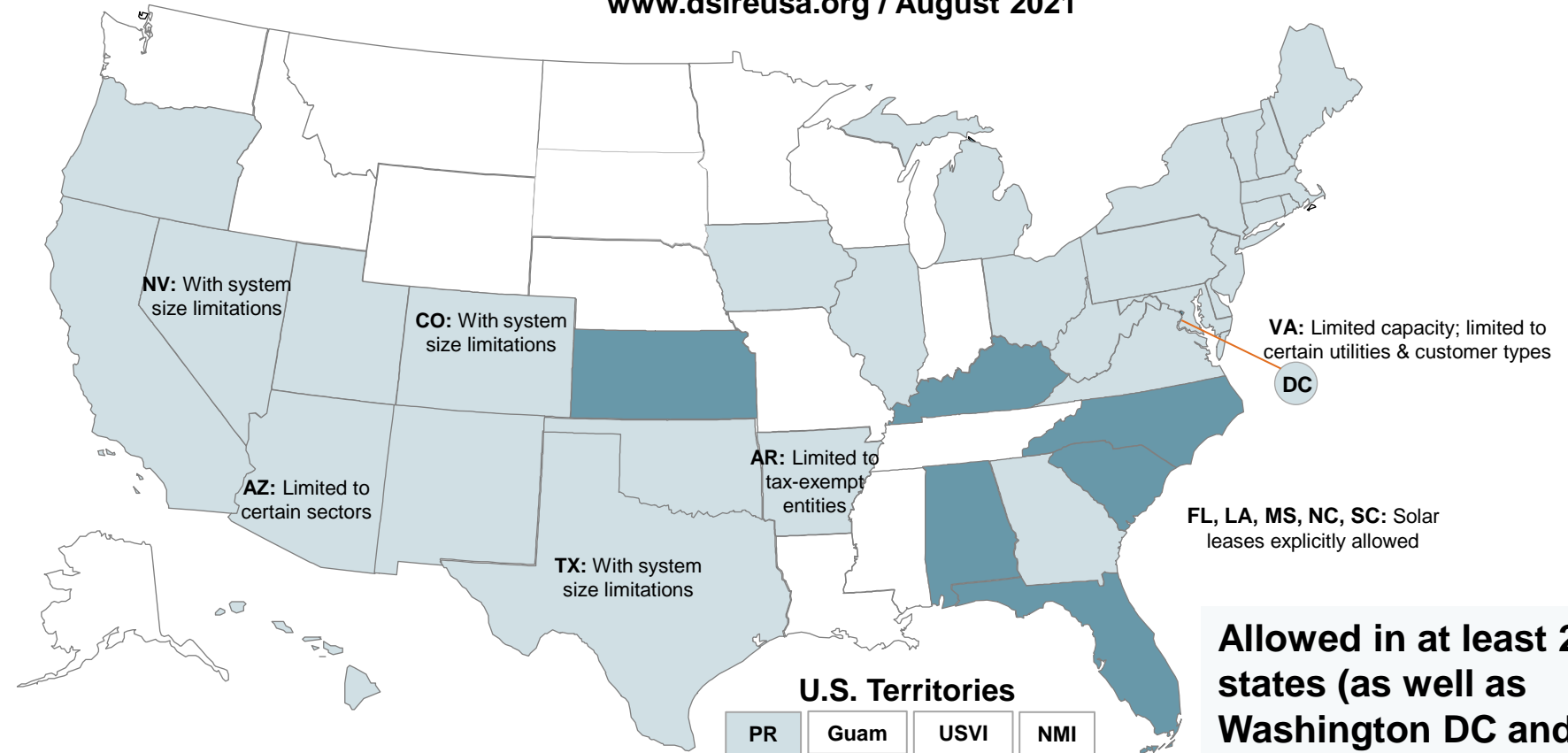


# Legality of Third-Party Electricity Sales

- Check the Database of State Incentives for Renewables and Efficiency ([DSIRE](https://www.dsireusa.org)) website for state policies
- Discuss planned project with your utility to confirm legal/regulatory considerations

## 3<sup>rd</sup> Party Solar Power Purchasing Legality

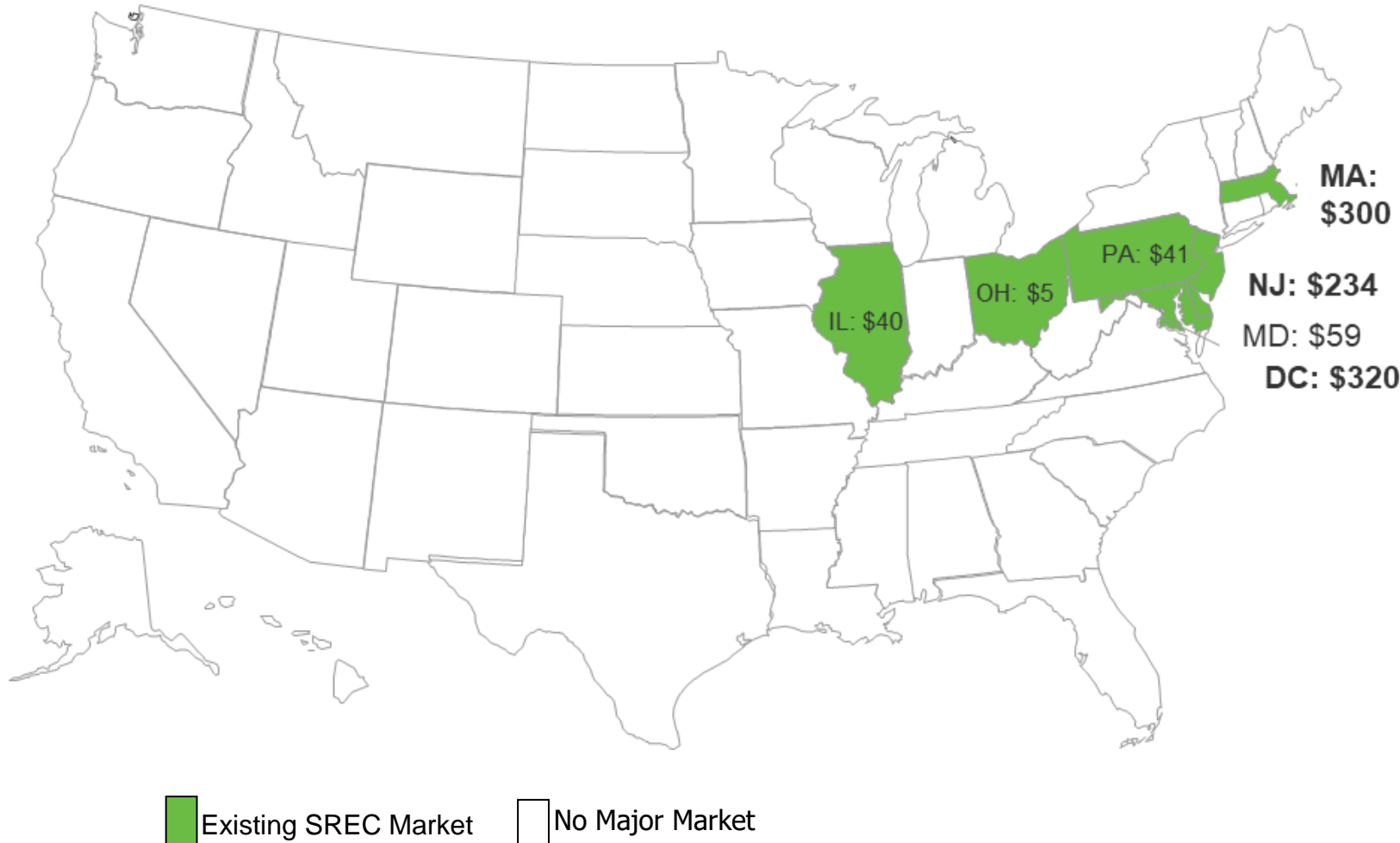
[www.dsireusa.org](https://www.dsireusa.org) / August 2021



- Apparently disallowed by state or otherwise restricted by legal barriers
- Authorized by state or otherwise currently in use, at least in certain jurisdictions
- Status unclear or unknown



# Key State Solar Renewable Energy Certificate (SREC) Markets



Pricing in \$/MWh from SRECTrade.com as of 6/17/2022

- Solar RECs can be a major project driver in certain markets such as Massachusetts, New Jersey and the District of Columbia.
- Voluntary REC market prices are much lower (typically less than \$5/MWh).
- Confirm compliance with applicable goal requirements, as well as agency policy.

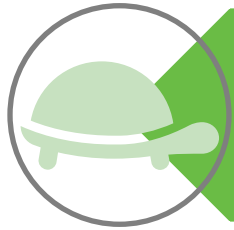
# On-Site Clean Energy Considerations



Third-party sale legality



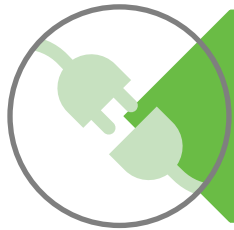
Stormwater management, erosion control, other construction considerations



NEPA, historic, cultural, glint/glare, permitting



Site management, agency and other approvals



Interconnection requirements and agreement



Buy American Act/Trade Agreement Act requirements



Building/land ownership and site access



Agency cybersecurity requirements

# On-Site CFE Project Best Practices

Specify deadlines in procurement documents to shorten implementation timelines.

Start long lead-time actions early in the development process (interconnection requirement discussions, NEPA, cultural/historic reviews).

Ensure Contracting Officer, agency HQ and site level buy-in early in the process; as well as their availability to support the project.

Maximize incentive use to improve project cost-effectiveness (property/sales tax exemptions, utility incentives, ancillary service sales).

Ensure contract specifies which party owns the RECs

# Strategies for Successful Procurements

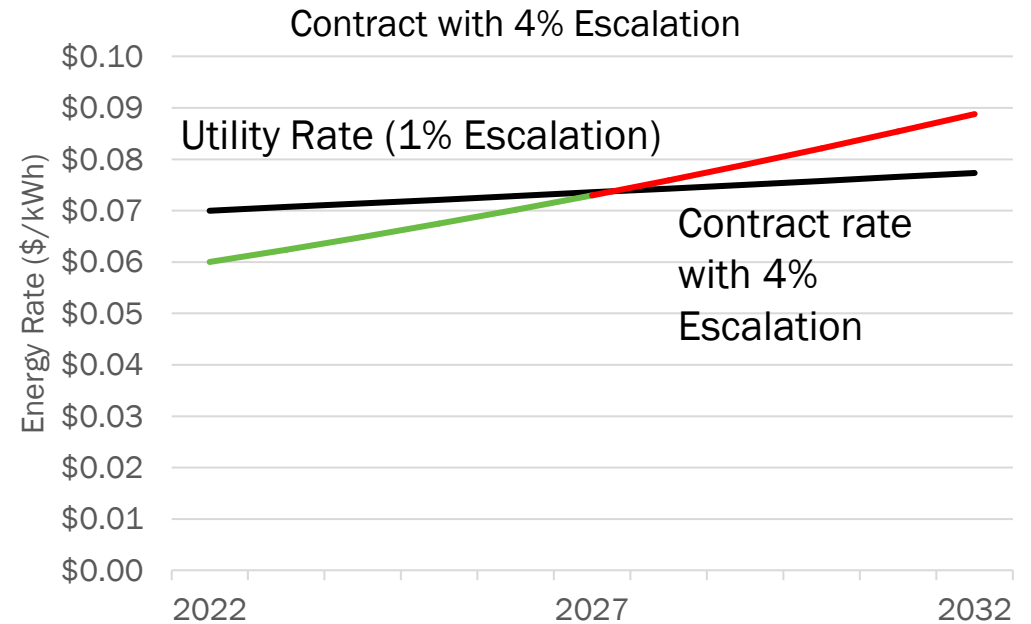
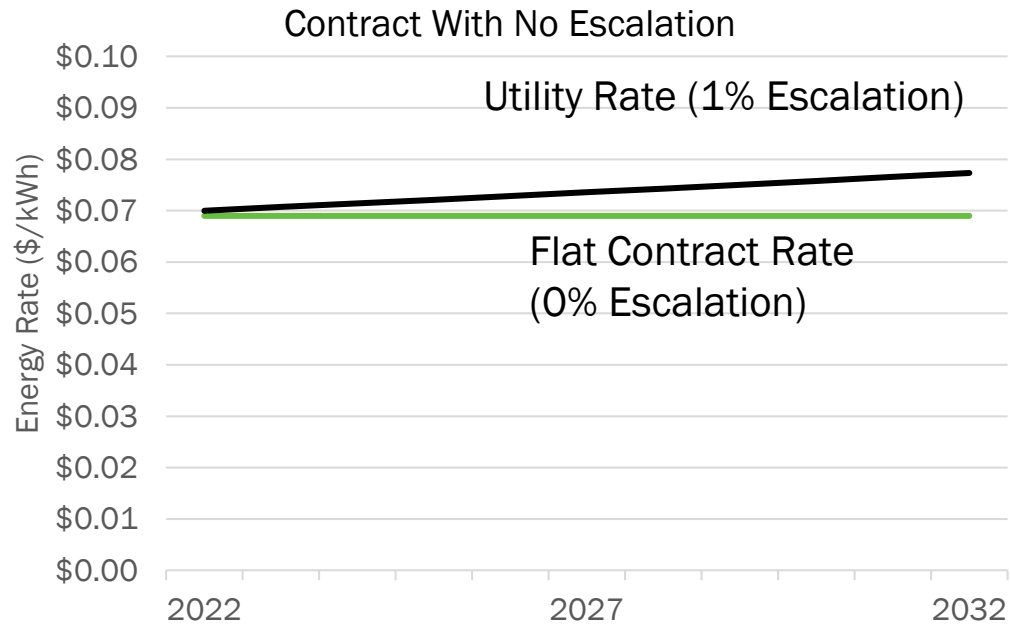
# Request for Proposal (RFP) Recommendations

- Develop RFP or other procurement document to include:
  - CFE generation specifications: technology type and location(s); resilience requirements (if applicable)
  - O&M/repair and replacement responsibilities
  - Any infrastructure requirements: roads, fence, site electrical upgrades, etc.
  - Interconnection responsibilities (including upgrades required by utility)
  - Cybersecurity requirements
- Discuss evaluation methodology and criteria with project team
  - Develop submittal requirements (prior experience, financial capability, references, etc.)
  - Select proposal evaluation methodology options: best value, low price/technically acceptable (LPTA), low price
  - Consider potential electric bill changes, such as standby charges and/or utility tariff changes

# RFP Recommendations (Continued)

- Select electricity price format
  - Fixed price or specify annual escalation factor (potentially based on NIST's [Energy Escalation Rate Calculator Webtool](#))
- Specify metering requirements
  - Ensure compatibility with energy management system, site or agency metering protocol, REC purchaser and/or other applicable requirements
  - Real-time access to generation information
  - Include detailed cybersecurity requirements
- Identify end of contract options
  - System removal (with wear and tear accepted or with restoration to original condition)
  - System purchase at fair market value to meet IRS guidelines for tax incentive eligibility
  - Issue a new solicitation for a follow-on contract

# CFE Purchase Contract Escalation Risk



- Fixed rates with no escalation (**Left**) are easiest to evaluate and lowest risk but require a higher price upfront.
- The price can also be escalated annually (**Right**) in anticipation of rising utility rates.
  - 1-2% are common escalation assumptions
  - Higher escalation rates increase the risk that the CFE purchase rate could exceed utility rates in future years and result in a cost premium.

# Key Takeaways

Ensure that third party sales of electricity are allowed  
in your site's utility territory

Research applicable incentives/policies ([DSIRE](#)) and discuss with your utility  
(net metering rules, tariff implications, standby charges, etc.)

Contact your serving utility early on for interconnection agreement  
and study requirements/timeframe/cost

Review agency contracting authority options and contract term limitations

Discuss NEPA requirements, site access agreement options, approval process.



# Case Study

# Federal Aggregated Solar Procurement Pilot

- Contract awarded by GSA Region 9 to Solar City in December 2015
- 5 MW, 7 locations (6 GSA, 1 USFS)
- Federal government expected to save an estimated \$5 million over contract (20 years)
- Carport at 2 locations was made electric vehicle ready
- Battery storage added to two sites



# Resources

# Useful Resources

- [FEMP On-Site Distributed Energy Page](#)
- [FEMP Carbon Pollution-Free Electricity Resources Page](#)
- [FEMP ESPC Energy Sales Agreement Page](#)
- [NREL Voluntary Green Power Procurement Page](#)
- [Interconnection Checklist](#)
- [DSIRE](#)
- [REopt Web Tool](#): DE modeling tool

## Carbon Pollution-Free Electricity Resources for Federal Agencies

Federal Energy Management Program

Federal Energy Management Program » Carbon Pollution-Free Electricity Resources for Federal Agencies

This page connects federal agencies to **Federal Energy Management Program (FEMP)** carbon pollution-free electricity (CFE) resources and provides information to increase federal agency understanding of on-site and off-site CFE options. Additionally, the steps outlined below represent a comprehensive approach to CFE planning and procurement.



[FEMP Carbon Pollution-Free Electricity Resources Page](#)

# “Working With Your Utility” Webinar Series

## Webinar #1

- Interconnection Basics  
(June 29<sup>th</sup>, 2021)

## Webinar #2

- Advanced Interconnection Topics, Part 1  
(August 17<sup>th</sup>, 2021)

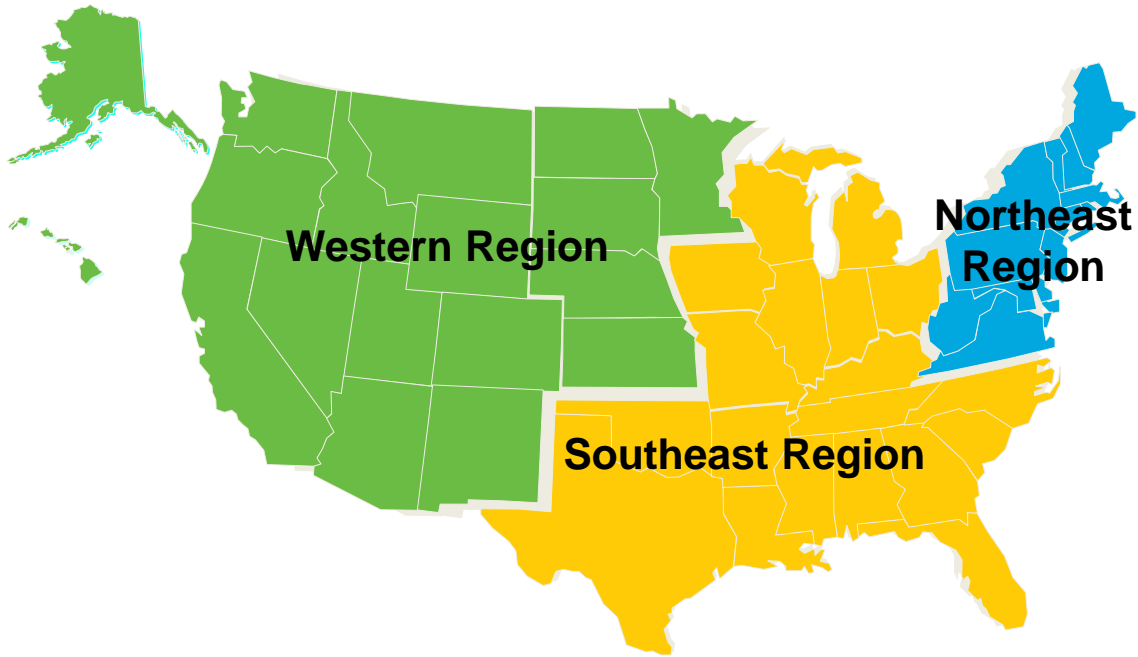
## Webinar #3

- Utility Cost Implications of a DE Project  
(October 19<sup>th</sup>, 2021)

## Webinar #4

- Advanced Interconnection Topics, Part 2  
(January 11<sup>th</sup>, 2022)

# Contact Information



## Federal Project Executives (FPEs)

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Gerald Robinson – LBL / 510-486-5769 / [gtrobinson@lbl.gov](mailto:gtrobinson@lbl.gov)

# 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 this is the 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 brief description states: 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. A note indicates that asterisks denote required fields. 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: Briefly describe the project you are pursuing and the current status of it. The Project Champion and Team Members section includes a text area.

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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.

<sup>\*</sup> 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.
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# IACET Credit for Webinar





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  - If you are sharing a web connection during the training, you must send an e-mail to Elena Meehan ([elena.meehan@ee.doe.gov](mailto: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/femplw07112022>

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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