

July 13, 2022: Utility Industry Basics for Federal Agency CFE Planning

**The webinar will
start momentarily....**



Utility Industry Basics for Federal Agency CFE Planning

July 13, 2022

Federal Energy Management Program



Notice

This webinar, including all audio and images of participants and presentation materials, may be recorded, saved, edited, distributed, used internally, posted on DOE's website, or otherwise made publicly available. If you continue to access this webinar and provide such audio or image content, you consent to such use by or on behalf of DOE and the Government for Government purposes and acknowledge that you will not inspect or approve, or be compensated for, such use.

Webinar Logistics

- Call in for the best audio connection!
- Please ensure your phone/computer is muted throughout the webinar
- Logistical issues: wbdg@nibs.org
- Don't hesitate to ask questions!
 - Send questions to all panelists in the Q&A window
 - Feel free to follow-up with 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>)



Instructors



Skye Schell
FEMP, Supervisor



Tracy Niro
FEMP, Utility Program Manager



Nichole Liebov
FEMP, DER Program Manager



Michele Zemplenyi
FEMP, AAAS Science & Technology Policy Fellow



Elisabeth McClure
FEMP, AAAS Science & Technology Policy Fellow

Guest presenters:

Denise Funkhouser
GSA, Energy Division
Director

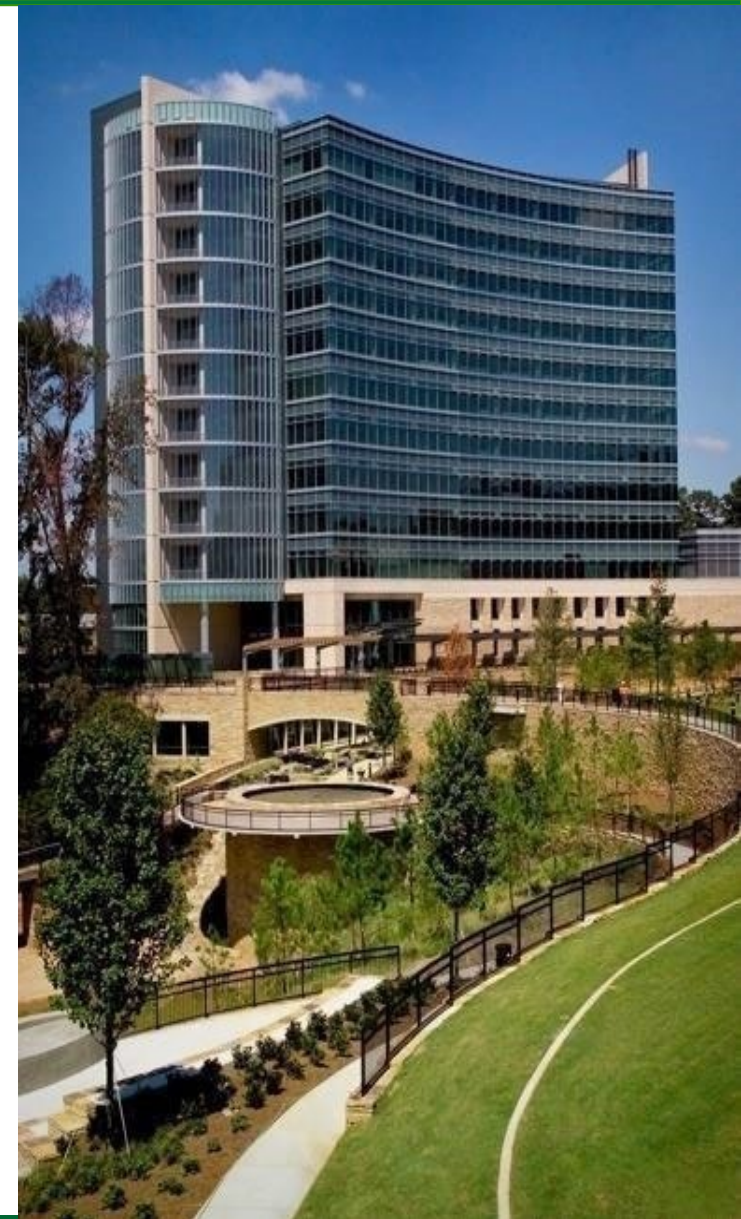
John Nelson
DLA Energy, Contracting
Officer

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



Webinar Overview

Agenda

| | |
|------|-------------------------------------|
| I. | Relevant Federal Policies |
| II. | Approach to Increasing CFE |
| III. | Electric Industry Overview |
| IV. | On-site Procurement |
| V. | Off-site Procurement |
| VI. | Utility Service-Related Authorities |
| VII. | FEMP Resources and Q&A |

Learning Objectives

- Recognize the differences between vertically integrated and retail electric choice utility markets;
- Recognize the impact of market structure on available CFE options
- Identify feasible, impactful pathways to increased CFE
- Leverage available FEMP and other resources to help agencies meet CFE goals

Remember--You will need to integrate any specific federal requirements into your strategies.

Acronym Listing

AWC – General Services Administration Areawide contract

BA – balancing authority

BTU – British thermal units

CCA – community choice aggregation

CEU – continuing education unit

CFE – carbon pollution-free electricity

CO₂e – carbon dioxide equivalent

DER – distributed energy resources

DoD – Department of Defense

EA2020 – Energy Act 2020

EACs – energy attribute certificates

ECM – energy conservation measure

EO – Executive Order

ESPC – energy savings performance contract

ESPC ESA – ESPC energy sales agreement

EUL – enhanced use lease

FAR – Federal Acquisition Regulation

FEMP – Federal Energy Management Program

FERC – Federal Energy Regulatory Commission

GSA – General Services Administration

IDIQ – indefinite delivery / indefinite quantity

ISO – independent system operator

LOA – letter of authorization

PCNRC – performance contracting national resource center

RECs – renewable energy certificates

RTO – regional transmission organization

UESC – utility energy service contract

USC – utility service contract

U.S.C. – United States Code

Related Federal Policy (not an exhaustive list)

- **EO 14057: Catalyzing America's Clean Energy Economy Through Federal Sustainability**
 - Carbon pollution-free electricity
 - Zero emission vehicles
 - Net-zero emissions buildings
 - Net-zero emissions procurement and operations
 - Climate resilient infrastructure and operations
 - *Implementing Instructions forthcoming*
- **Energy Act 2020**
 - Implement 50% of identified cost-effective energy conservation measures via performance contracts

Approach to CFE Planning & Procurement



1. Assess

- Understand current contracts and site loads
- Identify energy efficiency, on-site, and off-site CFE options



2. Strategize

- Energy efficiency to reduce load
- On-site CFE
- Off-site CFE purchases



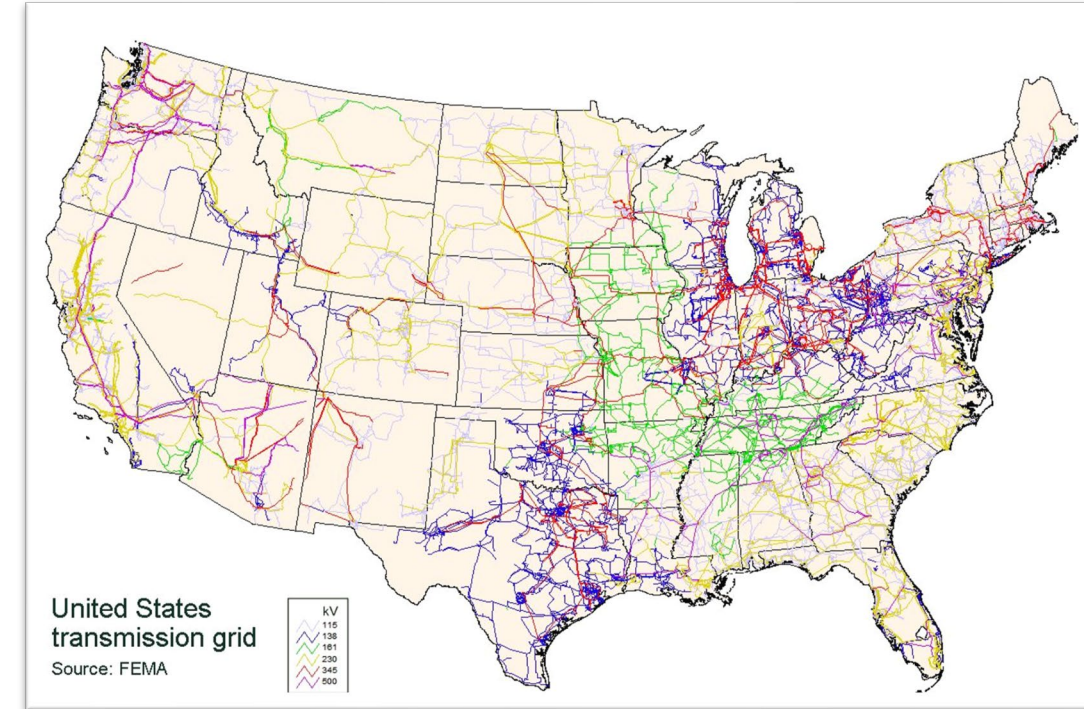
3. Implement

- Implement phased procurement strategies that increase CFE availability and qualify towards federal CFE related goals

Basic Overview of “The Grid”

Three Primary Components of the Power System:

1. **Generation:** Over 7,000 power plants
2. **Transmission:** 160,000 miles of high-voltage power lines
3. **Distribution:** Millions of low-voltage power lines and transformers

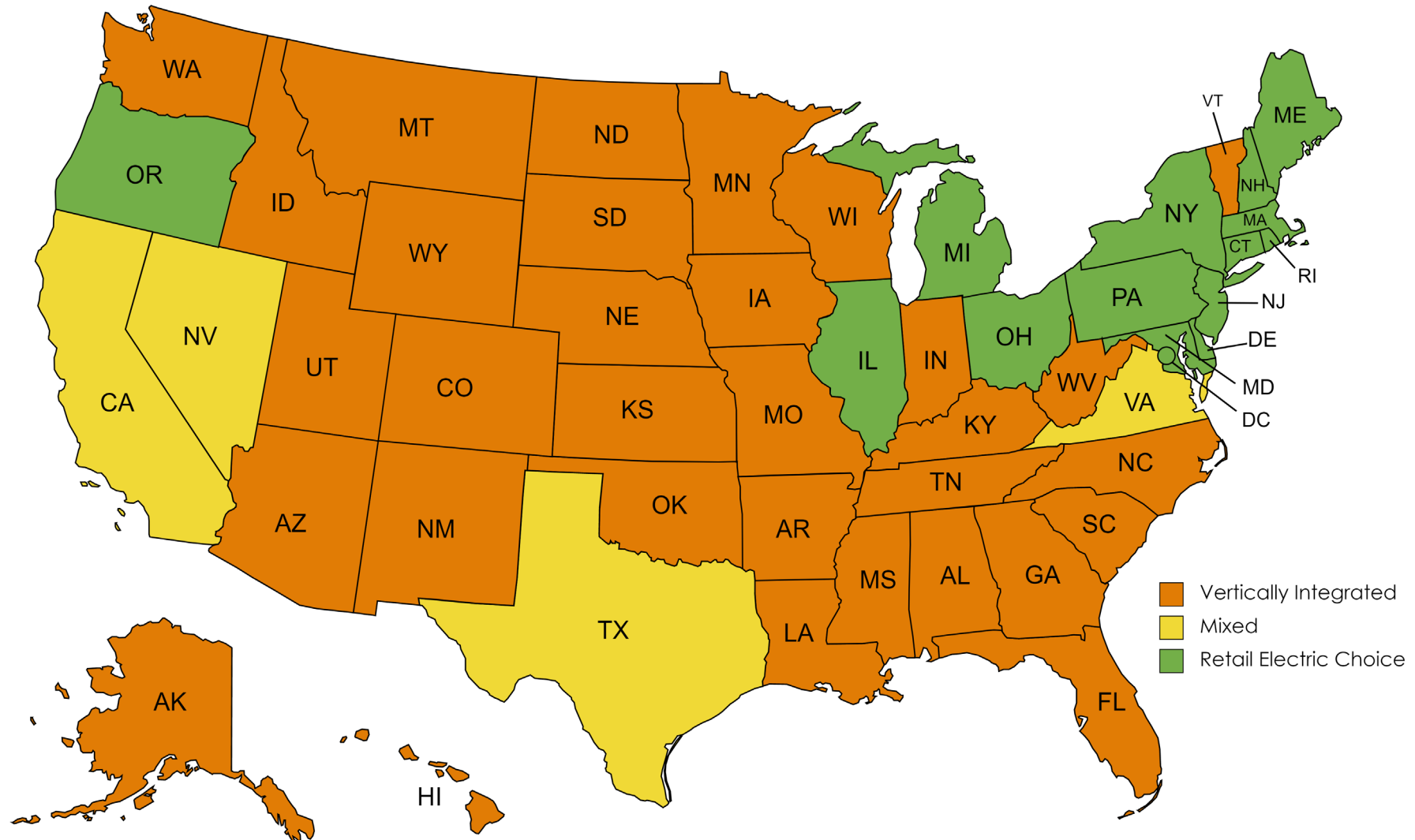


United States Transmission Grid, Source: FEMA



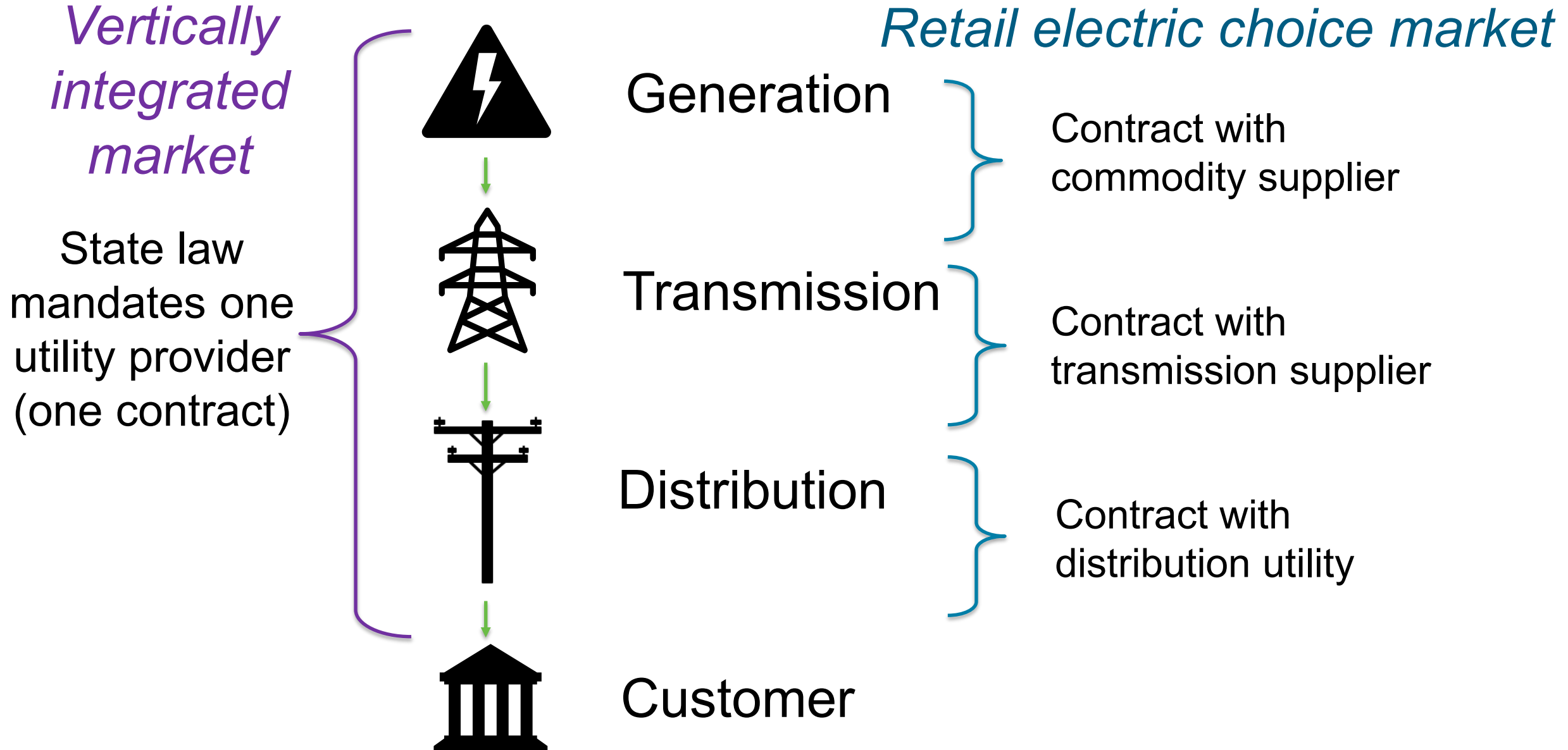
Maintaining a perfect balance of supply and demand is key to grid functionality.

Electricity Market Types



Note: Options for specific customer classes may change over time; it's always best to confirm with your serving utility.

Components of Electricity Service



The GSA Energy Program

GSA's energy programs

- Energy Procurement
 - GSA Areawide contracts
 - GSA commodity electricity procurements (covered later)
- Rate Intervention
 - Represent the consumer interest of Federal Executive Agencies in Public Utility Proceedings before Federal and State regulatory bodies.
- Regional Energy Coordinators

Collaboration

- Sustainability Program
- GSA's Proving Ground and DOE National Labs
- Office of Federal High Performance Green Buildings
- Offices of Portfolio Management and Customer Engagement, Design and Construction, and Acquisition Management

GSA Areawide Contracts for Utility Services

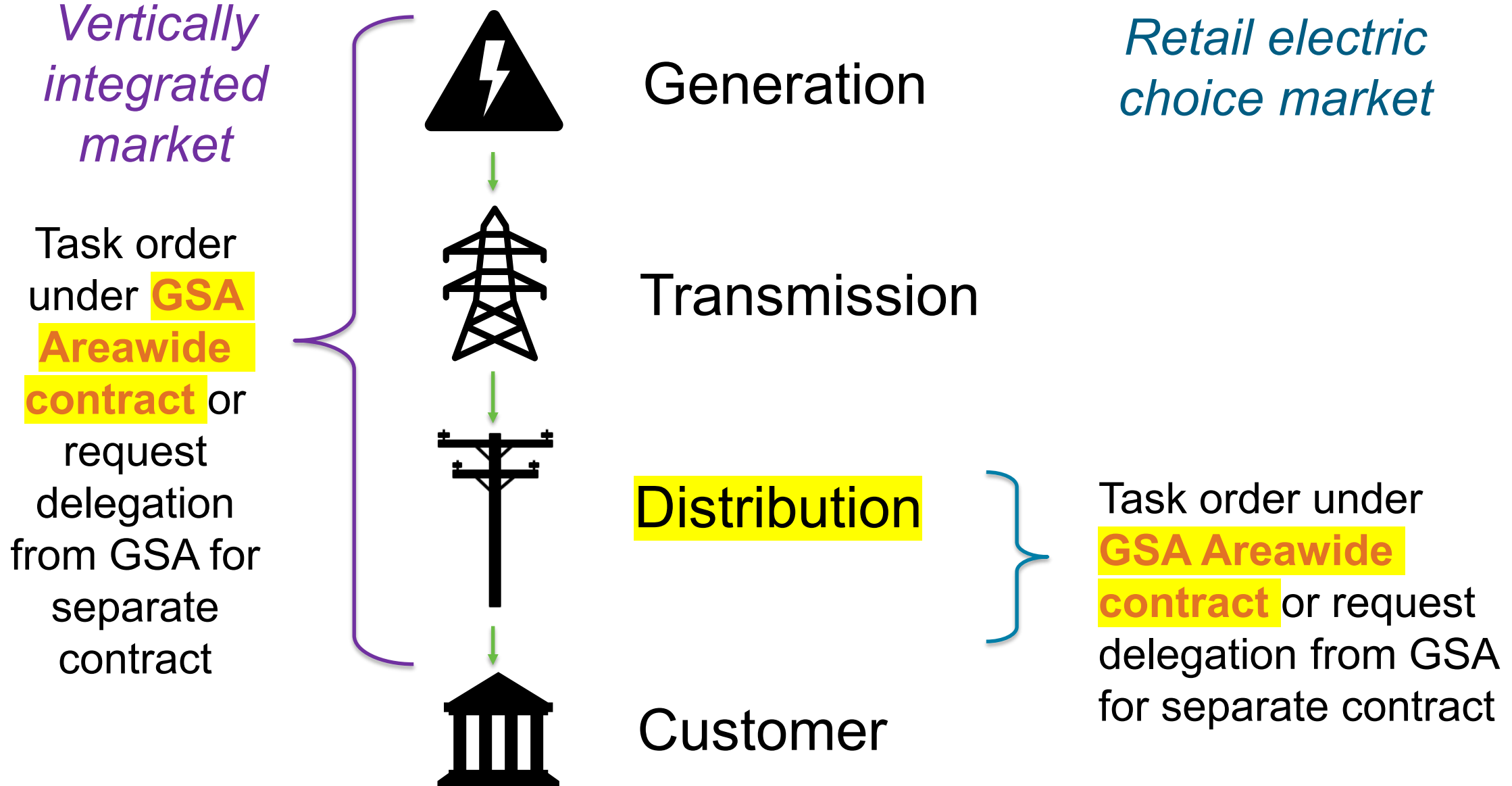
GSA negotiates utility service areawide contracts (AWCs) with utilities on behalf of the Federal Government to streamline utility service procurement

- GSA establishes long-term (10 year) government-wide contracts with regulated utility companies that covers their service territory
- Can include energy management services (UESC) and interconnection agreements (microgrids, solar, wind farm)
- Over 100 active areawide contracts

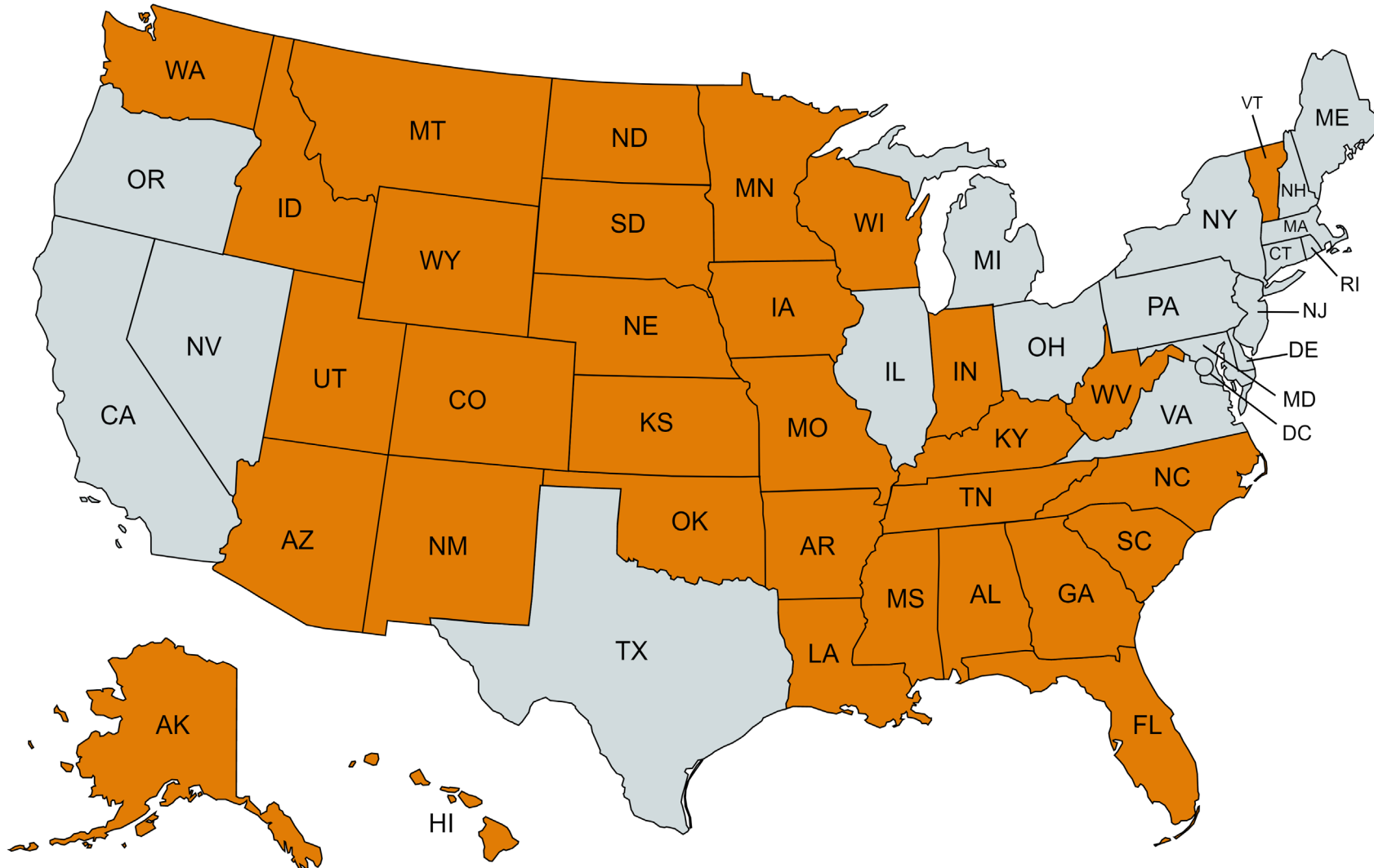
Note: FAR Part 41 requires agency use of available AWC unless head contracting authority determines otherwise.

For the listing of AWCs visit: [Download Contracts/ Modifications | GSA](#)

GSA AWCs in the Components of Electricity Service



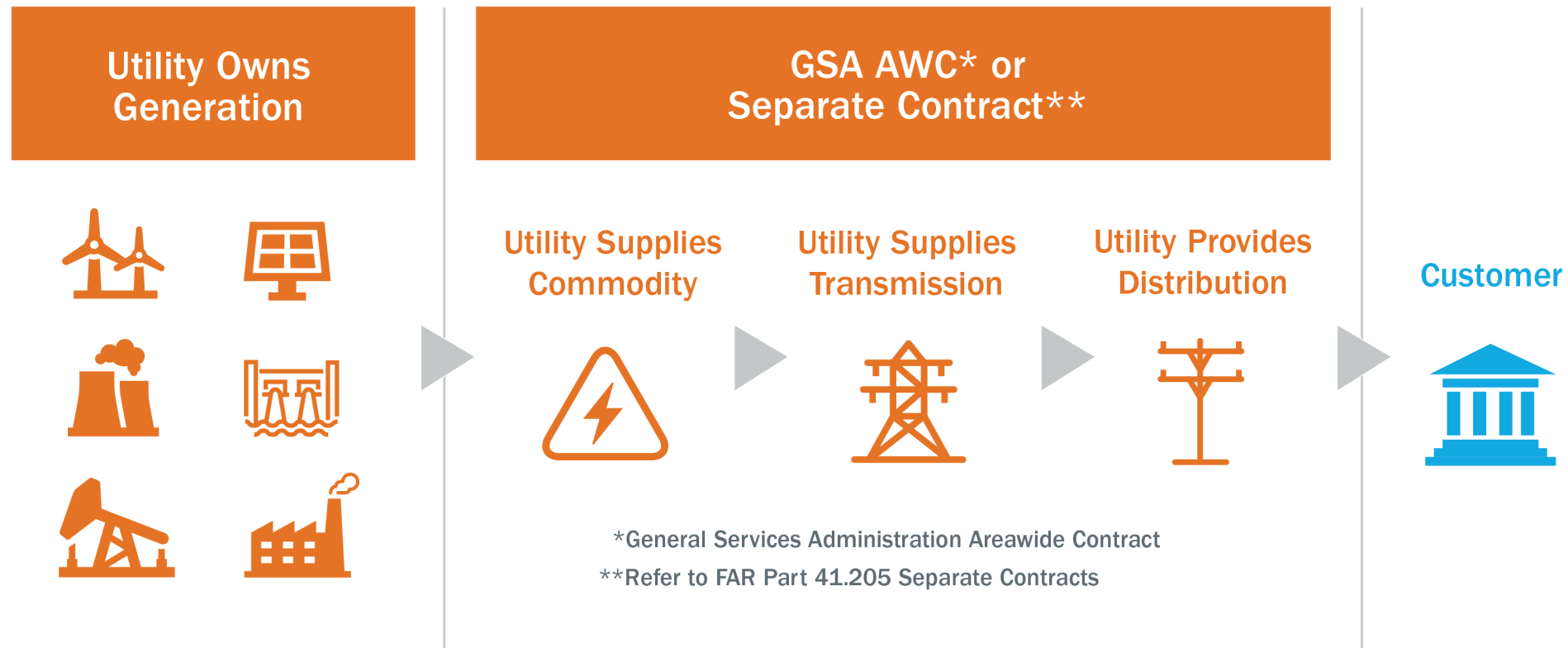
Vertically Integrated Markets



Note: Options for specific customer classes may change over time; it's always best to confirm with your serving utility.

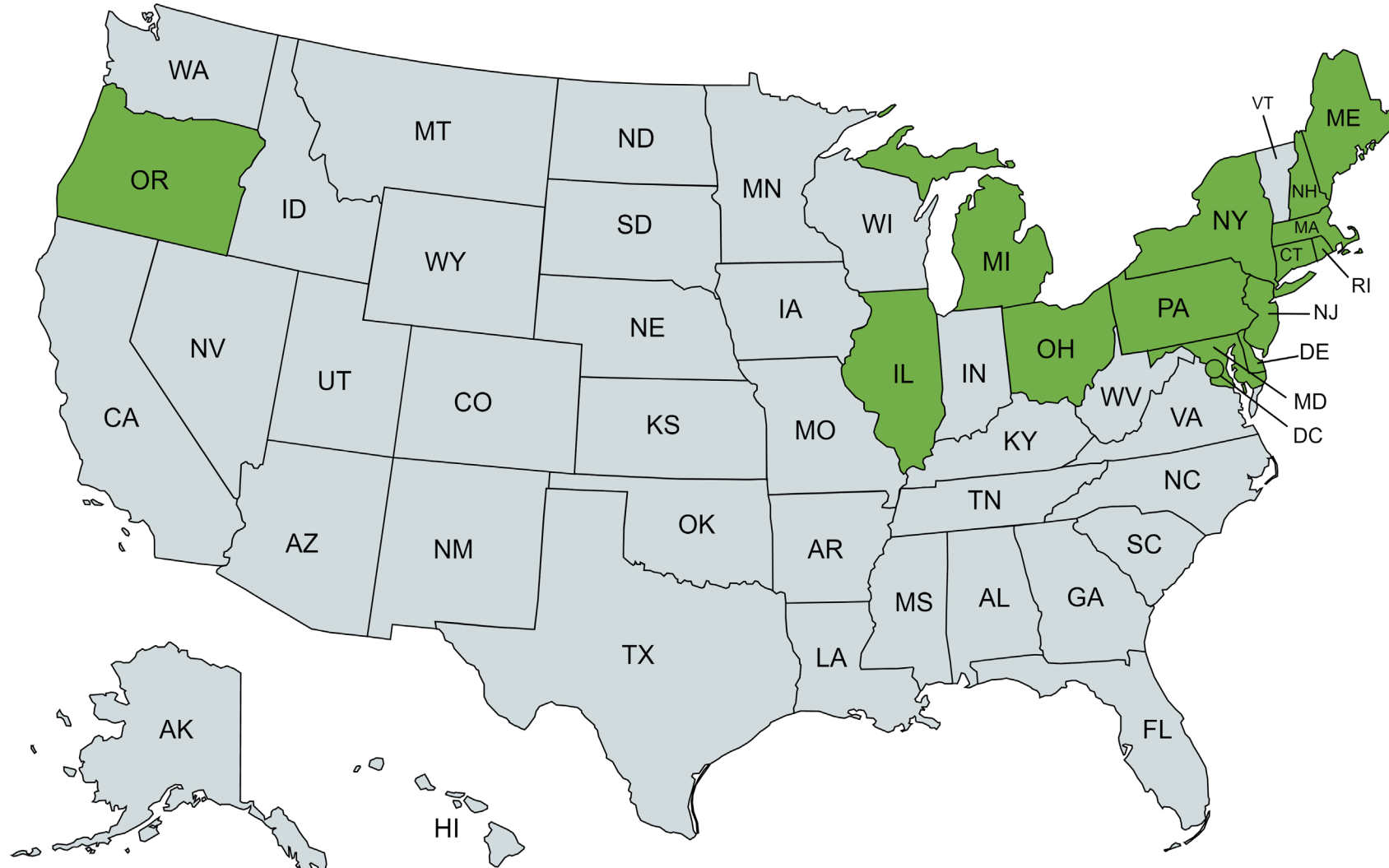
Overview of Vertically Integrated Markets

Utilities offer electric service to their customers via tariffs, which are pricing schedules approved by the relevant state utility commission.



Note: Electric cooperatives are generally structured as vertically integrated providers, except that they are regulated by their board of directors, not by a state commission

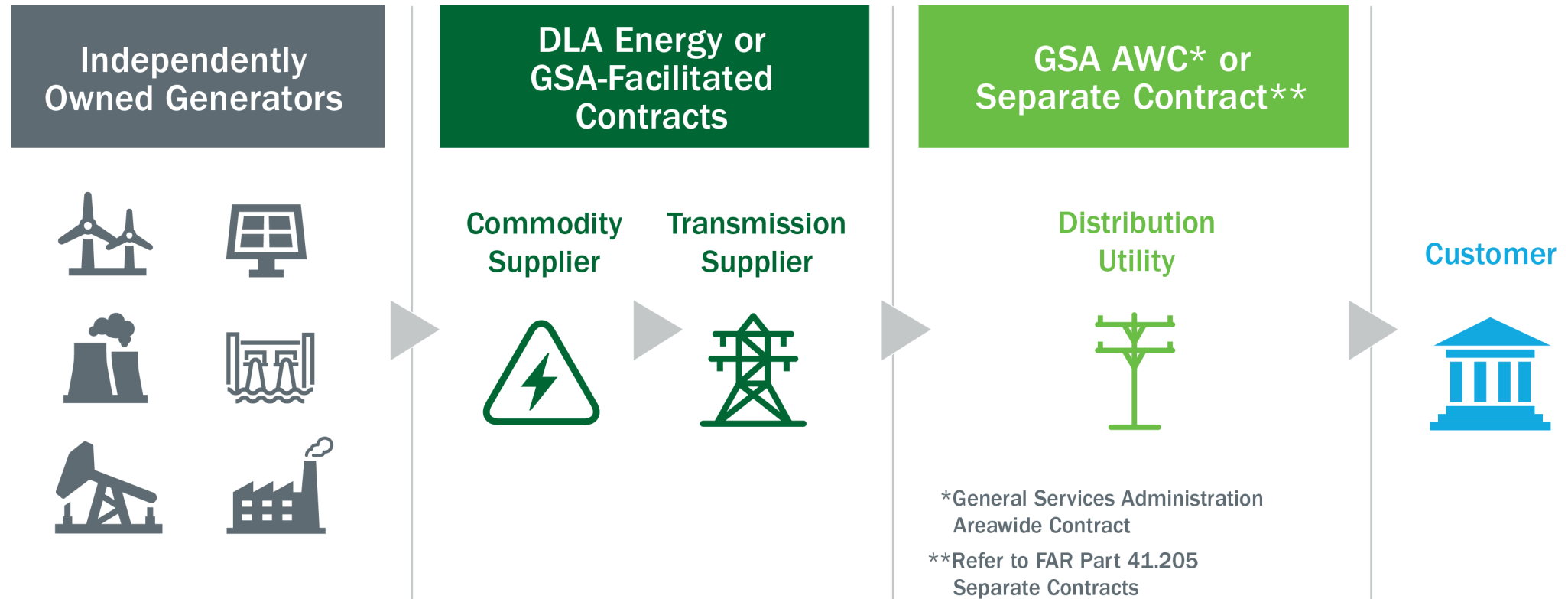
Retail Electric Choice Markets



Note: Options for specific customer classes may change over time; it's always best to confirm with your serving utility.

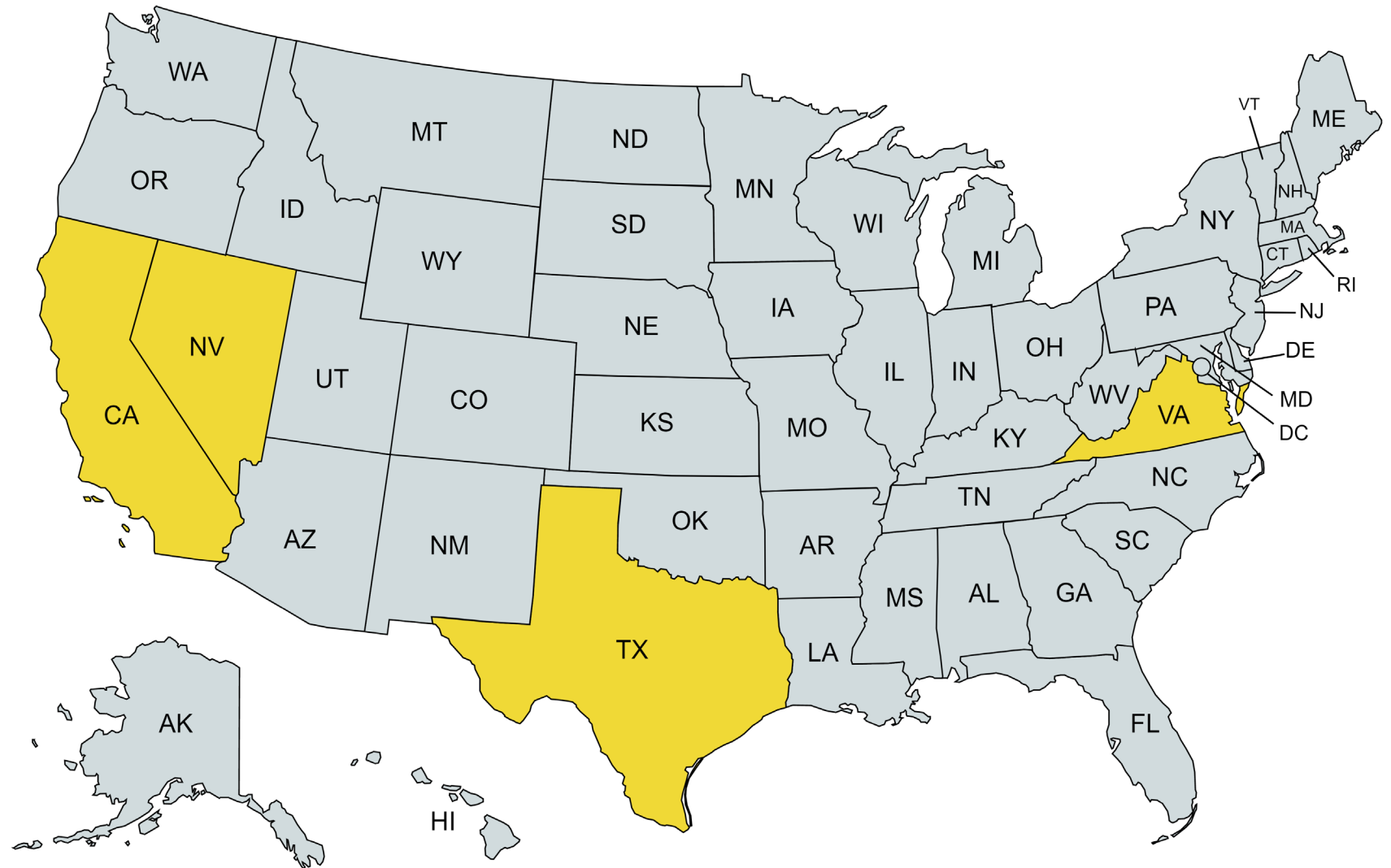
Overview of Retail Electric Choice Markets

Customers may competitively choose their commodity electricity and transmission suppliers but will generally have a single option for distribution service.



Mixed Markets

In some states, only certain areas have access to retail electric choice or retail electric choice may not be available to all customer classes.



Note: Options for specific customer classes may change over time; it's always best to confirm with your serving utility.

GSA Commodity Electricity Procurements

GSA procures electricity through third party energy supply contracts in retail electric choice markets

- 58 Federal agencies and non-governmental organizations; 173 active supply contracts (29 Electric and 144 natural gas); over 1,400 end-user accounts
- 109 utility service territories in 35 states
- 40% Renewable Energy Certificate requirement included in electricity contracts on average
- \$1.076 billion total gas and electric contract value of awards of active contracts as of April 2022, with an average annual contract value of \$375 million

GSA's electric competitive supply contracts

- Auctions reduce price risk and aggregate buying power
- Access market conditions and different pricing components
- Contract term typically 3-5 years
- Agency pay utility and energy suppliers directly

For more information, contact energy@gsa.gov

DLA Energy, Installation Energy Programs Overview

- **Commodity Electricity**
- **Other services**
 - Renewable Energy Certificates (RECs)
 - Demand Response
 - Performance Contracts (ESPC & UESC)

DLA Energy: Retail Electric Choice Overview

- Procure shaped load retail electricity
- Term 2-5 years, depends on program
- Multiple pricing alternatives
 - Firm-fixed
 - Locational marginal (LMP)
 - Block and index (dollar cost averaging)

Current Electricity Contracts

- 23 contracts
- 16.6 GWh
- Estimated \$820,348,000

Markets Served

- DLA Energy procures commodity electricity in the following markets:
 - Currently in CT, DC, IL, MA, MD, ME, NH, NJ, NY, OH, RI, TX
- DLA Energy procures for the following agencies
 - DHS, DOC, DOD, DOE, DOI, NASA, USDA, VA
- Mostly multiple account, campus type facilities

DLA Energy: Commodity Electricity Procurements

General Information

- All procurements conducted through Fort Belvoir Office
- Request Letter of Authorization (LOA) for inclusion and to get data from utility
- Aggregate requirements but priced by installation
- Contract between DLA Energy and contractor
- GSA areawide covers utility costs separately
- Utilize reverse auctions for pricing
- Billing (consolidated or dual)
- DLA Energy provides contract administration

DLA Energy: Other Services

Renewable Energy Certificates (RECs)

- Annual procurement for federal customers

Demand Response

- 9 approved agreements for federal customer use; contact electricity team

Performance Contracts

- Utilize DOE IDIQ for ESPC, multiple on-going

Other Commodity Procurements

DLA Energy Points of Contact

John Nelson

Electricity, Demand Response

John.Nelson@dla.mil

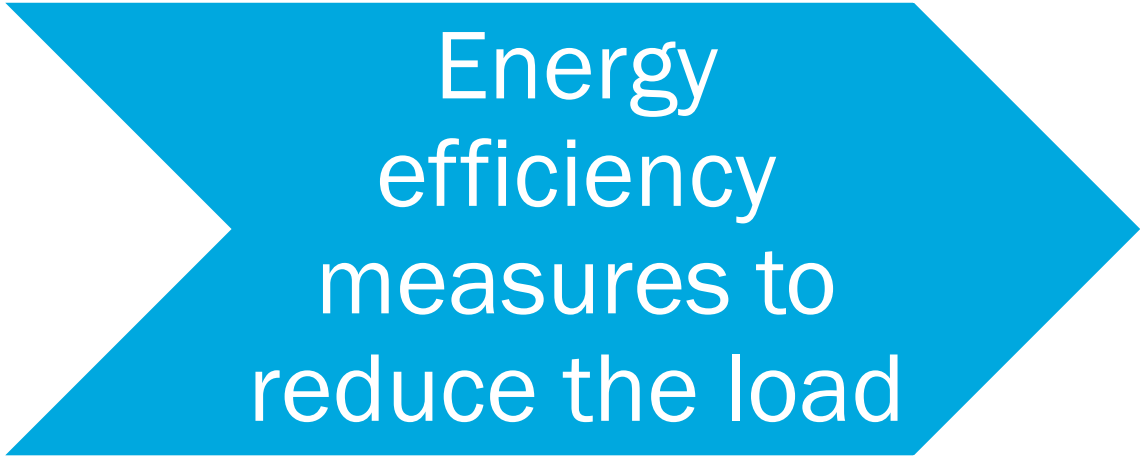
571-363-7185

Andrea Kincaid

ESPC/UESC/PPA

Andrea.Kincaid@dla.mil

Identify Options for Your Site



Energy
efficiency
measures to
reduce the load



On-site CFE
owned
purchased



Off-site CFE
purchases

Federal Performance Contracting

Over \$11.45 billion in project investments awarded.

(DOE ESPC IDIQ, ESPC ENABLE, UESC)

Energy

- 41.9 trillion BTU reduced annually
(more than the residential energy use in Washington DC in 2020)

Economic

- 91,600 job-years (direct jobs)

Environmental

- 2.8 million metric tons CO₂e* reduced annually
(equivalent to ~600,000 gas-powered cars driven for one year)

Workforce Development

- Courses on ESPC, ESPC ESA, UESC, ENABLE

Energy Act 2020

- EA2020 requirement to implement 50% of identified cost-effective energy conservation measures via performance contracts

*estimated from 2019 eGRID values

Can support energy efficiency and on-site CFE projects with no upfront costs.

Impact of Performance Contracts



Reduce Carbon Footprint of Buildings

- Install energy efficiency measures
- Replace fossil fuels
- Install distributed renewable energy



State and Local Partnerships

- Performance Contracting National Resource Center (PCNRC)
- State and Local Solution Center



Decarbonizing Transportation

- Support installation of electric vehicle supply equipment
- Investigate options for integrating electric vehicles



Workforce Development

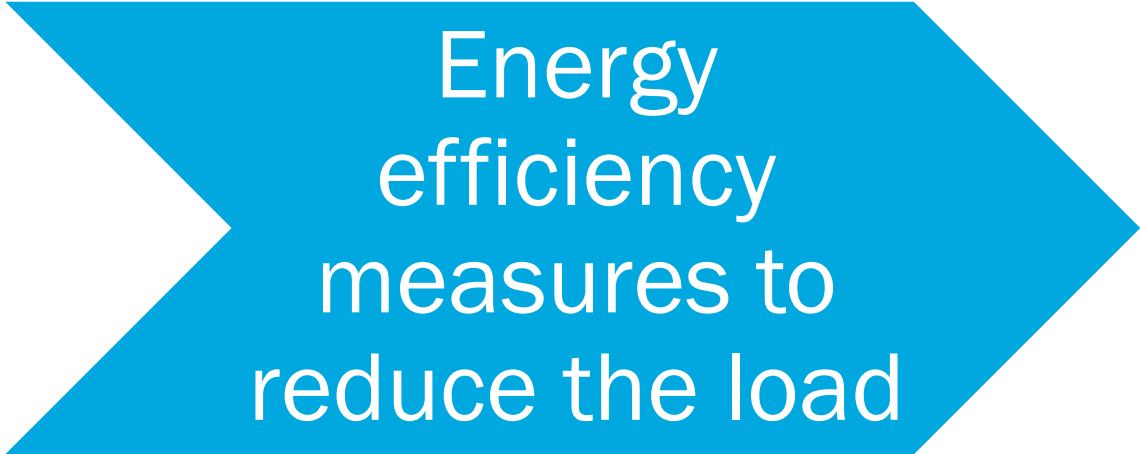
- Deliver training
- Buy American Act
- Davis Bacon wages



Energy & Environmental Justice

- Subcontracting goals in the DOE IDIQ contract for ESPCs
- Projects can benefit disadvantaged communities

Identify Options for Your Site



Energy
efficiency
measures to
reduce the load

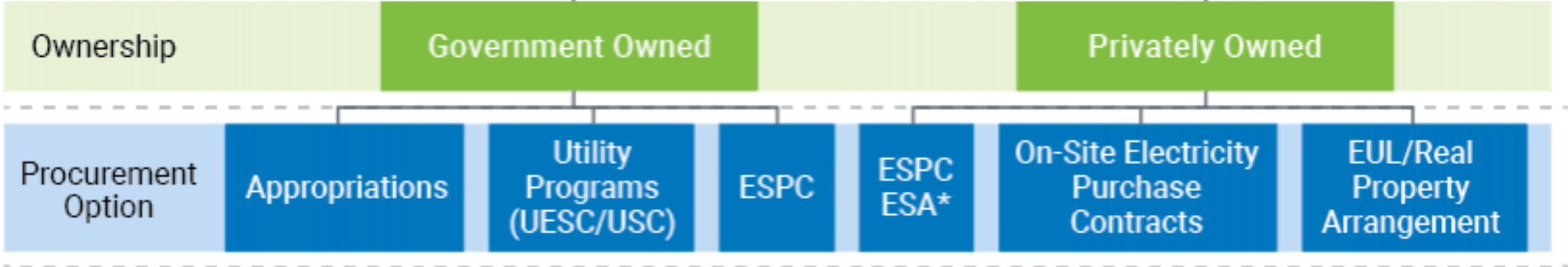


Onsite CFE
owned
purchased



Offsite CFE
purchases

On-site Options Overview



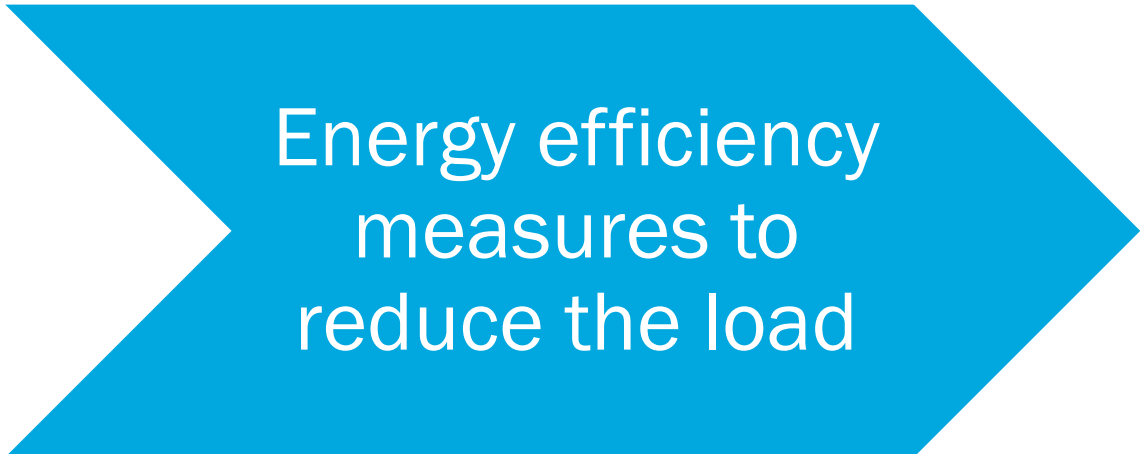
| | | | |
|------|-------------------------------------|-----------|-----------------------------|
| UESC | Utility Energy Service Contract | ESPC ESA* | ESPC Energy Sales Agreement |
| USC | Utility Service Contract | EUL | Enhanced Use Lease |
| ESPC | Energy Savings Performance Contract | | |

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

On-Site Considerations

- **Important! Interconnection of onsite generation must be coordinated with your serving utility**
 - [Distributed energy interconnection checklist](#)
- **For more information, see FEMP's on-demand *Working with Your Utility* webinar series**
 - [Interconnection Basics](#)
 - [Advanced Interconnection Topics, Part 1](#)
 - [Utility Cost Implications of a Distributed Energy Project](#)
 - [Advanced Interconnection Topics, Part 2](#)

Identify Options for Your Site



Energy efficiency
measures to
reduce the load



On-site CFE
owned
purchased



Off-site CFE
purchases

Off-site CFE Purchase Options by Market Type

Vertically Integrated

- Utility Green Pricing
- Utility Green Tariff
 - Sleeved offsite electricity purchase contract

Both Markets

- Community Choice Aggregation (CCA)
- Community Solar

Retail Electric Choice

- Commodity Supply Contract (via DLA/GSA)
- Off-site electricity purchase contract

We'll describe each of these in the following slides.

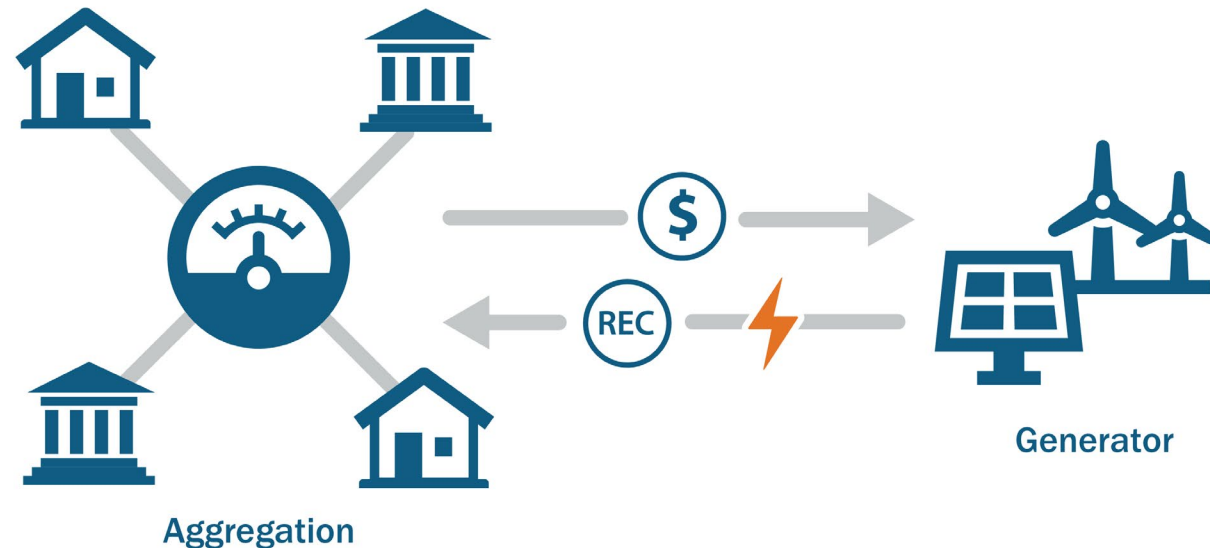
Off-site Options: Both Markets—Community Choice Aggregation

Both Markets

- Community Choice Aggregation (CCA)

Customers obtain electricity from aggregators; utility is responsible for transmission and distribution

- EACs are typically retained by the aggregators

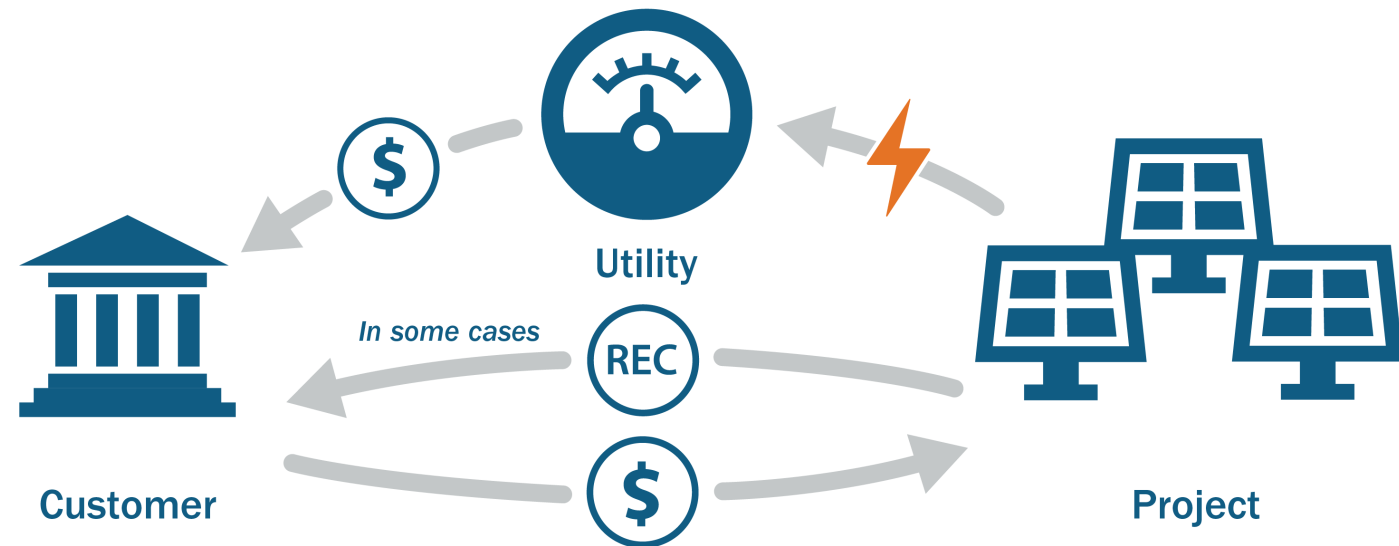


Off-site Options: Both Markets—Community Solar

Both Markets

- Community Solar

Subscribers pay for share of solar array and receive a bill credit
– EACs are typically retained by the solar array owner



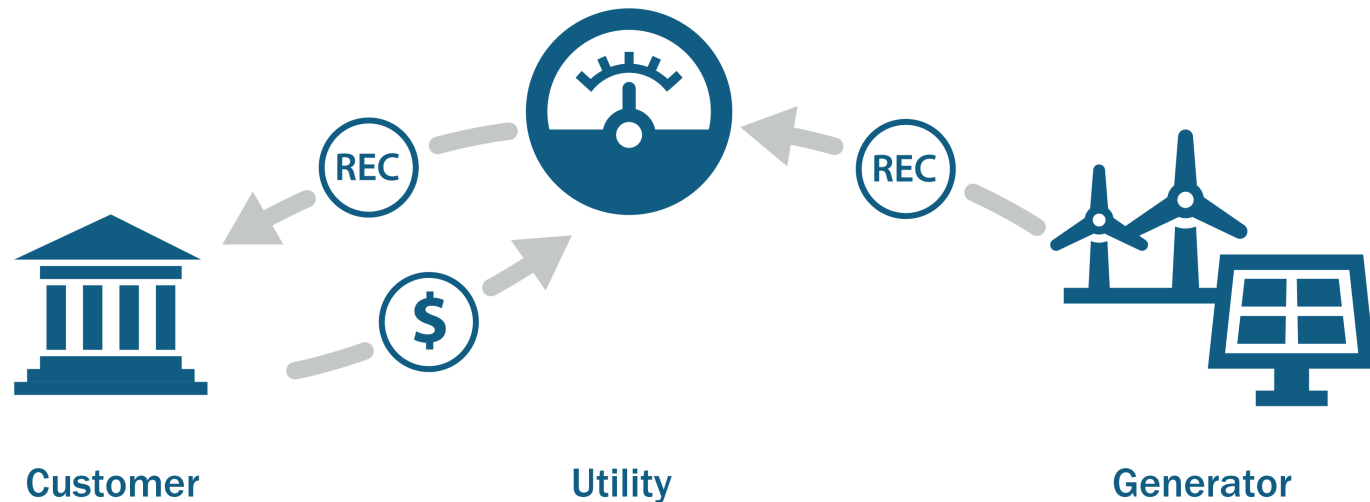
Off-site Options: Vertically Integrated Markets—Green Pricing

Vertically Integrated

- Utility Green Pricing

Customers are offered RECs at a price premium on existing electricity bills

- May or may not be sourced from the regional grid
- Short contract terms (e.g., month to month)



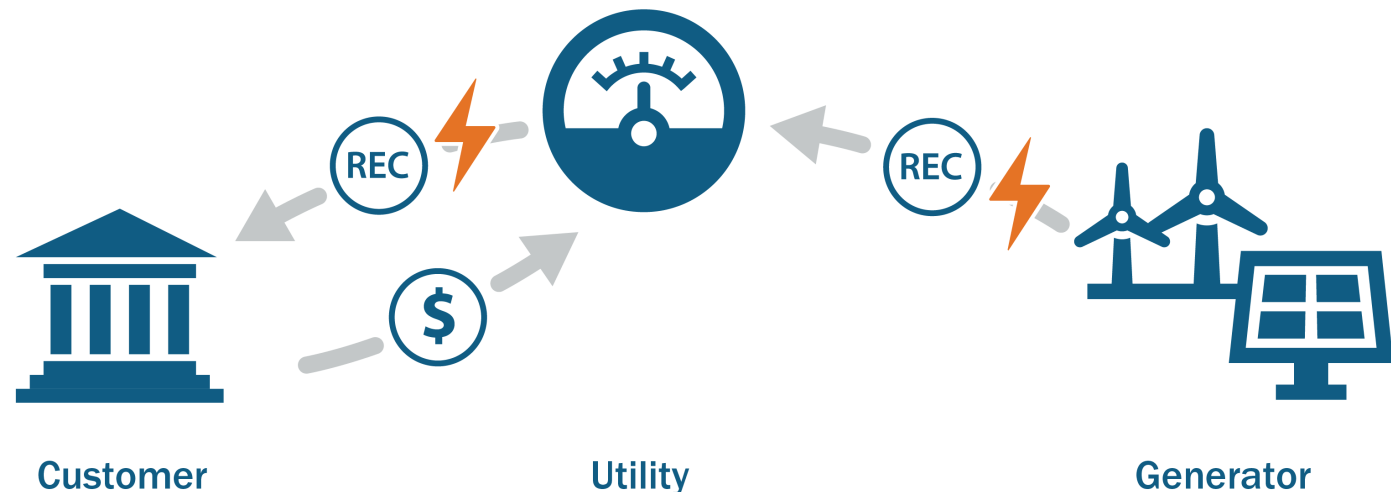
Off-site Options: Vertically Integrated Markets—Green Tariff

Vertically Integrated

- Utility Green Tariff
 - Sleeved offsite CFE purchase contract

Customers procure **electricity and RECs** from a clean energy project

- Project may be utility- or third-party owned
- Often have longer contract lengths (10-20 years)



Off-site Options: Retail Electric Choice—Commodity Supply

Retail Electric Choice

- Commodity Supply Contract

GSA and DLA Energy purchase electricity on behalf of federal agencies

- Commodity electricity is procured
- Transmission is typically included in GSA/DLA contract
- Distribution utility provides distribution via separate contract
- Contract length: 2-5 years

Contact DLA Energy at dlaenergy.eteam@dla.mil and GSA at energy@GSA.gov for assistance in retail electric choice markets

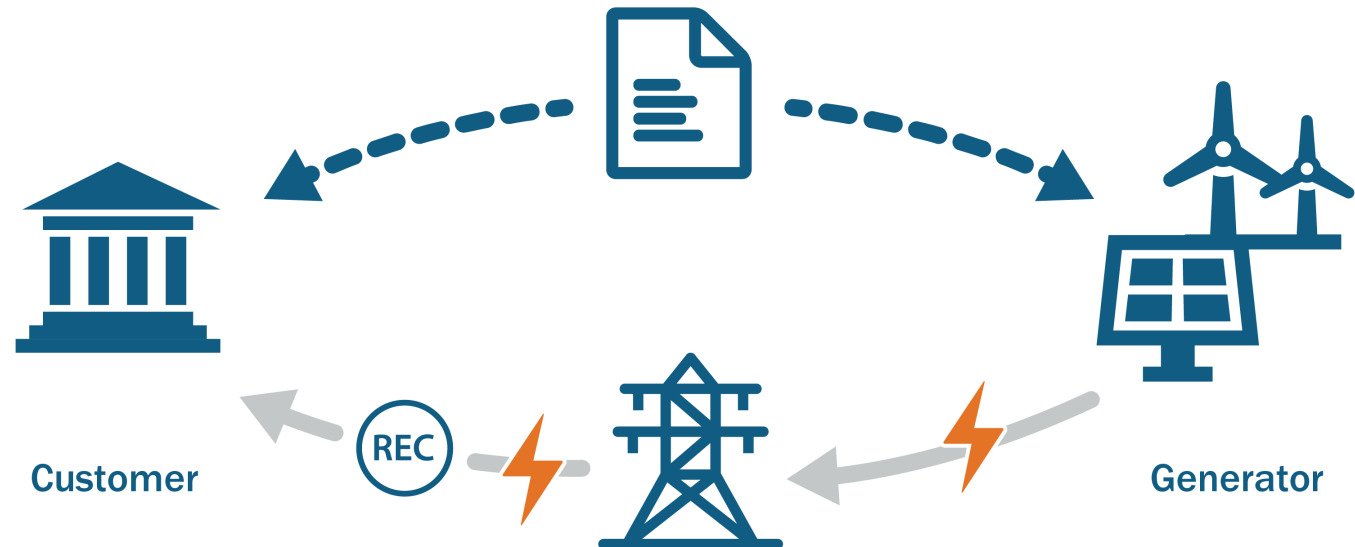
Off-site Options: Retail Electric Choice—Electricity Purchase

Retail Electric Choice

- Off-site Clean Electricity Purchase Contract

Customers purchase electricity from independent generators or suppliers rather than their serving distribution utility

- Often have longer contract lengths (10-20 years)
- REC/EAC ownership depends on contract terms



Summary of Relevant Authorities

40 U.S.C. § 501

- Only GSA, DoD, DOE have authority—other agencies must ask GSA for delegation (10 years)

40 U.S.C. § 591

- Must comply with State law; for example, can't have competitive procurement for electricity where not allowed

FAR Part 41

- Governs utility service acquisitions

10 U.S.C. § 2922a

- Department of Defense 30-year contract authority

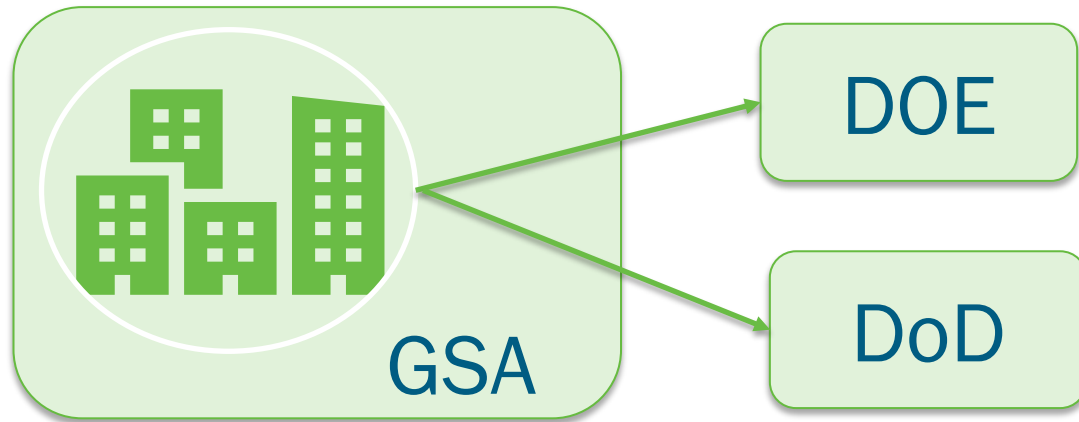
FAR Part 12

- For commodity electricity procurements via DLA Energy and/or GSA in retail electric choice markets (5 years)

This is not legal advice, always consult with agency counsel.

40 U.S.C. § 501: GSA's Utility Service Procurement Authority

Congress gave utility service procurement authority to GSA, GSA delegated their authority to DOE and DoD; and to VA for interconnection charges only



Pursuant to FAR Part 41.103(b)-(c) and 41.301(a) ALL agencies without a delegation must purchase utility services through GSA or request a delegation.

As a result, DOE and DoD can purchase utility services under 40 U.S.C. § 501 independently.

40 U.S.C. § 501, continued

40 U.S.C. § 501

- Only GSA, DoD, DOE have authority—other agencies must ask GSA for delegation (10 years)

Other agencies must purchase through GSA or ask GSA for a delegation of authority pursuant to FAR 41.103(b)-(c) and 41.301(a)

- Purchase under the GSA Areawide contract when available
Note: Commodity electricity is different and should be aggregated with other agencies via DLA Energy or GSA
- To obtain a delegation, an agency must demonstrate technical capability to effectively negotiate utility service contracts, among other things

40 U.S.C. § 591

40 U.S.C. § 591

- Must comply with State law; for example, can't have competitive procurement for electricity where not allowed

Important in the vertically integrated market context because:

- Full and open competition of electricity supply is generally not available in vertically integrated markets
 - In general, the only available options will be those offered by utility
- The Government, in general, must take electric service from their serving utility in vertically integrated markets

Closing Thoughts

- Is your agency GSA, DoD, or DOE?
- Identify existing performance contracts, opportunities
- Identify existing on-site generation, opportunities
- Use the FEMP lookup tool to identify the balancing area and regulatory market for your sites to help understand offsite options
- Don't just install onsite generation without talking to your utility!
Learn what is required in advance and integrate those deadlines and requirements into your project planning tools

Closing Thoughts, continued

Consider inventorying your existing electricity service contracts

- Identify those in **vertically integrated markets** → is service being taken under the [GSA Areawide contract](#), if not, what is the contractual arrangement? Expiration?
- Identify those in **retail electric choice markets** → is commodity electricity purchased via [DLA Energy](#) or [GSA](#)? If not, how is commodity supply being procured? Contract expirations? Consider reaching out to [DLA Energy](#) and [GSA](#) regarding participating in future procurements.
- Other arrangements?
- Is the electricity being delivered to your balancing area?

FEMP Resources: CFE Resources Landing Page

ENERGY.GOV

NewsroomLeadershipEnergy.gov OfficesNational LabsSearch Energy.gov



Office of
ENERGY EFFICIENCY & RENEWABLE
ENERGY

ABOUT
EERE

INITIATIVES

RESOURCES

ENERGY
EFFICIENCY

RENEWABLE
ENERGY

SUSTAINABLE
TRANSPORTATION

FEDERAL ENERGY MANAGEMENT PROGRAM

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.

Assess



Understand site utility markets and CFE usage

Strategize



Identify feasible, impactful pathways to increase CFE

Implement



Execute procurement strategies for CFE

Assess

Assess the options available to your site based on the utility regulatory environment in which it is located. Available options will differ depending upon the market structure.

| | |
|---|---|
| UNDERSTAND AGENCY ELECTRIC UTILITY REGULATORY ENVIRONMENT | + |
| CONSIDER FUTURE LOAD | + |

Strategize

Identify feasible, impactful pathways to increase CFE.

| | |
|---|---|
| UNDERSTAND POTENTIAL FOR ADDITIONAL ON-SITE CFE GENERATION CAPACITY | + |
| IDENTIFY CURRENT ELECTRICITY PROCUREMENT STRATEGY | + |
| UNDERSTAND OPTIONS FOR OFF-SITE CFE PROCUREMENT | + |

Implement

Implement energy efficiency measures, off-site CFE procurement, and on-site CFE generation and/or energy storage projects.

| | |
|--|---|
| EXECUTE STRATEGIES TO INCREASE ON-SITE CFE GENERATION | + |
| EXECUTE STRATEGY TO INCREASE CFE FOR SITES IN VERTICALLY INTEGRATED MARKETS | + |
| EXECUTE STRATEGY TO INCREASE CFE FOR SITES IN RETAIL ELECTRIC CHOICE MARKETS | + |
| REPORT CFE USAGE | + |
| MEASURE PROGRESS | + |

Carbon Pollution-Free Electricity Resources for Federal Agencies | Department of Energy

U.S. DEPARTMENT OF ENERGY

OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY

49

FEMP Resources: Onsite & Offsite Resources

Federal On-Site Distributed Energy Procurement Options

Federal Energy Management Program

[Federal On-Site Distributed Energy Procurement Options | Department of Energy](#)

Federal Off-Site Clean Energy Procurement Options

Federal Energy Management Program

[Federal Off-Site Clean Energy Procurement Options | Department of Energy](#)

Energy Exchange 2022

- **Save the Date!**
 - October 25-27, 2022 in Cincinnati, OH
- **Theme: Advancing Federal Infrastructure through Innovation**
- **Federal Energy and Water Management Awards**
 - Recognizing 2021 and 2022 winners
- **For more information, go to:**
energy-exchange.com



Questions?

Feel free to reach out to us at any time via the FEMP Assistance Request Portal:

<https://www7.eere.energy.gov/femp/assistance/>

For technical assistance specific to the Distributed Energy Program, please reach out through the DER portal

<https://www7.eere.energy.gov/femp/assistance/node/add/application-combined>

For questions directed to GSA, please contact energy@gsa.gov

For questions directed to DLA Energy, please contact
John.Nelson@dla.mil (electricity/demand response) or
Andrea.Kincaid@dla.mil (ESPC/UESC/PPA)

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, continued

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/femplw07132022>

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.

ENROLLED

COMPLETED

COURSE TYPE KEY

LO

Live Online

LOS

Live On-Site

OD

On-Demand

| COURSE TITLE | SPONSOR | TYPE | ENROLLED | | |
|--|---------|------|----------|-------------------|----------|
| Utility Industry Basics for Federal Agency CFE Procurement | FEMP | LO | 07/01/22 | PROCEED TO COURSE | UNENROLL |