U.S. DEPARTMENT OF ENERGY

ISWG: FEMP Carbon Pollution-Free Electricity Resources

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FEMP
Federal Energy Management Program

Federal Customer Priorities

Energy Efficiency | Decarbonization | Fleet Electrification | Resilience

Energy Act 2020:

- Expanded requirements related to implementation of lifecycle cost effective (LCE) energy/water conservation measures identified in facility audits
  - Requires performance contracting to install 50% of LCE measures

EO 14057 (12/2021): Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability

- Established federal emission reduction goals

Updated FAQs Address new EA2020 Requirements

Applicable to UESCs and ESPCs (see questions 37-40)

Executive Order 14057

Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability

100% carbon pollution-free **electricity** (CFE) by 2030, including 50 percent 24/7 CFE

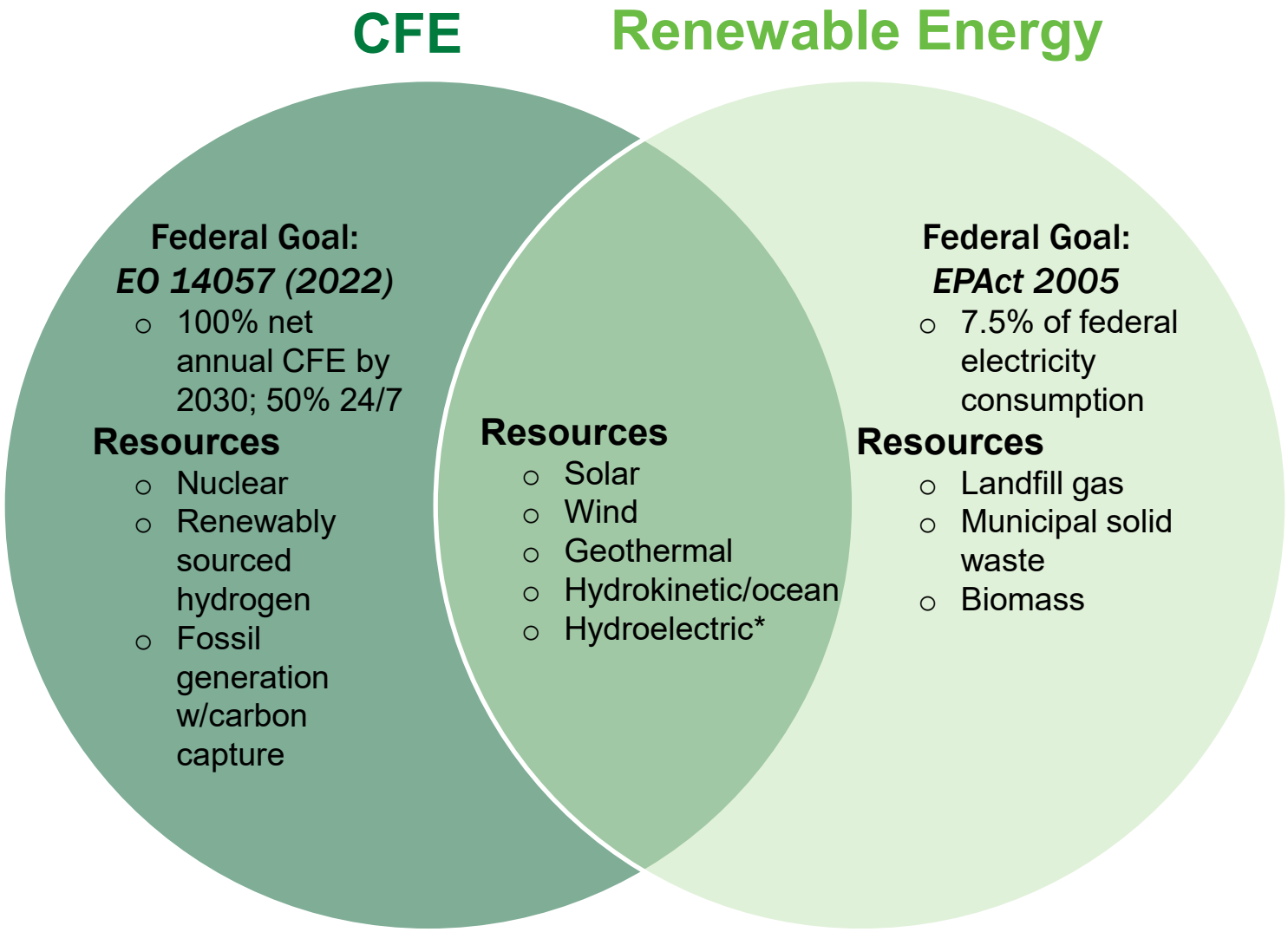
A **net-zero emissions building** portfolio by 2045, including a 50% emissions reduction by 2032; and

*100% **zero-emission vehicle** (ZEV) acquisitions by 2035, including 100% zero-emission light-duty vehicle acquisitions by 2027*

Net-zero emissions from overall federal operations by 2050

Implementing Instructions for Federal Agencies

CFE & Renewable Energy



*All hydroelectric generation qualifies as CFE. New hydroelectric generation qualifies as renewable if its capacity has increased through either improved efficiency or an addition to the project.

CFE Strategies

There are four strategies to source CFE that complies with the Implementing Instructions

(a) Grid-supplied CFE	• Electricity sourced via standard procurement from an electric utility
(b) On-site CFE	• Electricity generated on-site at federal sites from CFE-compliant sources
(c) Purchased CFE	• Electricity generated off-site and procured from an electricity supplier
(d) Energy Attribute Certificates-Only	• Certificates procured separately from the electricity

CFE Qualifications

When procuring CFE, the Implementing Instructions set three requirements for associated Energy Attribute Certificates (EACs):

	GENERATING TECHNOLOGY	BALANCING AUTHORITY	FY 2022+ PLACED IN SERVICE
Definition	Produced by zero-carbon sources	Delivered to the same BA where the agency matches its load	Generated by resources placed in service after October 1, 2021
Rationale	Eliminating emissions from electricity aligns with the Executive Order 14057 ambition	• Increased impact • Decarbonization benefits shared across the entire country	Procurement should be additive to grid decarbonization efforts

Note: These requirements do not apply to grid-supplied CFE. See CEQ CFE Strategic Plan Training for additional EAC exceptions.

CFE Strategic Plans

Agency CFE Strategic Plans (due 1/31/23) are meant to help agencies:

(1) Set CFE targets

(2) Participate in CFE procurements

(3) Share electricity procurement data

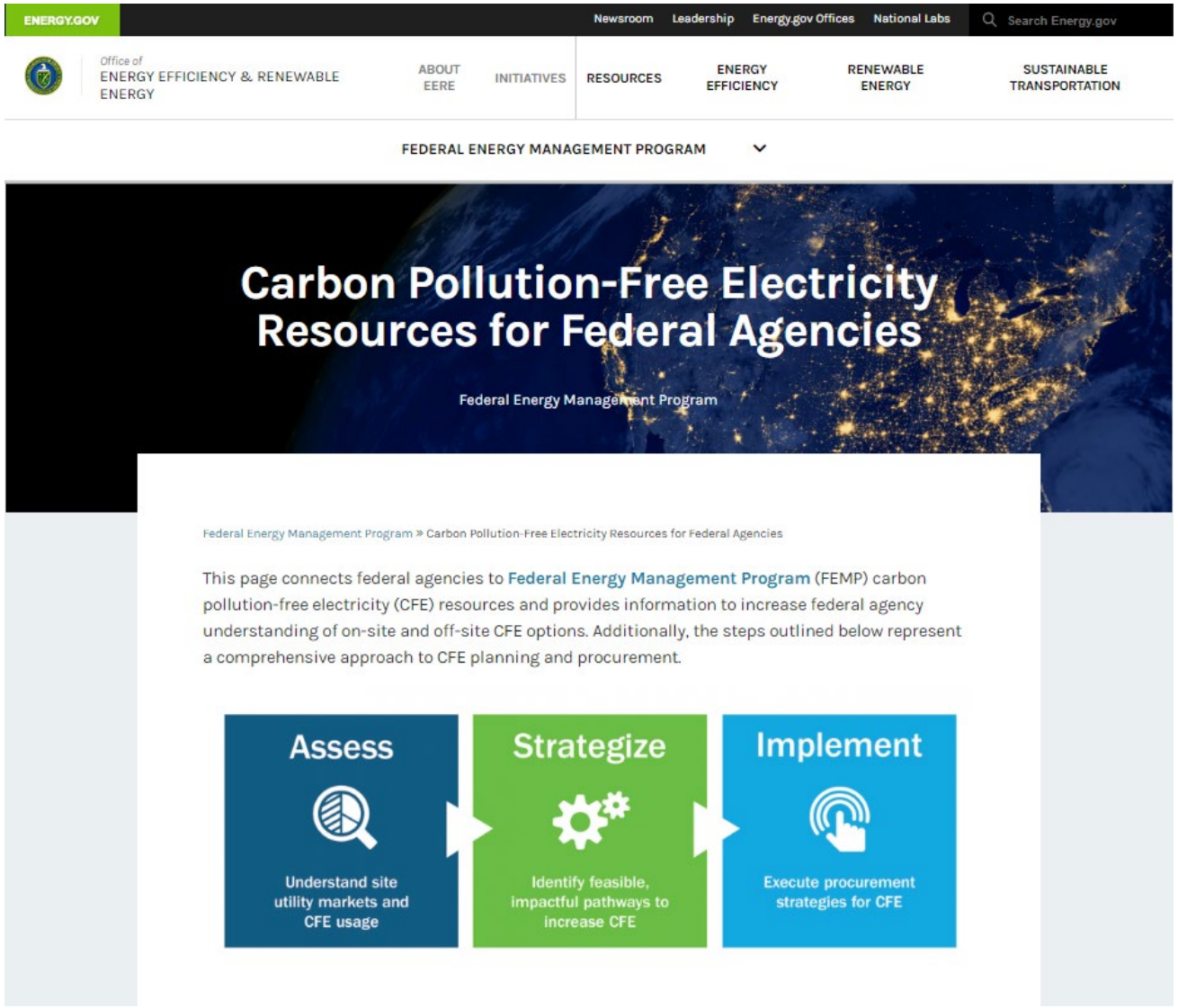
CEQ and FEMP are supporting agencies as they develop their Strategic Plans through:

(1) Tools & training

(2) Researching available CFE options at utilities with high federal load

(3) Office hours and one-on-one meetings

FEMP Resources: CFE Resources Landing Page



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 +
- IDENTIFY BALANCING AUTHORITIES +
- REVIEW AVAILABLE DATA RELATED TO IDENTIFIED ECMS FOR EFFICIENCY OPPORTUNITIES +
- 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

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

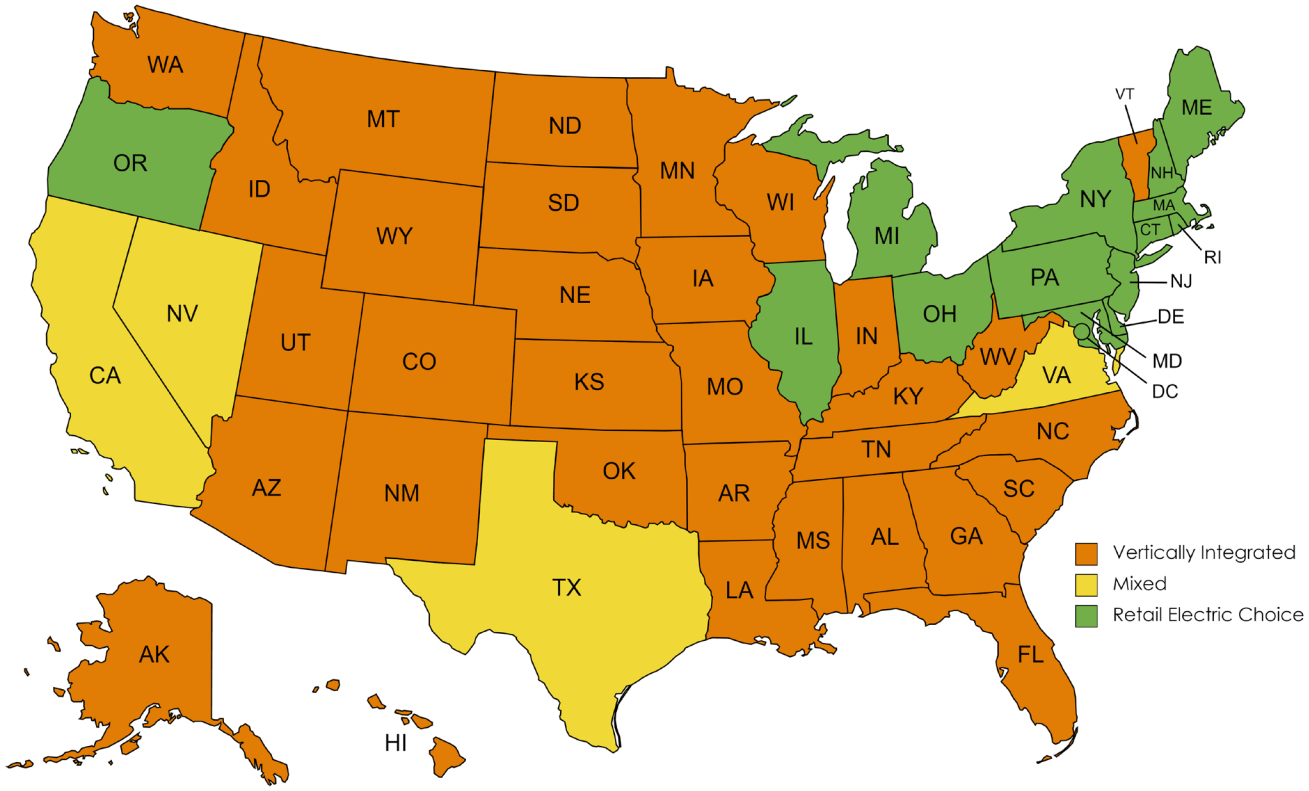
- Energy efficiency to reduce load
- On-site CFE
- Off-site CFE purchases

3. Implement

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

Assess

- **Understand Agency electric utility regulatory environment**
  - Varies by state
- **Identify balancing authorities**
  - Look-up tool available by request through the FEMP Assistance Request Portal
- **Review available data related to identified ECMs for efficiency opportunities**
- **Consider future load**



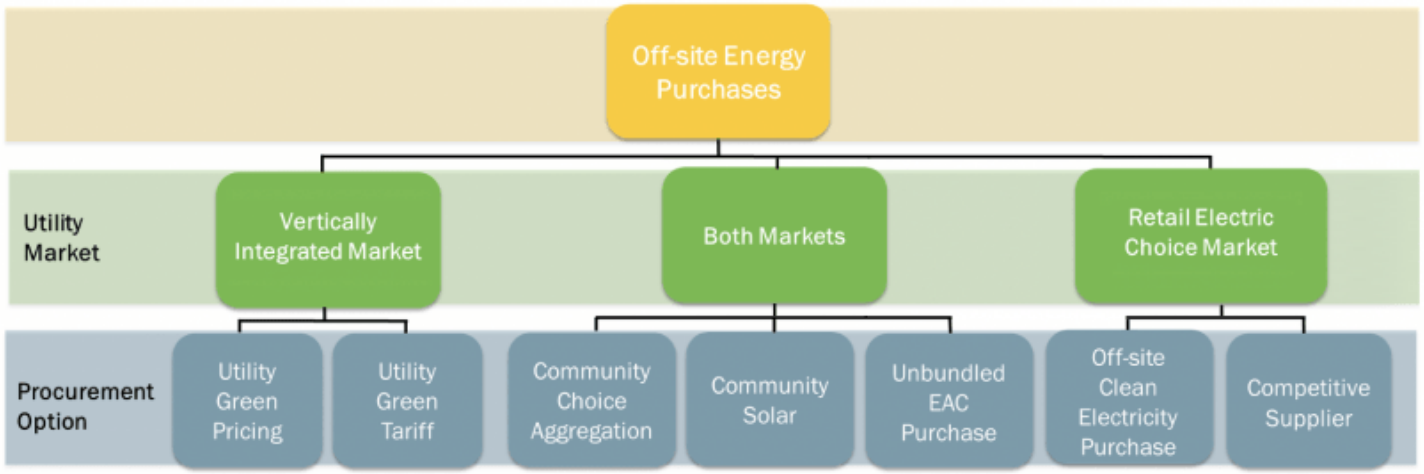
Strategize

- Understand potential for additional on-site CFE generation capacity
- Identify current electricity procurement strategy
- Understand options for off-site CFE procurement

FEMP RESOURCES

Refer to the following FEMP resources for more information and technical assistance.

- **REopt: Renewable Energy Integration and Optimization** : Techno-economic decision support platform to evaluate the economic viability of distributed energy technologies (e.g., PV, wind, battery storage, geothermal heat pumps) at each site
- **Process for Planning and Implementing Federal Distributed Energy Projects**: Six phase process to implement distributed energy projects
- **Distributed Energy Interconnection Checklist**: Series of questions and tasks for agencies to ask their utility, broken out by each interconnection process step
- **AFFECT: Assisting Federal Facilities with Energy Conservation Technologies**: Funding opportunity through FEMP to meet energy-related goals.



Implement

- **Execute strategies to increase:**
  - Energy efficiency or deep energy retrofits
  - On-site CFE generation
  - CFE for sites in vertically integrated markets
  - CFE for sites in retail electric choice markets
- **Report CFE usage**
- **Measure progress**

Additional FEMP CFE Programs and Resources

Performance Contracts
- ESPCs
- Utility Program & UESCs

Distributed Energy
- Distributed energy and energy procurement
  - On-site options
  - Off-site options

Project Quality Assurance Services
- Federal Project Executives
- eProject Builder (secure project tracking and management system)

AFFECT
- Assisting Federal Facilities with Energy Conservation Technologies
- Competitive grants for federal facilities to implement ECMs
- $250M from BIL

Facility Optimization
- Grid-interactive efficient buildings (GEB)
- 50001 Ready Program
- Metering
- O&M
- Re-tuning
- Auditing

Fleet Optimization
- Electric vehicles for federal fleets
  - Electric vehicle infrastructure assessments
  - Workplace charging
  - Alternative fuels
  - Federal Automotive Statistical Tool (FAST)

Resilience
- Energy and water resilience and security
  - Technical Resilience Navigator
  - Customer Damage Function Calculator

Sustainable Product Procurement
- Energy-efficient products and energy-saving technologies
  - ENERGY STAR
  - FEMP designated efficiency requirements
  - Low Standby Power

CFE Reporting
- Annual energy reporting requirements

Questions?

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

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

Or contact Tracy.Niro@ee.doe.gov with additional questions