FEMP
Federal Energy Management Program

Southern Company

Utility Open House for Federal Customers: Georgia Power (Southern Company)

May 22, 2024 | 10:00 AM – 3:00 PM EDT

This Training Offers IACET CEUs

How to obtain your CEUs:

1. Visit the Whole Building Design Guide (WBDG) at wbdg.org to log in or create an account
2. Enroll in the training
3. Attend the training in full
4. Return to your WBDG account's Enrolled courses
5. Select the training's "Proceed to Course" button
6. Complete an assessment
7. Submit a training evaluation
8. Download your certificate.

What's an IACET CEU?

An International Association for Continuing Education and Training (IACET) continuing education unit (CEU) is a unit of credit equal to 10 hours of participation in an accredited program designed for professionals with certificates or licenses to practice various professions.

Agenda

10:00 AM (EDT)	Welcome and Opening Remarks
10:20 AM	Grid-Interactive Efficient Buildings, Demand Response and Time-Variable Pricing
10:55 AM	Fleet Electrification Programs
11:30 AM	Carbon Pollution-Free Electricity (CFE)
12:05 PM	Break
12:35 PM	Resilience
1:10 PM	Utilizing the GSA Areawide Contract (AWC)
1:45 PM	Utility Energy Service Contracts (UESC)
2:20 PM	Final Q&A, Resources and Next Steps
2:30 PM	Adjourn

FEMP Welcome

Mary Sotos
Director, Federal Energy Management Program
U.S. Department of Energy

Federal Goals Lead to Electrification

Energy Act of 2020

- Use performance contracting to address at least 50% of cost-effective ECMs identified in facility audits (w/in 2 years)

Executive Order 14057

- Net zero federal operations by 2050
- 100% net zero buildings, zero-emission fleets, 100% carbon pollution-free electricity by 2030

Utility Partnerships

Federal Building Performance Standard

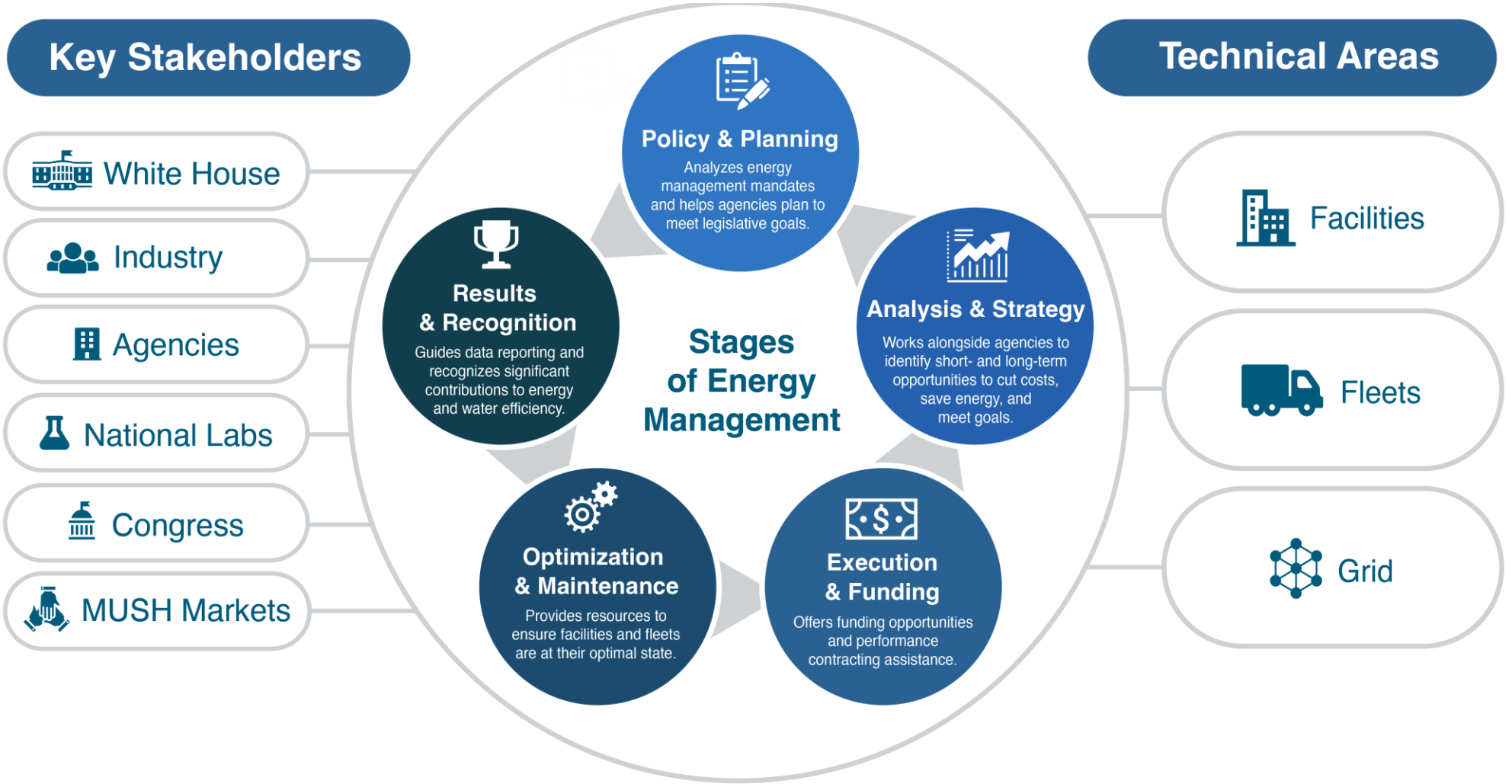
- Support achievement of net-zero emissions for federal building portfolio
- Zero scope 1 emissions from on-site fossil fuel use in 30% of federal buildings by 2030

Climate Smart Building Initiative

- Establish emissions reduction targets delivered through performance contracting
- Increase on-site clean electricity generation

FEMP Focuses on Federal Agency Support

FEMP works with key stakeholders to support all stages of energy management in federal agencies' critical areas



FEMP Support Moves Agencies Forward

Access off-the-shelf resources and request specialized support.

Request Technical Assistance

FEMP's technical experts learn about your needs and provide customized support.

Access Tools

Available tools help collect data, assess resilience, identify opportunities for carbon pollution-free electricity, and much more.

Join a Community

Communities are available for federal employees & industry stakeholders to share lessons learned and drive decision-making.

Apply for Funding & Access Support

$250M in AFFECT funding is available as well as performance contracting support.

Get Recognition

Nominate individuals, projects, and sites for a variety of available federal recognition programs.

Take Training

On-site, in-person, and on-demand FEMP-delivered training supports an informed, capable workforce.

FEMP Tools & Support

- Smart Facility Accelerator
- FEDS Spotlight
- REopt
- ESPC
- Technical Resilience Navigator
- Federal Utility Partnership Working Group
- Re-tuning Trainings
- EVI Locate
- UESC
- CDF Calculator
- Treasure Hunts
- Interagency Task Force
- Federal Energy & Water Management Awards
- Energy Exchange
- AFFECT Funding
- Electricity Procurement Analysis

and much, much more...

FEMP's Goal for Today: Agencies Take Action!

Request a consultation with FEMP or your utility to:

- *Discuss your site's energy goals, challenges, and priorities*
- *Identify program offerings that align with your needs*
- *Sign up for incentives*
- *Connect with subject matter experts to learn more about any of the topics discussed today*

Consultation Request Form

Fill out this *linked form* or scan the QR code below.

FEMP will connect you with the appropriate party for follow-up, which may include FEMP technical experts, utility POCs, and/or the relevant Utility Lead Agency.

Georgia Power

Latanza Adjei

Senior Vice President
Customer Experience

Grid-Interactive Efficient Buildings (GEB)

Jason Koman
Energy Technology Program Specialist
DOE FEMP

Legislative Drivers

- **Energy Independence and Security Act (EISA) of 2007**
  - Numerous mentions (114 to be exact!) of “smart” (e.g., smart grid technologies, smart consumer devices and appliances, smart services and practices)
- **Energy Act of 2020, Smart Building Acceleration**
  - Requires the Secretary of Energy, as a part of the Better Building Challenge, to develop smart building accelerators to demonstrate innovative policies and approaches to accelerate the transition to smart buildings.
  - Establishes an R&D program focused on building-to-grid integration.
- **E.O. 14057, Catalyzing America’s Clean Energy Industries and Jobs through Federal Sustainability**
  - Guidance for both existing facilities (energy efficiency and deep energy retrofits) and new construction and modernization to implement GEB

What are GEBs?

GEBs incorporate energy efficiency, renewables, energy storage, and load flexibility

GEBs employ these capabilities to flexibly **reduce, shed, shift, modulate, or generate** electric load as needed

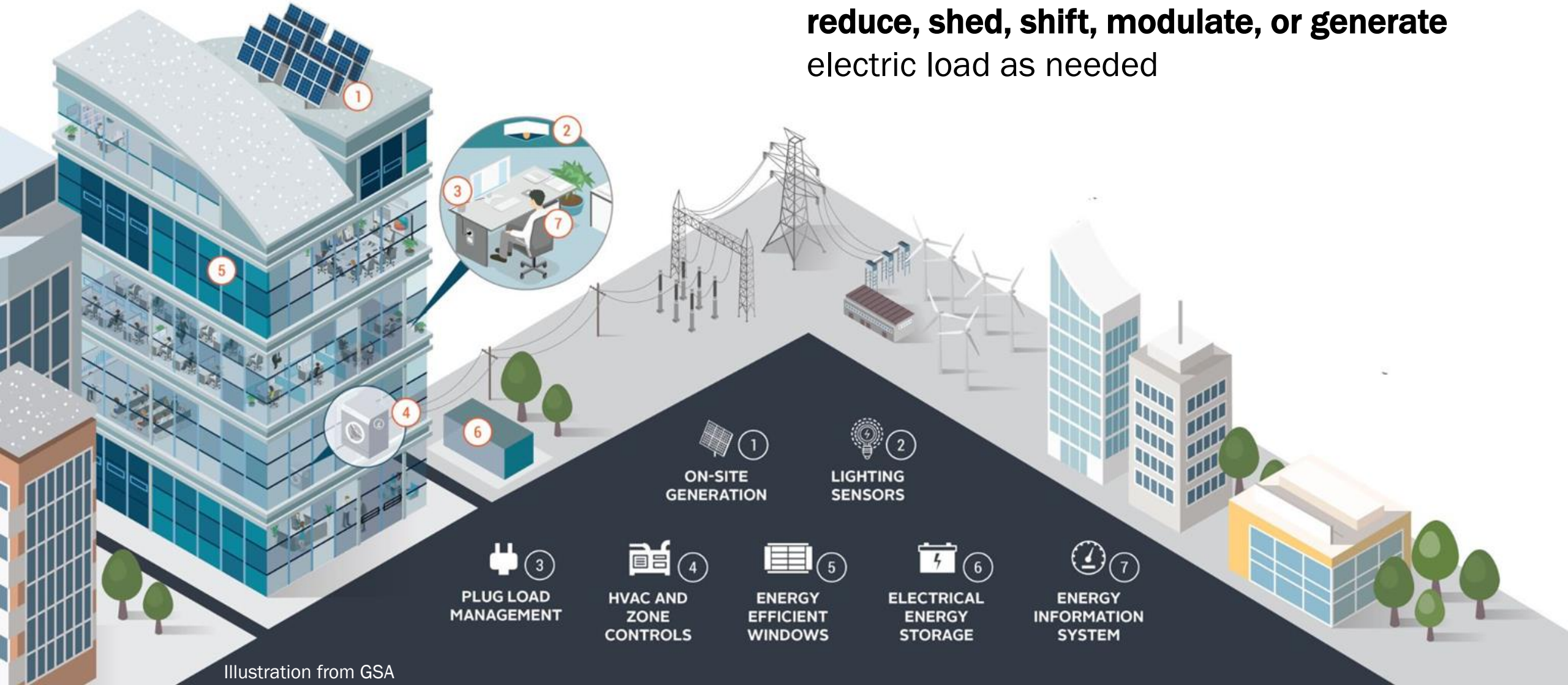


Illustration from GSA

FEMP GEB Program Support

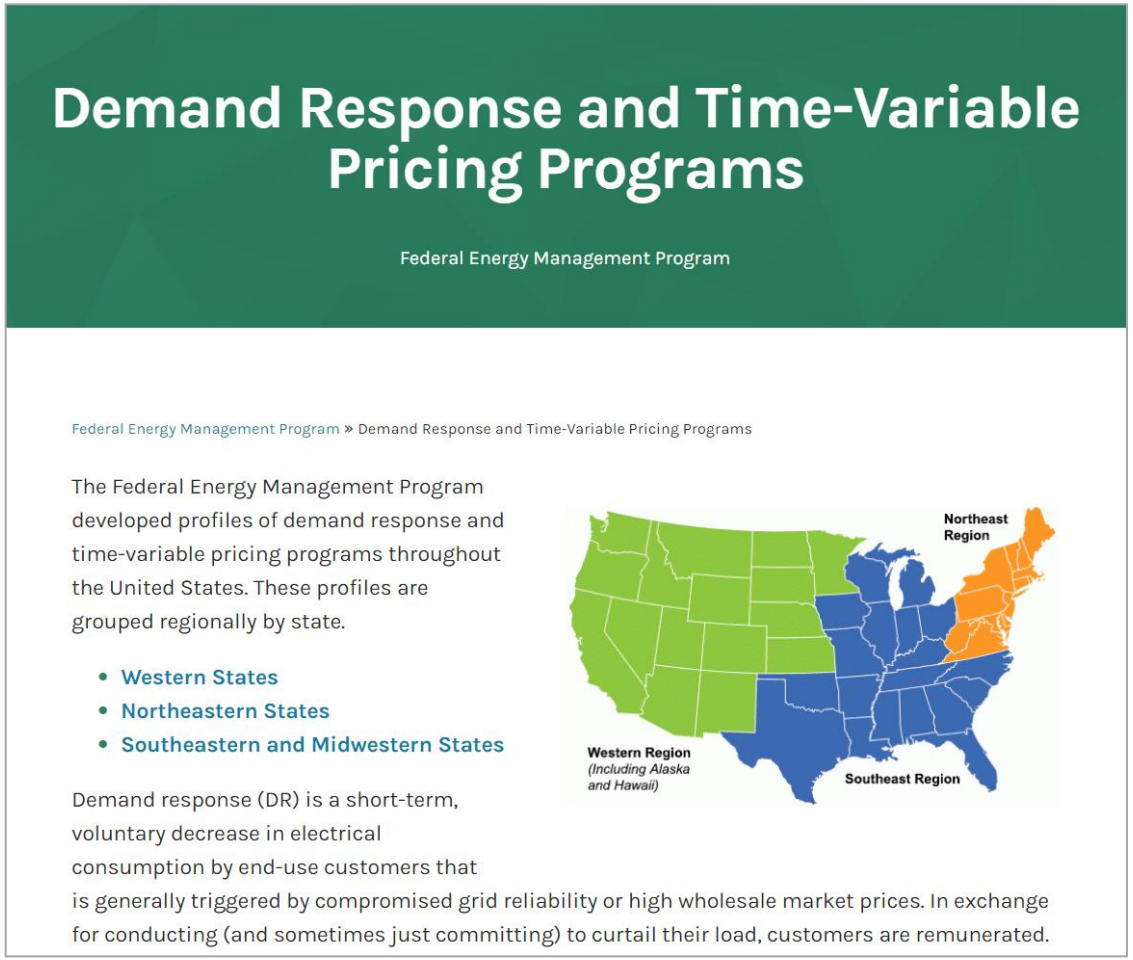
- FEMP's GEB program is available to provide technical assistance and guidance around implementing GEB strategies
  - Technology Insights
  - Financing Guidance
  - Utility Rate and Incentive Considerations
  - Case Studies

GSA Oklahoma City Federal Building Case Study

- Highlights a robust GEB project carried out via an utility energy service contract (UESC)
- FEMP's GEB team is available to develop additional cases studies. **Let us help you tell your story!**

Utility Rate Considerations

- **Demand response programs**
- **Coincident peak demand charges**
- **Virtual power plant/aggregator laws**
- **Minimum billing demand clauses**
- **Time-Variable Pricing**
  - Real-time pricing (RTP)
  - Day-ahead hourly pricing
  - Block-and-index pricing (sometimes called block-and swing pricing)



Demand Response and Time-Variable Pricing Programs

Federal Energy Management Program

Federal Energy Management Program » Demand Response and Time-Variable Pricing Programs

The Federal Energy Management Program developed profiles of demand response and time-variable pricing programs throughout the United States. These profiles are grouped regionally by state.

- Western States
- Northeastern States
- Southeastern and Midwestern States

Demand response (DR) is a short-term, voluntary decrease in electrical consumption by end-use customers that is generally triggered by compromised grid reliability or high wholesale market prices. In exchange for conducting (and sometimes just committing) to curtail their load, customers are remunerated.

https://www.energy.gov/eere/femp/demand-response-and-time-variable-pricing-programs

Utility Offerings and Incentives

Favorable Utility Rates

- High peak demand rates
- Large differences between peak and non-peak energy
- Time of Use (TOU) rates available with high on-peak charges

Incentives

- Prescriptive and customized offerings for efficient building equipment and distributed energy technologies, e.g., lighting, refrigeration equipment, HVAC equipment, smart thermostats, photovoltaics, batteries

Table 6. Illustrative Utility Rate Favorability for GEB

Rate Type	GEB Favorability	Total Energy Charges	Total Demand Charges
Low energy and demand rates	Less	$0.05–0.10/kWh	$5–$10/kW
High demand rate (low energy rate)	More	$0.05–0.10/kWh	$10–$20/kW
High demand rate (high energy rate)	Most	$0.10–$0.20/kWh	$10–$20/kW

https://www.nrel.gov/docs/fy21osti/78190.pdf

Demand Response and Time Variable Pricing (DR/TVP)

Billie Holecek
Research Associate
Lawrence Berkeley National Lab

What is Demand Response?

Demand response is a short-term, voluntary decrease in electrical consumption by end-use customers to stabilize the grid, triggered by:

- compromised grid reliability,
- high wholesale market prices, or
- supply/demand imbalance

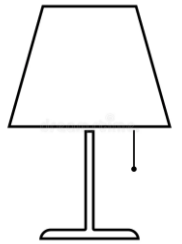
Image Source: DOE (www.energy.gov/oe/demand-response)

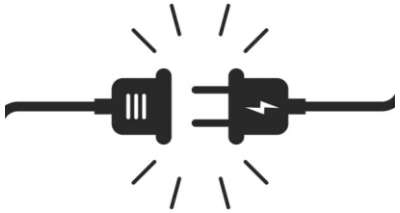
Program Types

- **Formal DR Programs**
  - Run by utilities and ISO/RTOs
  - Reliability-based and price-based programs
- **“Informal” DR – load management to:**
  - Reduce demand charges
  - Lower electricity costs by optimizing TVP rates

Load Management Techniques (Common Examples)

- **Lighting**
  - Dimming via control
  - “Bi-level” switching: 2 or 3 lit lamps/fixture to 1 or 2
- **Cooling**
  - Raising set points of space or chilled water
  - “Demand-limiting” air handling unit (AHU) fans
- **Plug Load**
  - Notifying employees to minimize lighting and office equipment power (via on-off switch or sleep settings)
- **Miscellaneous**
  - Shut down (and power off) bank of elevators
  - Shut down pool and irrigation pumps





DR/TVP Programs Benefits

Participating in DR/TVP programs can help agencies meet federal goals by:

- Lowering the price of energy consumed
- Enabling greater use of on-site storage and generation
- Reducing carbon emissions during periods of peak demand
- Contributing to federal resilience and grid stability through reduced peak energy consumption

Authorizing Law

Both informal (tariff-based) and formal DR Programs are legal

- 10 USC 2913/2919 (DoD) and 42 USC 8256 (civilian)
  - "Agencies are authorized and encouraged to participate in programs to increase energy efficiency and for water conservation or the management of electricity demand conducted by gas, water, or electric utilities and generally available to customers of such utility"
  - "Each agency may accept financial incentives, goods, or services generally available from any such utility, to increase energy efficiency or to conserve water or manage electricity demand."

Case Studies

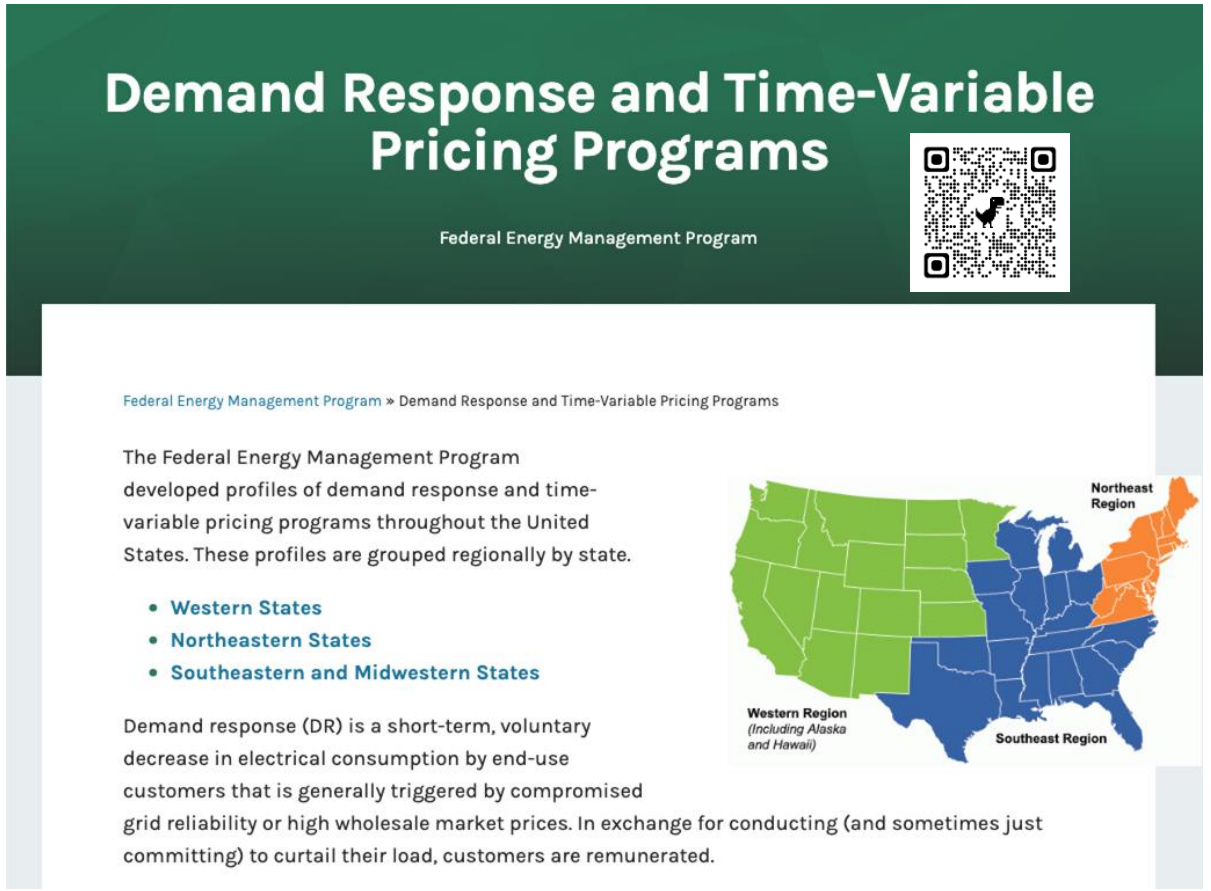
William S. Moorhead Federal Building in Pennsylvania enrolled in a TVP rate and **implemented load shifting resulting in $285k of savings (12%) over the first 3 years.**

VA MD Health Care System enrolled 1-3 MW annually in a demand response program. Using small generators and manual curtailment strategies **they have been able to save over $490,000 to date**.

GSA Region 9 enrolled facilities in California's statewide Emergency Load Reduction Program. Sites enrolled **receive $2/kWh for reduction** when an event is called. In 2023, these facilities delivered over 0.5 MWh in load reduction

Resources and Support

- FEMP’s Demand Response and Time-Variable Pricing Website
- FEMP’s Technical Assistance Portal
- FEMP's On-Demand Training on Demand Response and Time-Variable Pricing



https://www.energy.gov/femp/demand-response-and-time-variable-pricing-programs

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Real Time Pricing

Tony Castro
Pricing Administration Manager

Benefits of the RTP Program

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The purpose of the RTP program is to give large Commercial and Industrial customers the opportunity to purchase a portion of their usage at hourly marginal prices

- Offers marginal pricing for new load
- Helps keep existing businesses competitive
- Encourages economic growth in Georgia
- Promotes the efficient use of generating resources
- Increases customer satisfaction

Tariff Options

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RTP-DA (Day-Ahead)

- 250 kW monthly minimum to qualify
- Prices delivered daily at 4:00 PM for next 24 hours beginning at midnight

RTP-HA (Hour-Ahead)

- 5,000 kW monthly minimum to qualify
- Prices delivered hourly for next hour

Price Protection Products

- Used to reduce exposure to price volatility

Fixed Pricing Alternative

- Time-of-use option available for eligible RTP customers

Non-Disclosure Agreement (NDA)

- Necessary to protect access to RTP data

Two-Part Design

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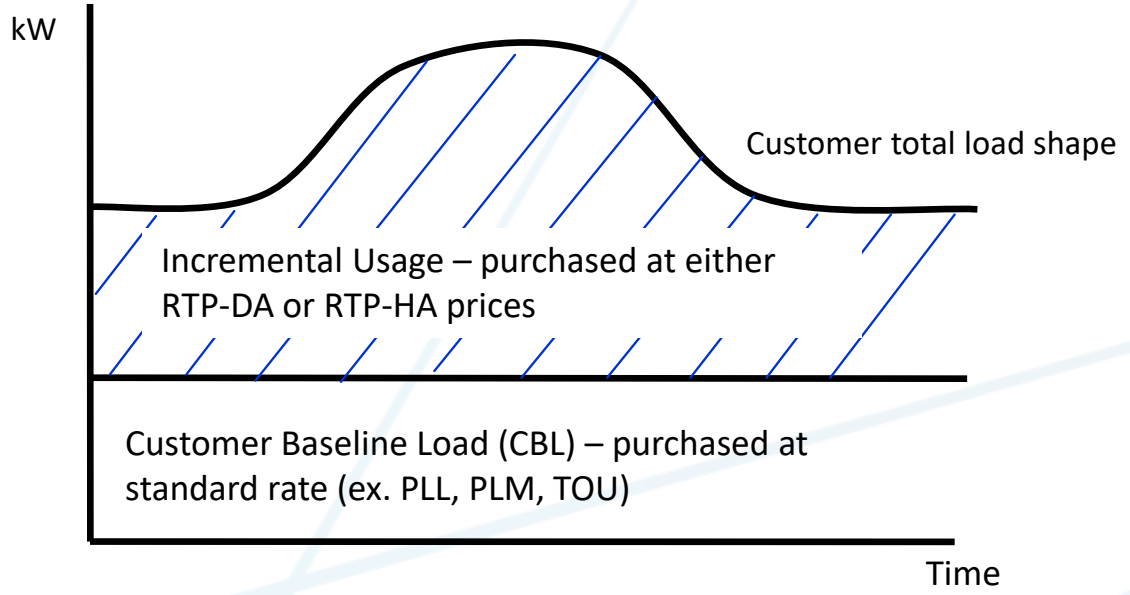
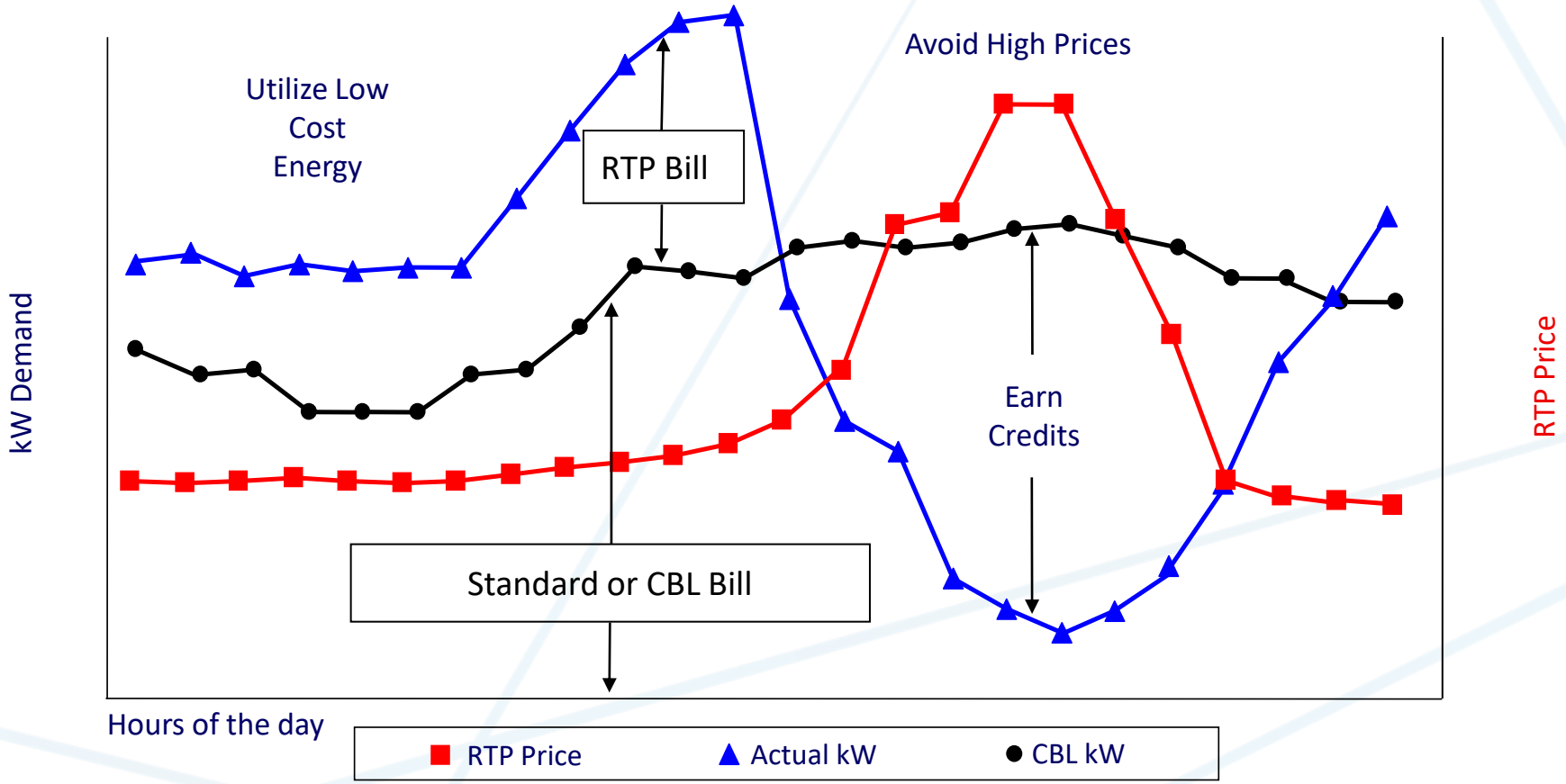
$$\text{RTP Bill} = \text{Standard Bill} + \sum_{\text{all hrs}} \left\{ \left(\text{Total Load} - \text{CBL Load} \right)_{\text{per hr}} \times \text{Marginal Price per hour} \right\}$$



Why is RTP Valuable to Customers?



Components of Hourly RTP Price Signal

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- System Lambda
- Losses
- Recovery Factor
- Transmission
- Reliability

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Price Protection Products

Price Protection Products (PPP)

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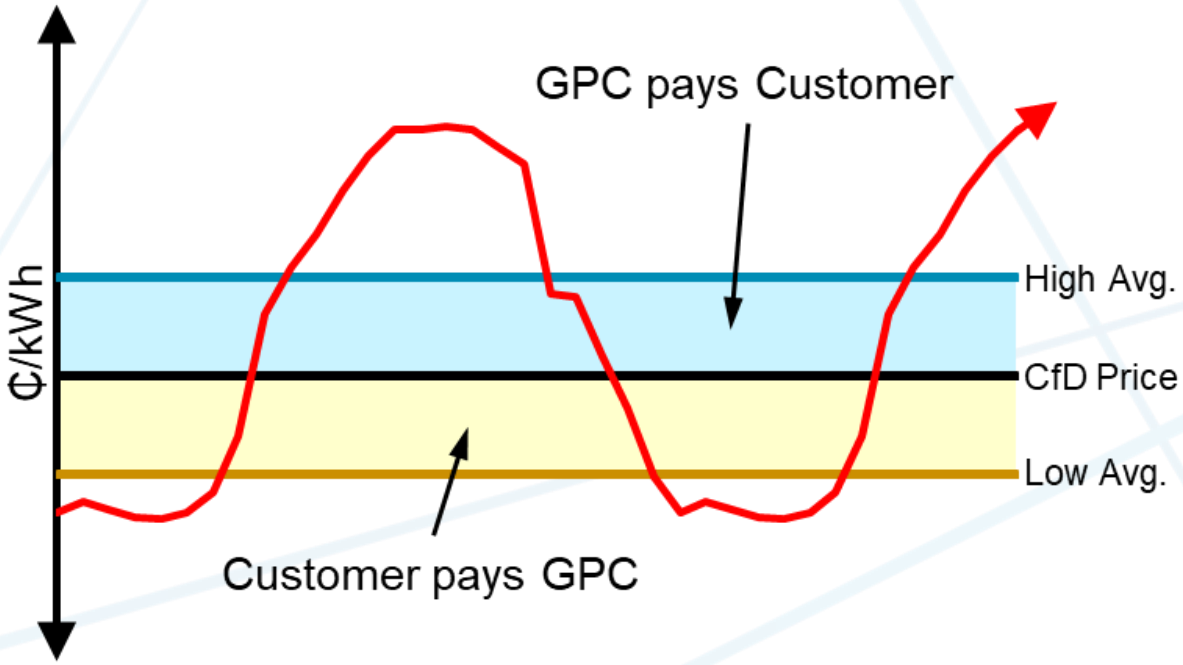
- A Contract for Differences (CfD) is a **fixed** price over a specific time period
- No upfront premium is required
- The customer selects the time period and the amount of load to contract



CfD Example

Time Period	July, All Hours
Contracted kW	1,000
# Hours	744 (31 days x 24 hrs/day)
Contracted kWh	744,000
CfD Price	6.0 ¢/kWh

Settlement for **High** Average Price of **10¢**:

= [(**10.0** – 6.0) * 744,000] / 100 = $29,760

GPC pays Customer $29,760

Settlement for **Low** Average Price of **4¢**:

= [(**4.0** – 6.0) * 744,000] / 100 = ($14,880)

Customer pays GPC $14,880

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Tony Castro
Pricing Administration Manager
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Fleet and Electric Vehicle Supply Equipment (EVSE) Programs

Jason Koman
Energy Technology Program Specialist
DOE FEMP

Electric Vehicles as an Administration Priority

WH.GOV

Executive Order on Tackling the Climate Crisis at Home and Abroad

January 27, 2021

GSA, Council on Environmental Quality, and Office of Management and Budget in coordination with DOE, Department of Labor, and Department of Commerce to develop a plan to convert Federal, state, local, and Tribal fleets to zero-emission vehicles (ZEVs)

WH.GOV

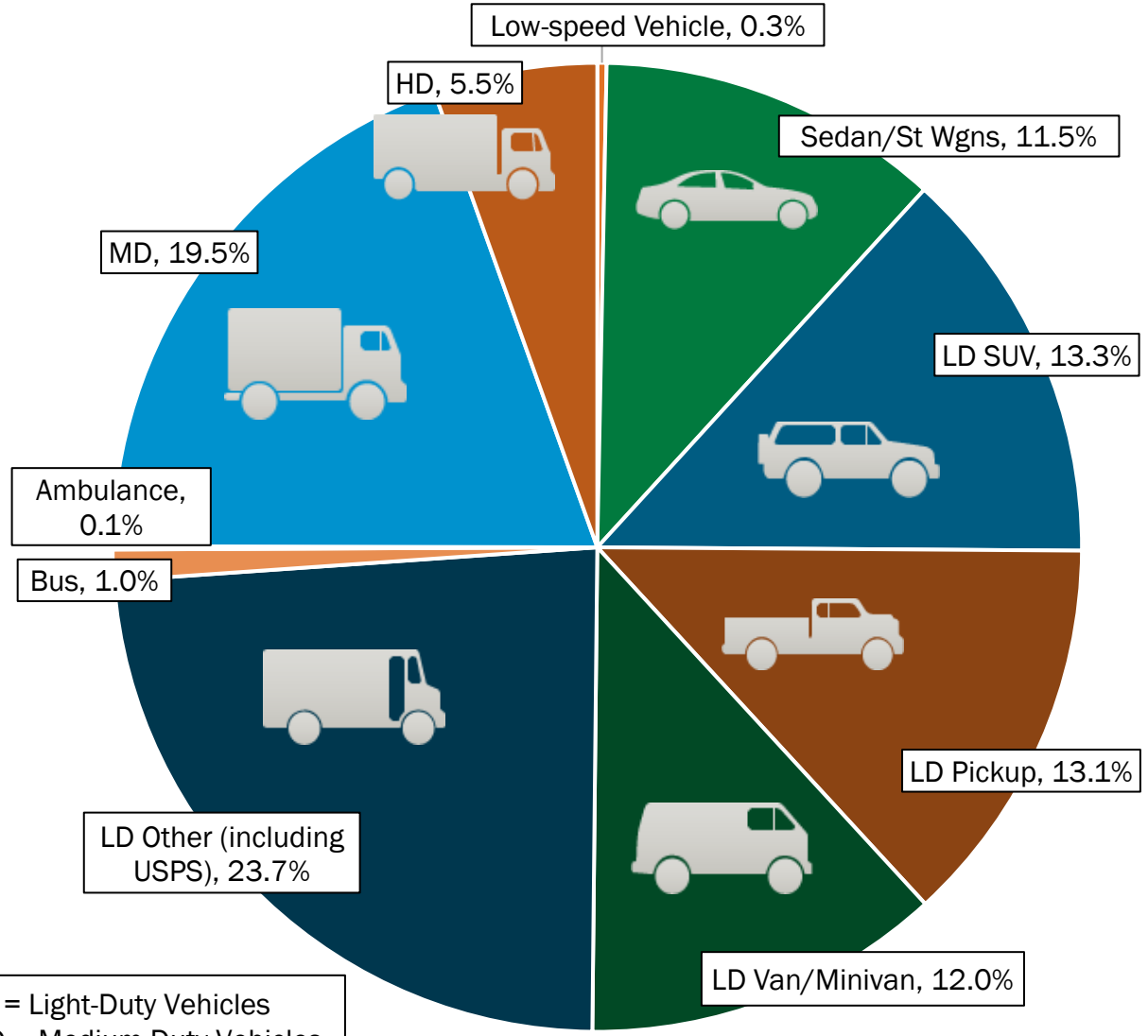
Executive Order on Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability

December 8, 2021

Transition to a zero-emission federal fleet

- Annual targets for ZEVs by agency
- 100% light-duty (LD) acquisitions by 2027
- 100% medium-duty (MD)/heavy-duty (HD) acquisitions by 2035

Federal Fleet Electrification is Accelerating (FY23 FAST)



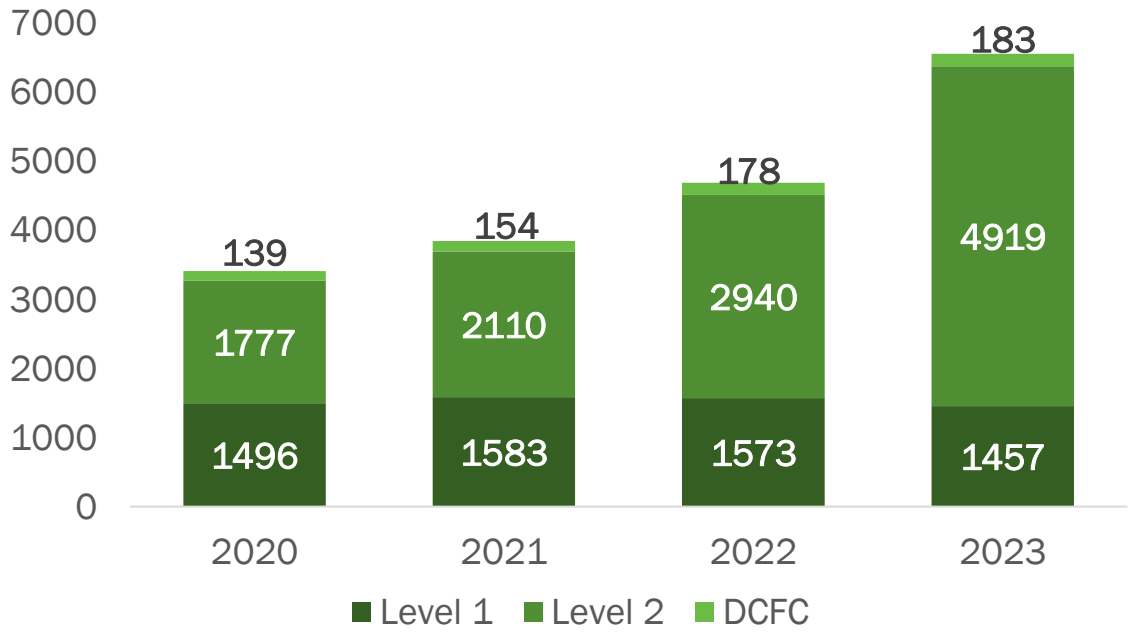
LD = Light-Duty Vehicles
MD = Medium-Duty Vehicles
HD = Heavy-Duty Vehicles

3.6k FY22 ZEV orders
(9% of Federal Fleet Purchases)

5.8k FY23 ZEV orders
(14% of Federal Fleet Purchases

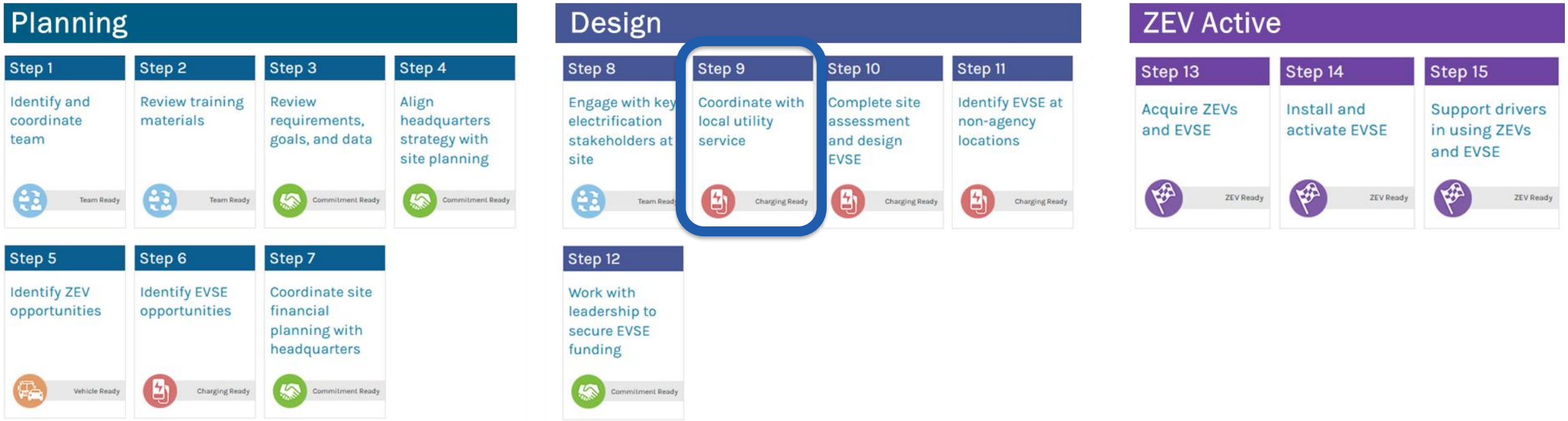
5.1k FY24 ZEV orders as of 2/29/24
(18% of Federal Fleet Purchases)

Source: GSA, Excludes USPS



ZEV Ready Framework

FEMP's recommended site-level fleet electrification planning process consists of 15 process steps organized into 3 phases.



Step 9 – Identify Utility Point of Contacts and Incentives

FEMP's EV Utility Finder (EV U-Finder)

Database that helps federal agencies connect to electric vehicle supply equipment (EVSE) utility partners and incentives available by ZIP Code

Enter ZIP Code to identify local utilities, electric vehicle support programs, and Clean Cities Coalitions.

72863

Powered by the U.S. Utility Rate Database (https://openei.org/apps/USURDB/)
Utility territories last updated February 2021.

See Introduction worksheet for notes on using EV U-Finder.

***Customer Types:**
G: Government or Public; C: Commercial; R: Residential

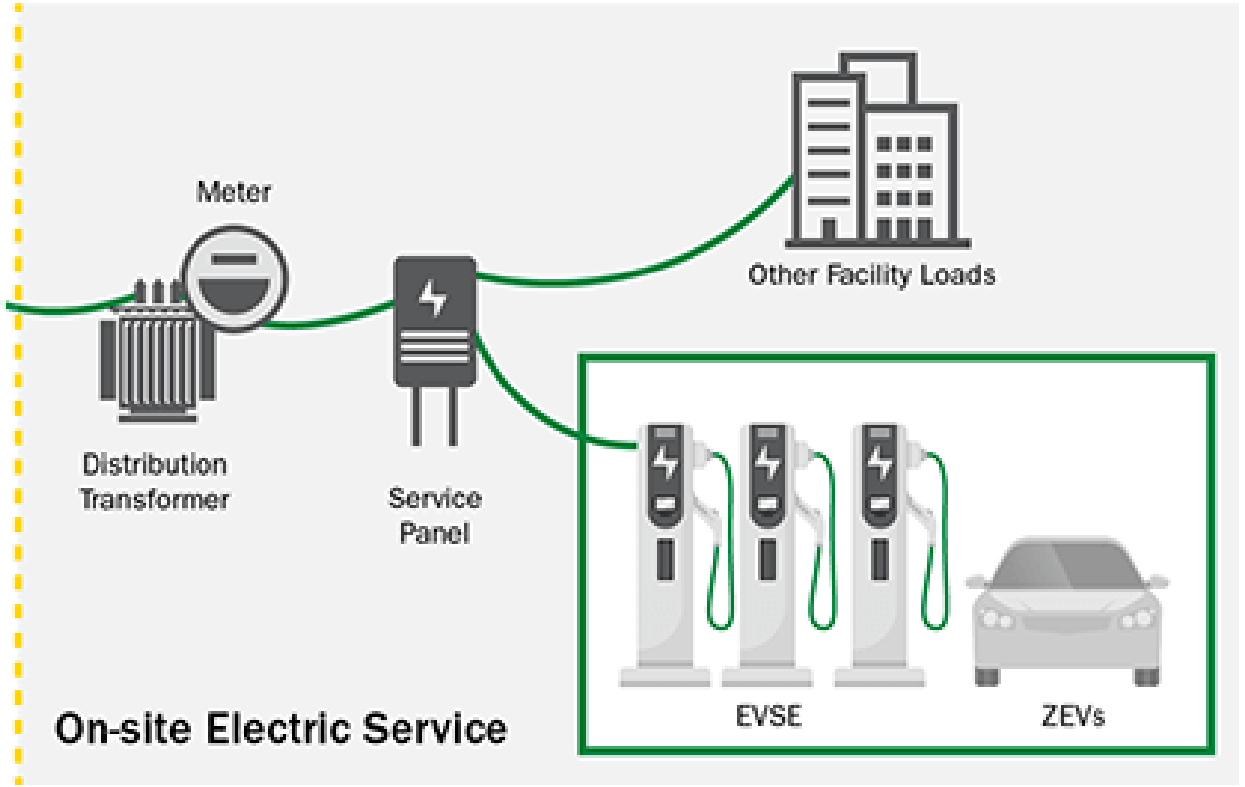
Identified active utilities in 72863

Utility	Utility Name	Utility Ownership	Known EVSE Funding Eligibility?*	Known Advisory Services Eligibility?*	Known Federal EVSE Incentives?	GS
1	Entergy Arkansas Inc	INVESTOR	GCR		Y	
2	Arkansas Valley Elec Coop Corp	COOPERATIVE				
3	Village of Brainard, Nebraska (Utility Company)	PUBLIC				

https://www.energy.gov/femp/articles/ev-utility-finder-ev-u-finder

Step 9 – Coordinate with Local Utility Service

- **Evaluating EVSE impacts on electrical service equipment**
  - Facility versus utility equipment ownership
- **Evaluating EVSE impacts on power requirements**
  - Power Capacity
  - Power Load at the Service Panel Level
  - Power Load at the Facility Level
- **Utility Equipment Upgrades**
  - Plan for the future
  - Scale back when practical
  - Use managed charging



Electric Vehicle Program Solutions

Tray Leslie
Program Engagement Manager

Southern Company

EV Charger 101

Southern Company

Things to consider when selecting a charger:

- Will the charger be installed for public use or for fleet?
- What level charger do I need?
- Do I need a non-networked or networked Charger?
- Maintenance and resiliency.

Level 1

110V

~ 4 miles per hour charge
1.3kW

J1772 plug

Suitable for: Homes

Level 2

208/240V

~ 24 miles per hour charge
6.6kW / 7.7kW

J1772 plug

Suitable for:
Homes, Workplaces, Public Spaces, Fleet

Fast Charging

480V

Fully charge in 5-60min
50kW, 150kW, 350kW

Combo (CCS) plug

CHAdeMO plug

Suitable for:
Public Spaces, Large Fleet

Non-Networked	
"Dummy Charger"	Free Amenity
No User Account	No Reporting / Utilization Data
Plug and Charge	Low Cost – High Reliability
Recommended Use: Workplace Charging, Fleet Charging	

Networked	
"Smart Charger"	Ability to set Pricing Policy
User Account Required	Generate Reports, Collect Data
Cellular Modem or Wi-Fi connection	24/7 Tech Support
Recommended Use: Public Facing	

Make Ready Infrastructure Program

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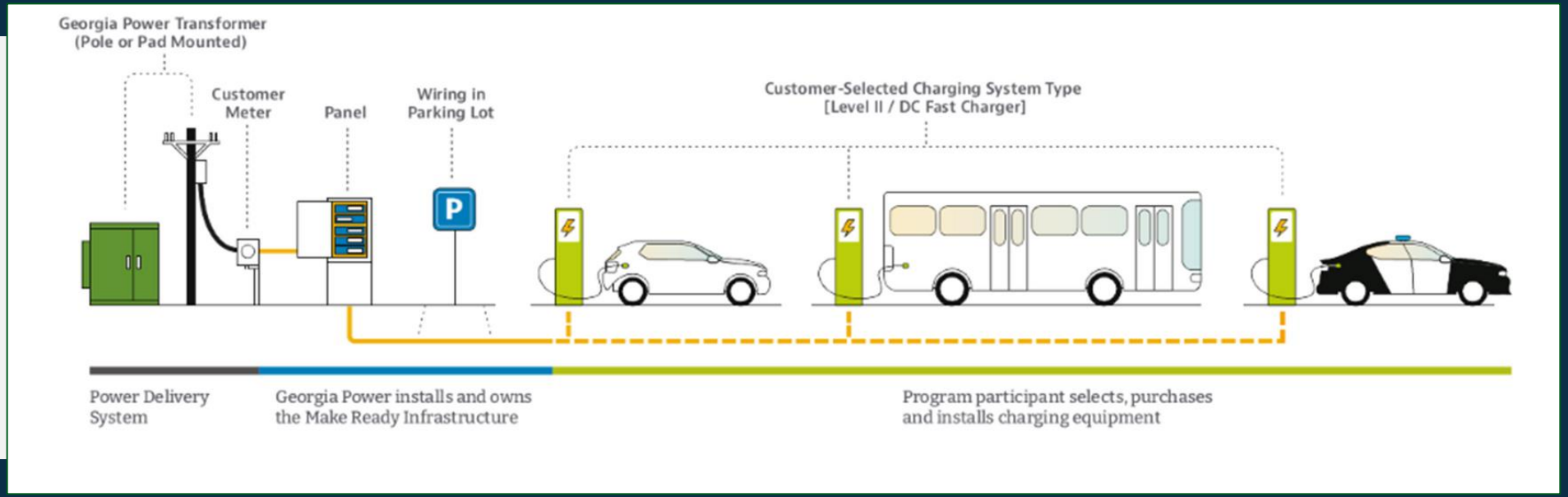
Requirements:

- Public-Facing Installation (Accessible or Serving the Public)
- 6 or more Level 2 chargers or 1 DCFC



<u>Includes</u>

EV Charging Infrastructure includes panels, conduit, wiring and associated infrastructure on customer side of the meter.

<u>May Include</u>

Transformers and other power delivery equipment will utilize the standard new line extension polices. Additional upgrade costs may be covered through Make Ready program.

<u>Does Not Include</u>

- Charger Equipment
- Future Proofing
- Space Painting
- Wheel Stops/Landscaping/ Bollards
- Restricted Access Chargers Outside of Publicly Owned Vehicle Fleets

Turnkey Solutions:
Charger Installation and Maintenance

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- End-to-end solution that includes design, installation, and maintenance of EV charging stations
- Multiple EV charging station manufacturers and models available
- Flexible buying options that include upfront purchase, traditional financing, and as-a-service bundled offering
- Sparkfund is our partner on this solution

Business EV Charger Plus Rebate Program

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- Applies to new and existing business customers for workplace, customer, and fleet charging
- Rebate amounts are determined based on the power rating of the chargers installed

Level II Chargers		DCFC
Less than 6 chargers	6 or more chargers	One or more DCFC
$50/kW	$250/kW	$100/kW
$2,000 Cap	$20,000 Cap	$20,000 Cap
No Pre-Approval	Pre-Approval Required	Pre-Approval Required

It may be more cost effective to install more chargers and utilize the Make Ready Program.

Scan the QR code or visit georgiapower.com/et for more information

Business EV Charger Rates and Riders

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TOU EV Charging Rate

- Applicable to business customers with charging stations separately metered
- On-peak period is 2:00 p.m. to 7:00 p.m. Monday – Friday during June through September (summer months).
- May be a good option for fleets with EVs charging overnight

$148	Basic Service Charge
20.7695¢	On-peak kWh Energy Charge
5.1924¢	Off-peak kWh Energy Charge
$4.46	Demand Charge per kW

Charge It Rate Rider

- Rider applies to new, separately metered EV charging loads on Power & Light rates
- Reduces billing demand impact while load factor improves over time – up to 48 months
- Demand discount phases out and ends if/when average load factor exceeds 15%

Bills / Months	Demand Discount
1 – 12	80%
13 – 24	60%
25 – 36	40%
37 – 48	20%

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Program Engagement Manager
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Carbon Pollution-Free Energy (CFE) Purchasing Programs

Nichole Liebov
Program Manager
DOE FEMP

Executive Order 14057 CFE Goals

Catalyzing Clean Energy Industries and Jobs through Federal Sustainability
(12/8/2021)

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

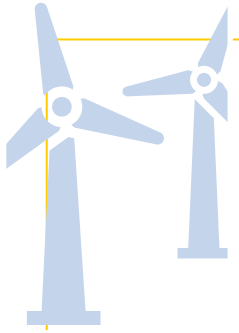
A **net-zero emissions building** portfolio by 2045, including a 50% emissions reduction by 2032; and

*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

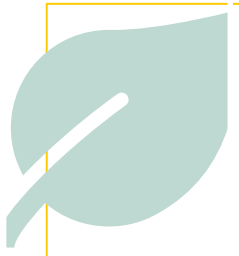
Implementing Instructions for Federal Agencies

What Qualifies as CFE?



CFE Technology

Placed in service 10/1/2021 or newer



EACs delivered or retired

Delivered to balancing area

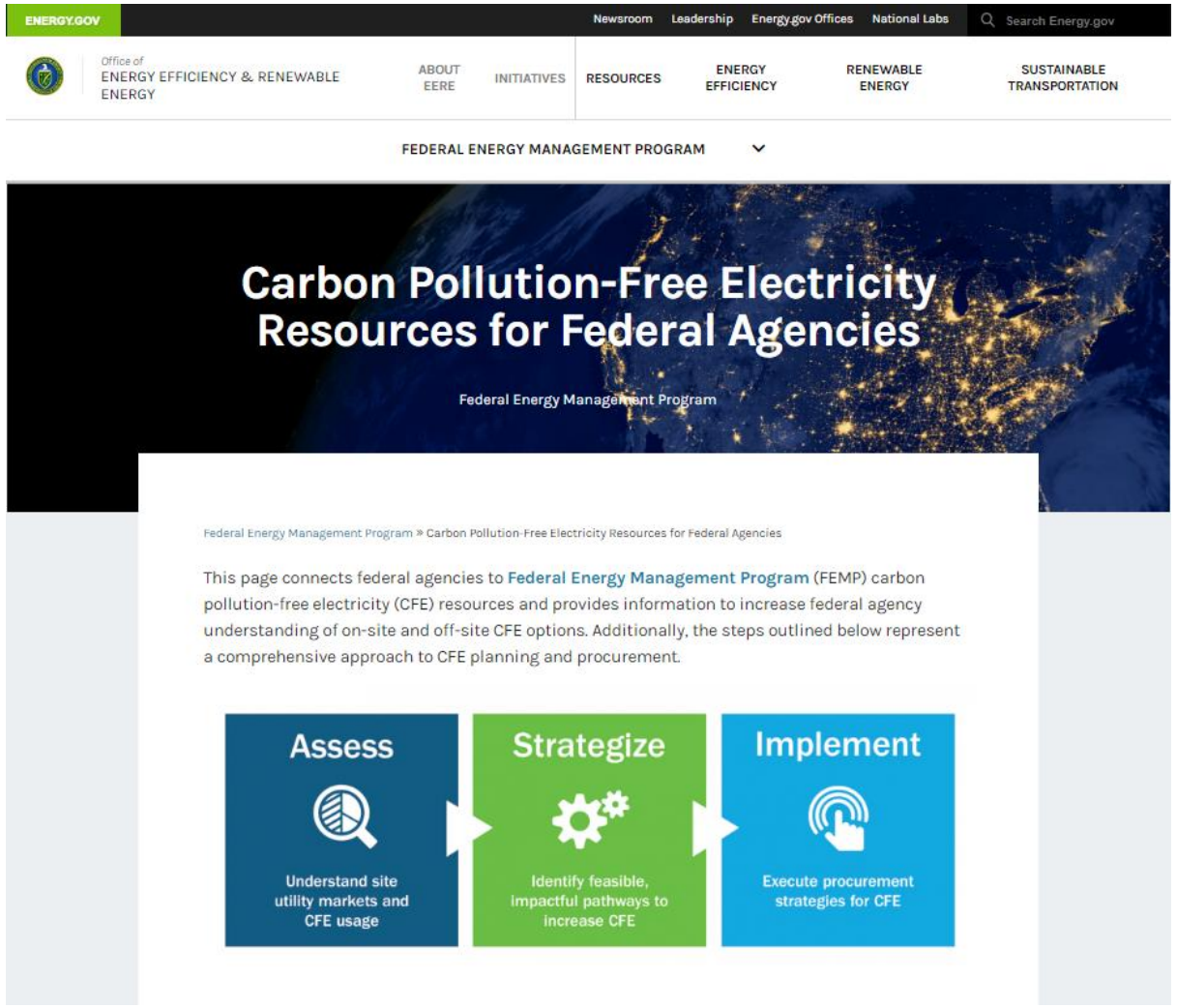
What Technologies Are Considered CFE?

Per E.O. 14057 Section 603(d):

- Solar
- Wind
- Hydroelectric
- Nuclear
- Geothermal
- Renewably-sourced hydrogen
- Generation from fossil resources with active carbon capture and storage
- Marine and hydrokinetic

Other technologies may also be eligible with carbon capture and storage

CFE Resources on the FEMP Website



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.

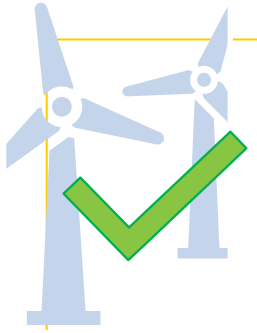
- EXECUTE STRATEGIES TO INCREASE ON-SITE CFE GENERATION +
- EXECUTE STRATEGY TO INCREASE CFE FOR SITES IN VERTICALLY INTEGRATED MARKETS +
- EXECUTE STRATEGY TO INCREASE CFE FOR SITES IN RETAIL ELECTRIC CHOICE MARKETS +
- REPORT CFE USAGE +
- MEASURE PROGRESS +

Learn more: CFE Resources for Federal Agencies

Where to Start to Purchase Qualifying CFE?

- **Identify the regulatory environment:**
  - In Georgia, electricity is a vertically integrated market
- **Identify the balancing area:**
  - Your balancing area is SOCO

Evaluate Options to Determine What Qualifies as CFE



CFE Technology

solar/wind/non carbon emitting, etc.

Placed in service 10/1/2021 or newer

EACs delivered or retired

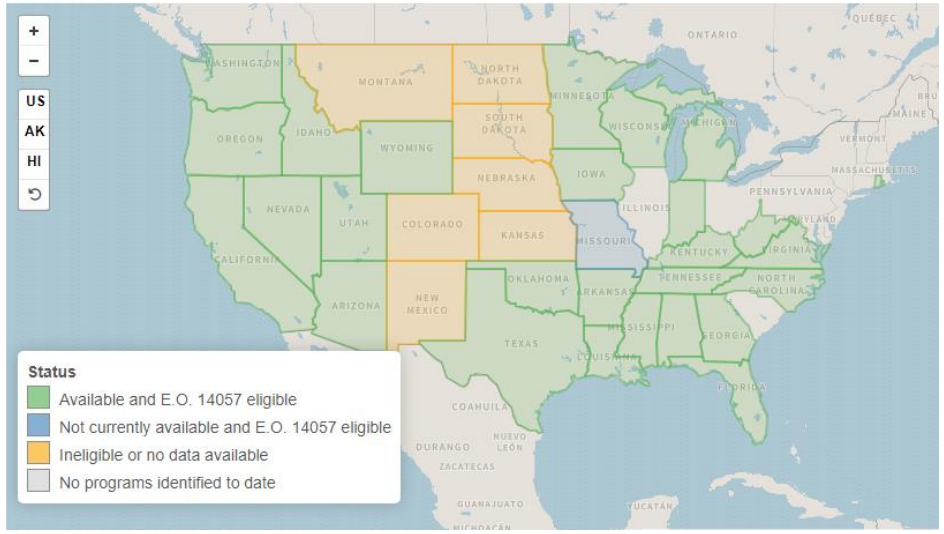
Delivered to *SOCO* balancing area

Tools for CFE Planning

Utility CFE Program Availability Map Tool

- Identify clean energy purchasing programs offered by vertically integrated utilities.
- Filter by state, program availability, E.O. 14057 eligibility, and existing areawide contract to identify programs of interest.

New programs/utility offerings added quarterly!



Balancing Authority Lookup Tool

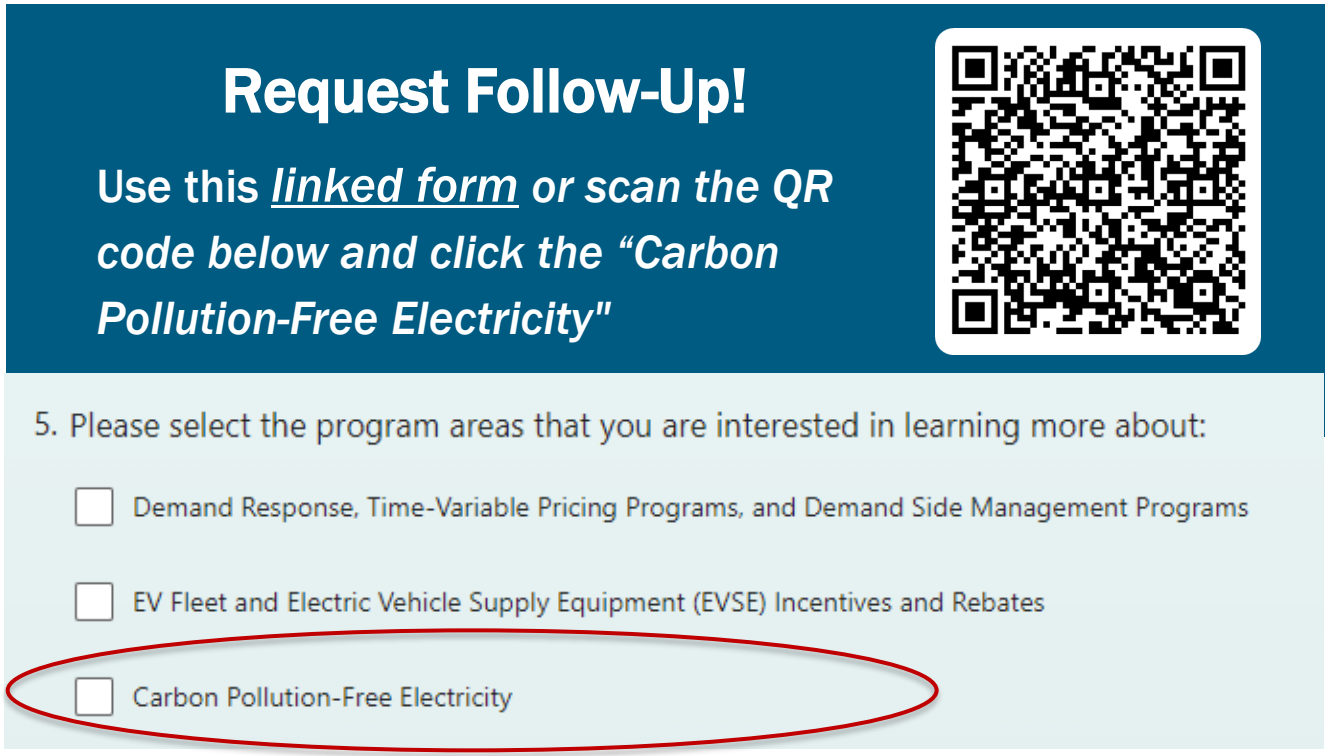
- Identify a site's balancing authority by entering its ZIP code.

REopt (Renewable Energy Optimization Tool)

- Evaluate economic viability of on-site technologies at a given site.
- Perform single- or multi-site analysis.
- Set clean energy goals (i.e., can specify % of load to be met by on-site CFE).

Request Follow-Up to Be the First to Know About New Options

- Georgia Power Co's CARES program is available for enrollment and meets the CFE requirements from Executive Order 14057



Carbon Free Energy Solutions

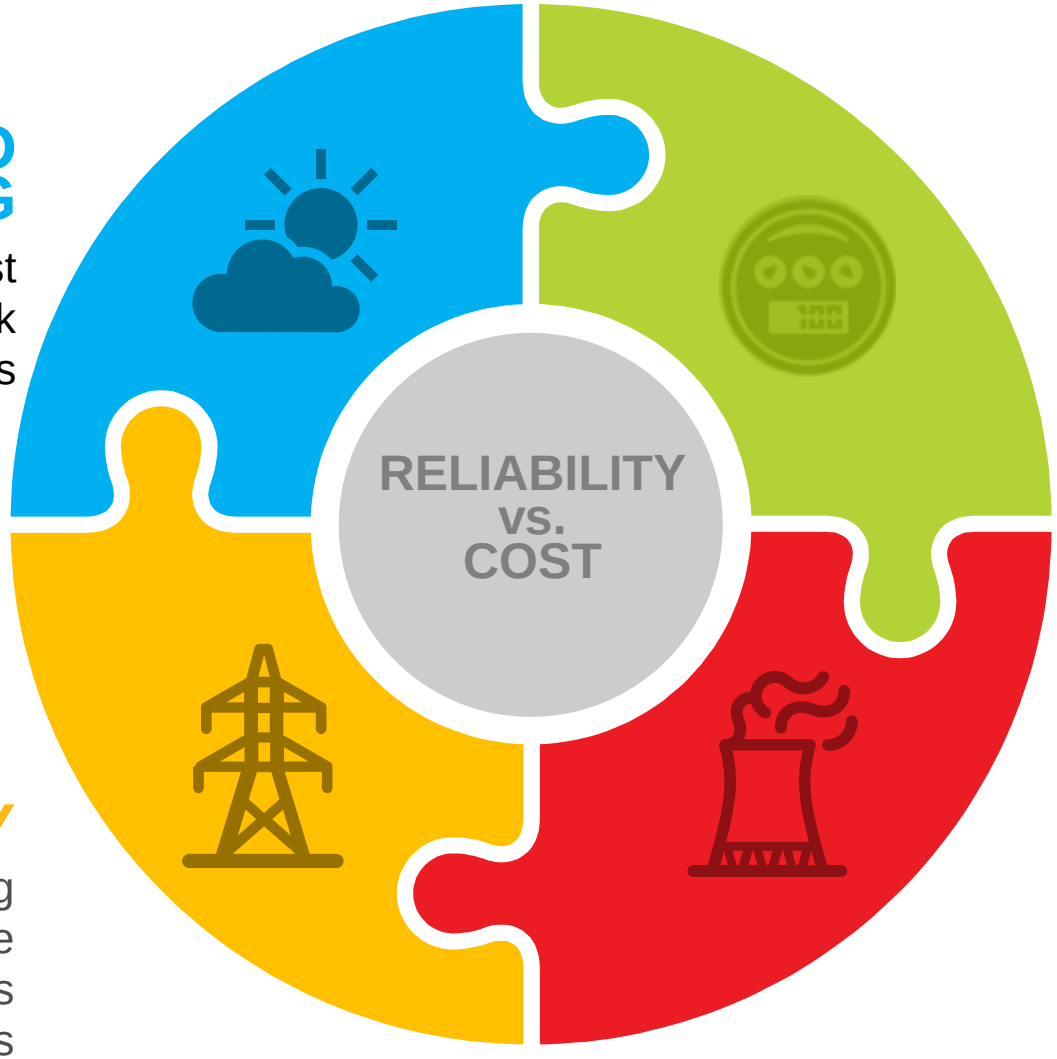
Tray Leslie
Program Engagement Manager

Southern Company

How We Plan For The Future
Integrated Resource Plan (IRP)

Southern Company

LOAD PLANNING
Load Forecast
Reserve Margins Impact Risk
Capacity Worth Factors



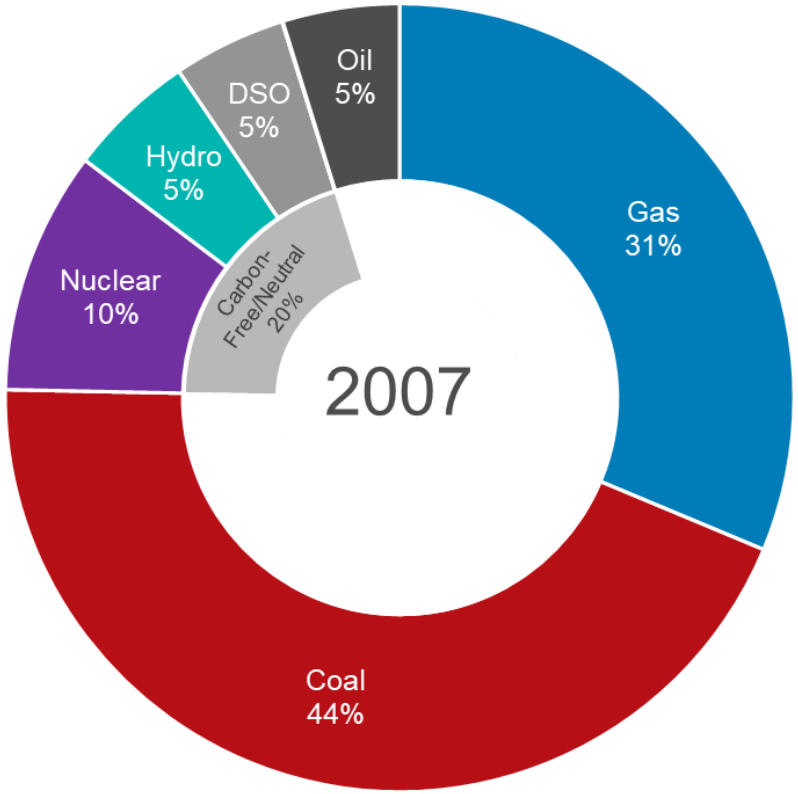
DEMAND SIDE OPTIONS
Energy Efficiency
Demand Response
Backup Generation

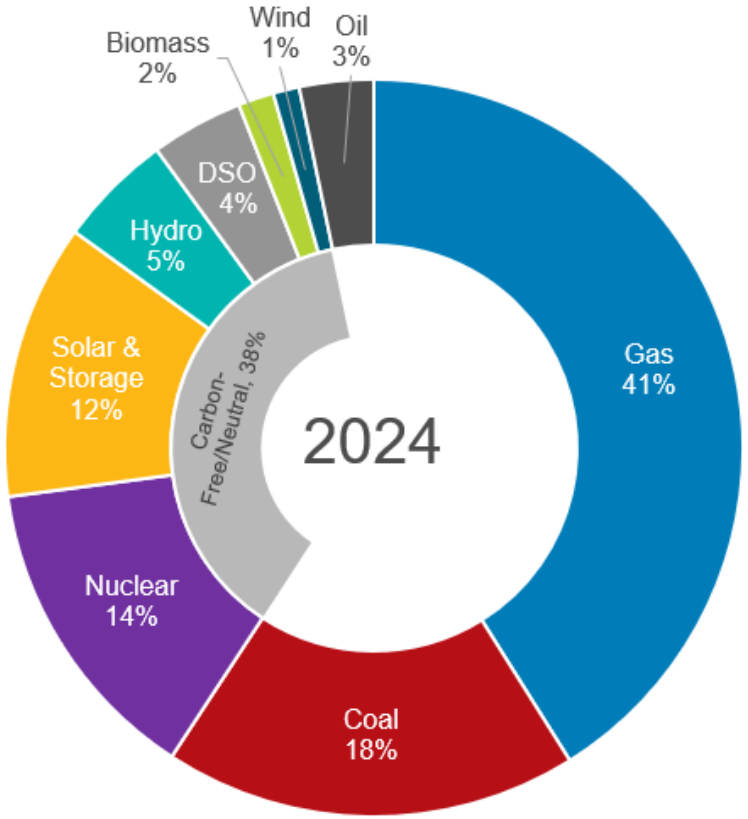
POWER DELIVERY
Capital vs. O&M Spending
Age of Grid vs. Replacement Cycle
Generating Plant Retirements
Distributed Energy Resources

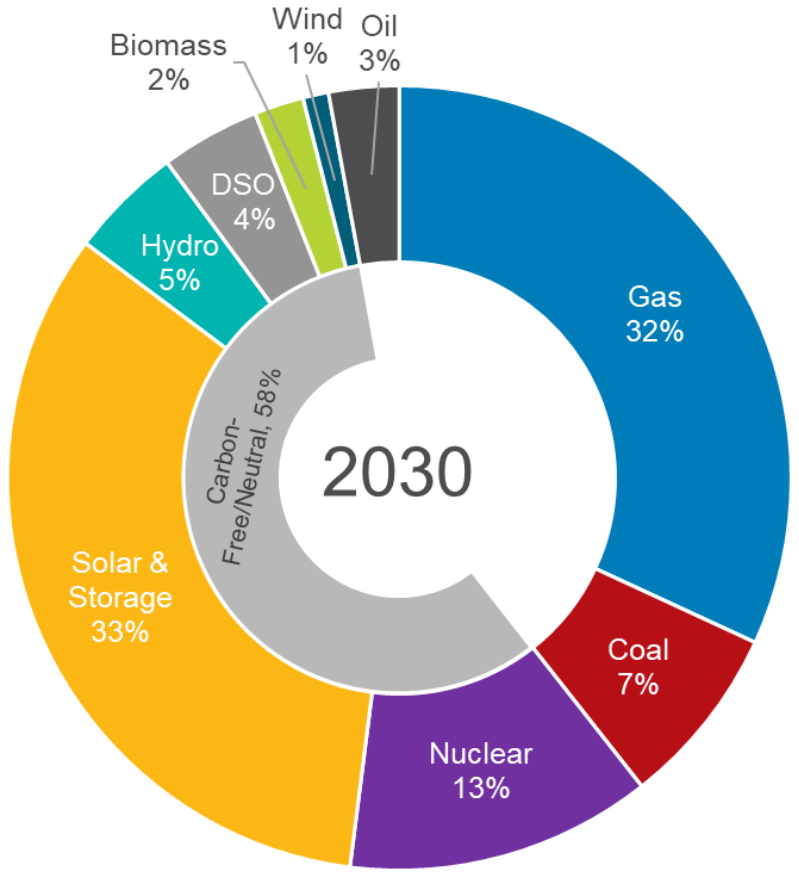
POWER GENERATION
Fuels & Carbon Forecast
Build, Contract, Buy, Retire
Coal, Nuclear, Gas, Hydro, Renewables

Capacity Mix Evolution

Southern Company







These capacity mixes reflect nameplate capacity for renewable resources, program capacities for demand-side options (“DSOs”), and designated/demonstrated capacity for the remaining fuel types. A portion of the renewable generation capacity included in these charts includes capacity where the renewable generator retains the related Renewable Energy Credits (“RECs”).

Georgia Power's Commercial Energy Efficiency Programs

Southern Company

Custom

- Earn $0.10 per kWh of energy saved for energy efficient upgrades.
- Rebates are for measurable and verifiable reduction in electricity consumption.
- $75,000 up to 50% of project cost per year
- $250,000 up to 50% of project cost per year for Chiller Plants serving multiple buildings

Prescriptive

- Earn a fixed rebate $ amount per individual units of equipment.
- $50,000/year/building up to 50% of equipment cost per year
- Outdoor pole-mounted lighting cap of $10,000 up to 50% of equipment cost per year
- Major Renovation and New construction Lighting capped at $25,000 and up to 50% of project cost per year

Apply Now

Equipment Categories

- Existing Building Lighting
- Major Renovation & New Construction Lighting
- Heating & Cooling
- Water Heaters
- Food Service & Grocery
- Business Equipment
- Pumps
- Custom Equipment & Building Tune Up

Custom & Prescriptive caps can be combined per building per year.

All projects and equipment are subject to current program terms & conditions, pre-conditions and requirements. To learn more please visit georgiapower.com/ceep

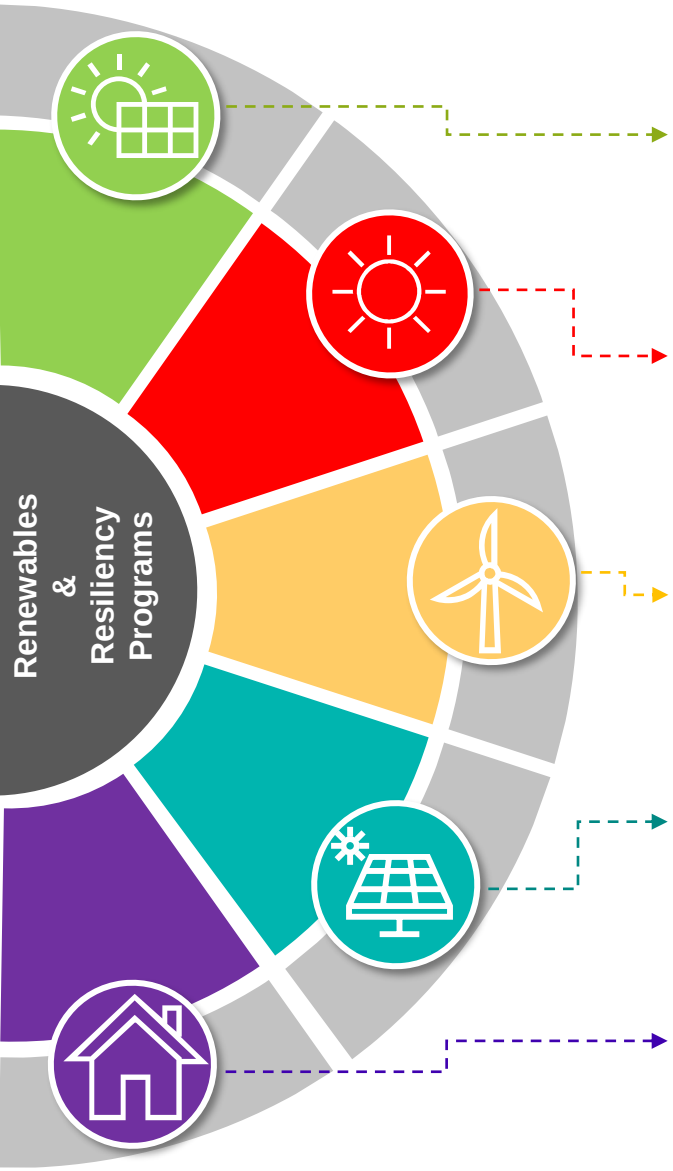
We offer renewable programs across the continuum of customer needs

Southern Company

	Offset		Subscribe		Build
Description	*Environmental attributes purchased and retired on behalf of customers*	*Environmental attributes reallocated from existing renewable facilities*	*Environmental attributes from a portfolio of new renewable facilities*	*Environmental attributes from a portfolio of new 24x7 carbon free facilities*	*Environmental attributes from a dedicated new renewable project*
Mechanism	Unbundled RECs from Market	Unbundled RECs from Georgia	Renewable Energy	Renewable Energy + Storage	Customer Specific
Resource Acquisition	REC Market	Currently Online	Competitive Solicitation	Competitive Solicitation	Direct Transaction
Capacity	No Limit	1,000 – 2,000 MW	2,100 MW	100 MW ATC	N/A
Additionality					
Timeline	Today	Today	January 2028	January 2028	Varies
GPC Program	**Flex RECs**	***Retail Rec Retirement (R3)***	***Clean and Renewable Energy Subscription (CARES)***	***Carbon Free Energy Around the Clock (CFE/ATC)***	***Customer Partnership***

Georgia Power Renewable Customer Program Options

Southern Company



Renewable Subscription Program

Clean and Renewable Energy Subscription (CARES) Program

- Gives commercial and industrial (C&I), including M.U.S.H., customers an avenue to support their sustainability initiatives by subscribing to a portion of the **2,100 megawatts (MW) of additional renewable generation** that Georgia Power will procure through power purchase agreements (PPAs).

Renewable REC Reallocation Program

Retail REC Retirement (R3) Program

- **Reallocate the Renewable Energy Credits (RECs)** from existing and planned renewable resources and make those environmental attributes available for subscription by individual customers.
- Participating customers will be able to purchase, at a fixed cost per MWH, RECs that are being generated from up to 2,000 megawatts (MW) from existing renewable portfolios.

Unbundled REC Retirement Programs

Simple Solar and Flex REC Programs

- Allows customers to support the growth of renewable energy while **reducing their electric-based carbon footprint** by matching, for a per kWh fee, a portion of their monthly energy usage with RECs.
- **Flex RECs** - Option is available to customers who purchase a monthly minimum of 100,000 kWhs of RECs and who contract with the company for a fixed quantity and term.

Social Justice & Community Impact Programs

Community Solar Program and Income-Qualified Community Solar (IQCS) Pilot

- Provides residential and small commercial customers an opportunity to support renewable energy and the development of solar power in the state by subscribing to a portion of a **local solar farms'** production.
- **IQCS Pilot** - Will provide up to 5,000 income-qualified customers access to energy generated from Community Solar farms at discounted prices.

Customer Sited Generation Programs

Onsite and/or Dedicated Distributed Energy Resources (DER) Installation

- Renewables and Resiliency energy experts are available to help customers make informed decisions about DER, including providing a customized solar installation rate analysis and resiliencyy solutions.
- **Qualifying Facility** – The Company will work with Customers to identify developer to build dedicated renewable facility
- **CCSP Program** – The Company will purchase 100% of the energy from solar facility on customer's property
- **DER Customer Pilot** – The Company is authorized to deploy 250 MW of DER installed on customer's property BTM.

C.A.R.E.S. Program Pricing Options

Southern Company

Option 1

Program Charges & Credits

Fixed Program Portfolio Charge per kWh:
- Includes PPA supply cost, additional sum, & administrative fee

Minimum ten (10) year contract term length

Levelized pricing over entire term of Customer Agreement

Hourly Credit per kWh:
- Hourly operating cost of incremental generation

RECs: Retired via attestation

Option 2

Program Charges[1]

Fixed Program Portfolio Charge per kWh:
- Based on Value of RECs in Market
- Includes Administrative Fee ($0.25/MWH)

Minimum ten (10) year contract term length

Levelized pricing over entire term of Customer Agreement

No Hourly Credit

RECs: Retired via attestation

[1] - *This option is not available for the CFE/ATC Carve Out*

Southern Company

Tray Leslie
Program Engagement Manager
tdleslie@southernco.com

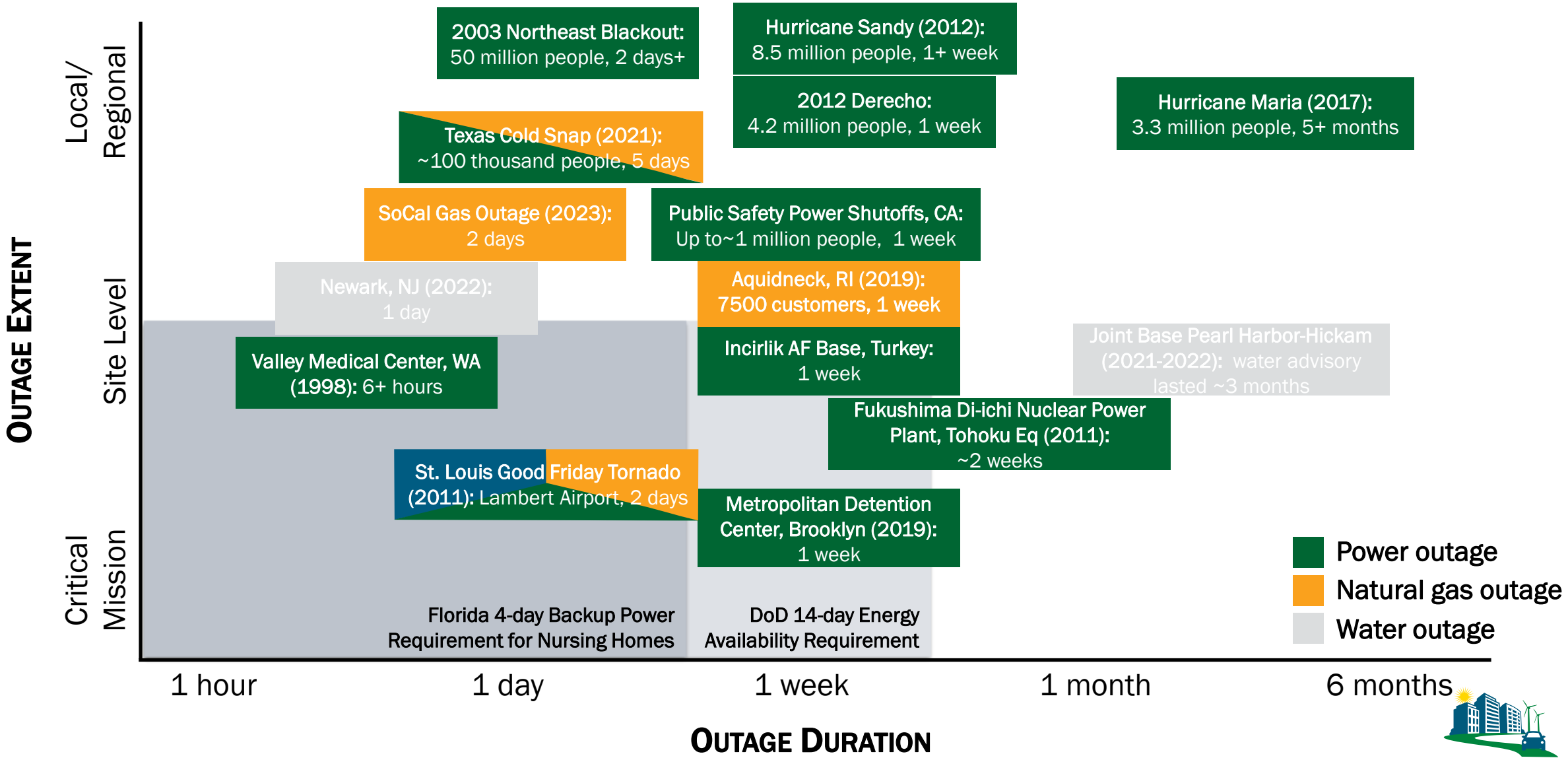
Resilience

Ethan Epstein
Resilience Program Manager
DOE FEMP

What is Resilience?

The ability to anticipate, prepare for, and adapt to changing conditions and to withstand, respond to, and recover rapidly from disruptions.

Energy and Water Resilience is Increasingly Important



High Impact Hazards Occurring More Frequently Over Time

- NOAA analysis of “billion-dollar disasters” demonstrates an increase in hazards that are likely to be impacted by climate change over time
- Increasing cost of natural hazards is likely a combination of increasing population and climate change effects

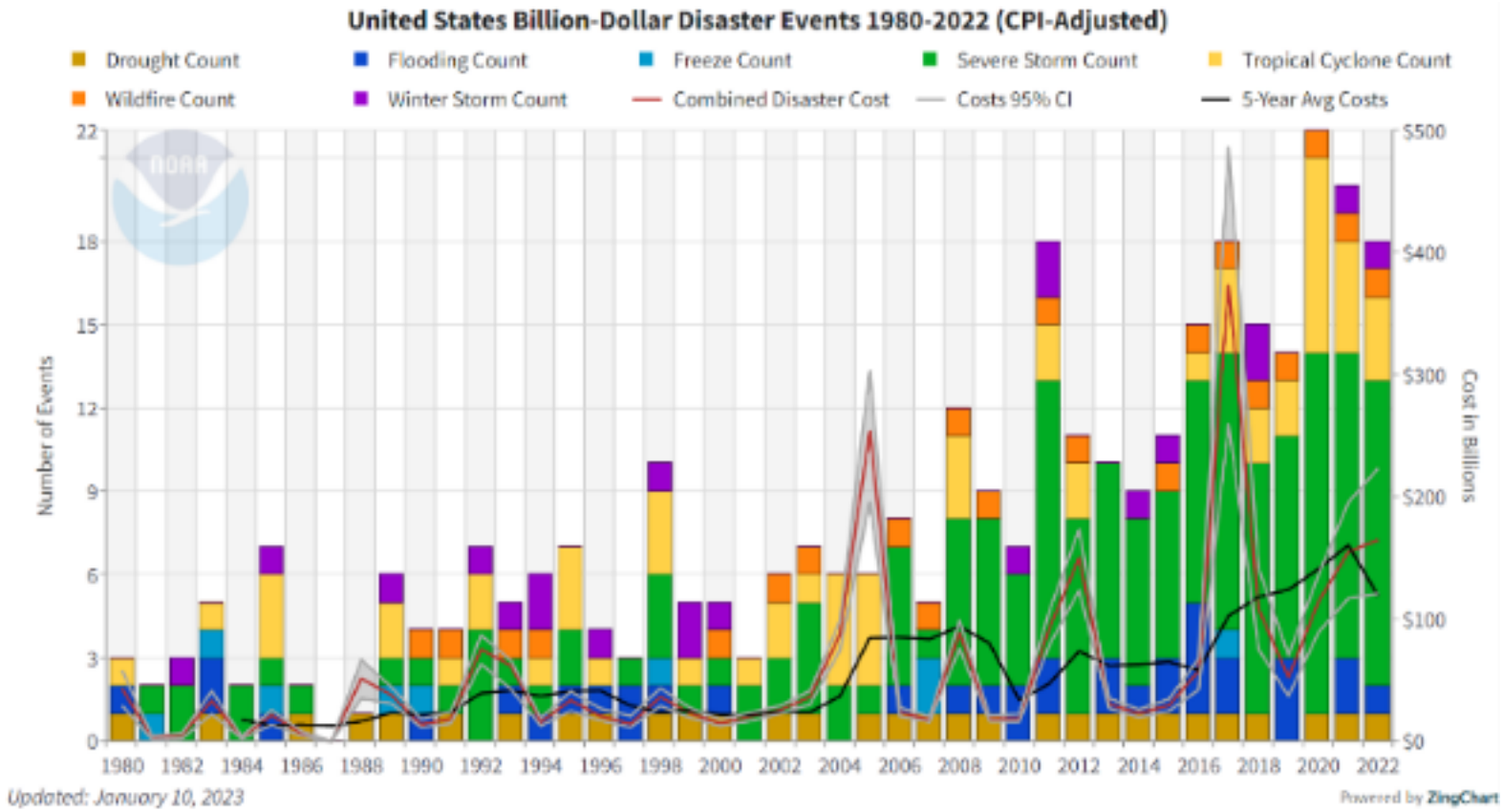
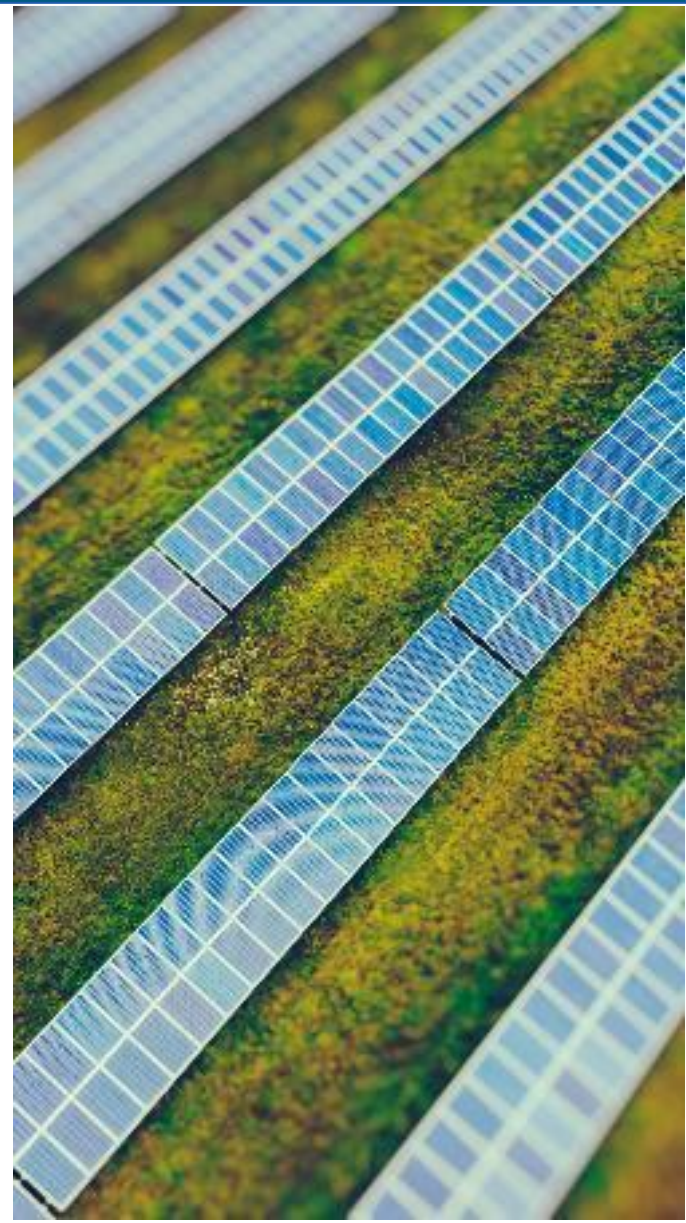


Figure Source: NOAA/NCEI, https://www.climate.gov/news-features/blogs/2022-us-billion-dollar-weather-and-climate-disasters-historical-context

Federal Utility Resilience Projects - Funding Approaches*

- Real property arrangements such as lease, easement or license for on-site generation/storage
- Utility Service Contracts (using GSA Areawide Contracts)
- Direct Funded Projects/Appropriations
- Utility Incentives
- Utility Resilience Tariffs
- Utility Energy Service Contracts (UESCs)

** There are other options for achieving resilience goals, such as using ESPCs, that will not be covered in this webinar.*



Utility Resilience Tariffs

- New offering from a limited number of utilities in vertically-integrated markets
- Generation/storage systems designed, built, paid for, owned and operated by the utility; operates during a grid outage
- Typically require state PUC approval
- Important considerations:
  - Resilience uptime guarantee
  - Cost
  - Contract length
  - Terms/conditions
  - REC ownership (if applicable)

Resiliency and Distributed Energy Resource (DER) Solutions

Tray Leslie
Program Engagement Manager

Southern Company

Resiliency Program Overview

Southern Company

Current DER Customer Pilot

1. Resiliency Asset Service Program
2. DER-Enabled Demand Response Credit

Recently Filed DER Customer Programs

- DER Colocation Program
- DER Customer Owned Program

DER Customer Program

Southern Company

250 MW

DER Customer Program

OVERVIEW

Georgia Power (GPC) received approval of a new ***Distributed Energy Resource (DER) Customer Program*** that supports commercial and industrial customers with enhanced resiliency needs and provides demand response value and corresponding system reliability benefits for all customers

GPC will deploy this new program under <u>two</u> new tariffs:

PROGRAM TARIFFS

Resiliency Asset Service (RAS) Tariff

- GPC will provide a resiliency service via a new, customer-sited DER behind the meter
- GPC will design, procure, install, own, operate, and provide maintenance to all equipment and recover the cost from the participating customer as a levelized monthly payment
- RAS Tariff will include a Service Agreement that determines the scope, pricing, and commercial terms of a customized resiliency solution

Demand Response Credit (DRC) Tariff

- Allows GPC to utilize assets under the RAS Tariff during a system reliability event
- GPC will provide participating customer with a fixed and levelized credit over the contract life depending on asset availability to offset the cost of the DER

Georgia Power's Resiliency Programs

Southern Company

	DER Customer Pilot	New DER Colocation	New DER Customer Owned
Tariff(s)	RAS-1 / DRC-1	DCL-1	DCO-1
DER Asset Ownership	GPC	GPC	Customer
Capable of pushing to the Grid	No	Yes	Yes
DER Metered Separately	No	Yes	Yes
Max Term Length	Asset Life	Asset Life	Through 2031
Technology Allowed	Dispatchable	Dispatchable with Firm Fuel Supply	Dispatchable with Firm Fuel Supply
Eligibility	RAS: 200kW Annual Peak Load DRC: 1000kW Demand Reduction but can aggregate facilities if each is > 200kW	Installed asset nameplate ≥ 10MW	Installed asset nameplate ≥ 1MW and < 10MW, can aggregate if each is 250kW or greater
Levelized Monthly Program Tariff Cost / Credit	RAS: Capital and O&M Costs DRC: 100% Capacity Value (Firm Load Only)	Capital and O&M Costs less 75% of system value	Credit for 75% of the system value
Fuel Cost Responsibility	Customer	GPC	GPC
Operational Use Cases	Local Outage Extreme Supply and Demand Conditions	Local Outage Economic Dispatch	Local Outage Economic Dispatch*
Rate limitations	Certain Marginal Rates Ineligible	No limitations	No limitations
Program Cap	250 MW	-	-
PSC Approval Prior to Construction	No	Yes	Yes

*Customer cannot utilize DER for other purposes (i.e., peak shaving) during the contract period

Resiliency Program Alternatives

Southern Company

➢ Curtailable Load Program

- ➢ Similar to existing DPEC program, but with longer term and higher credit value
- ➢ Customer can use an existing or new resource (or no resource at all) to reduce load
- ➢ Customer retains flexibility to use their resource for energy arbitrage or peak shaving
- ➢ Offers another way for customers to save money while adding resiliency to their business
- ➢ Program begins 1/1/2025, but can get customers in the pipeline in advance

	Demand Plus Energy Credit + Industrial Load Retention Rider (grandfathered)	**Demand Plus Energy Credit (current)**	**New Curtailable Load (CL)**
Tariff(s)	DPEC-5 + ILR-4	DPEC-5	CL-1
Credit Value Determination	per the tariff	per the tariff	custom calculation
Term Length	1 Year	1 Year	6 Years
Eligibility	200kW Demand Reduction	200kW Demand Reduction	200kW Demand Reduction
Forgiveness	Yes	Yes	No
Credit Value	Better	Good	Best

Southern Company

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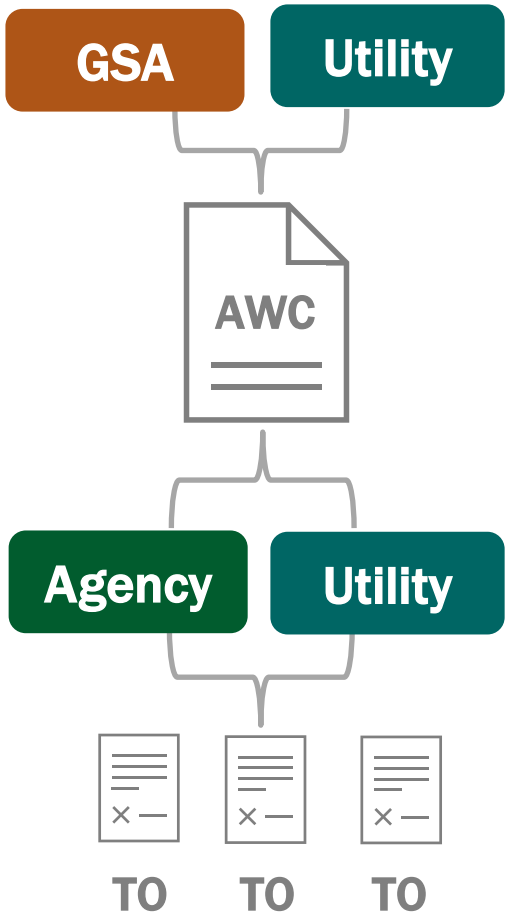
Leveraging GSA Areawide Contracts (AWCs)

Ebony Atkinson
Chief, Public Utility Branch | Senior Contracting Officer
GSA

Areawide Contracts for Utility Services

GSA negotiates AWCs with public utilities on behalf of the Federal Government to streamline procurement of utility services.

- Contract Term - 10 years (25 years for UESCs)
- AWC bilaterally signed by GSA and utility
- FAR Part 41 requires agency use available AWC unless head of contracting authority (HCA) determines otherwise
- Exhibits for services signed by agency and utility



AWC Exhibits/Authorizations

Authorization for Electric Service

Nature of Service

- ❑ Connect
- ❑ Change
- ❑ DSM Work
- ❑ Line Extension, Alteration, Relocation or Reinforcement
- ❑ Special Facilities

Examples: EV Infrastructure, Advanced Meters

Authorization for Natural Gas Service

Nature of Service

- ❑ Connect
- ❑ Change
- ❑ Continue service
- ❑ Line Extension, Alteration, Relocation or Reinforcement
- ❑ Transportation
- ❑ Billing & Ancillary Services

Example: Installation of gas line

Authorization for Energy Management Services

Nature of Service

- ❑ Preliminary Energy Audit
- ❑ Investment Grade Audit
- ❑ Engineering & Design Study
- ❑ Energy Conservation Project Installation
- ❑ Demand Side Management Project

Examples: Lighting and Chiller Retrofits, Recommissioning, HVAC

Authorization for Provisions of Services Under (insert appropriate Regulatory Authority)

Nature of Service

- ❑ _____ Interconnection of the Ordering Agency's renewable energy project

Examples: Interconnection of PV System

Authorizations for Electric or Natural Gas Service

Used to obtain utility service and implement infrastructure projects that don't typically result in savings.

Authorization for Electric Service

Nature of Service

- ❑ Connect
- ❑ Change
- ❑ DSM Work
- ❑ Line Extension, Alteration, Relocation or Reinforcement
- ❑ Special Facilities*

Authorization for Natural Gas Service

Nature of Service

- ❑ Connect
- ❑ Change
- ❑ Continue service
- ❑ Line Extension, Alteration, Relocation or Reinforcement
- ❑ Transportation
- ❑ Billing & Ancillary Services

** Special Facilities includes a variety of measures not otherwise listed in the Exhibit*

Authorization for Electric Service: Project Examples

- EV Infrastructure
- Advanced Meters
- Solar Arrays
- Conversion of overhead lines to underground
- Utilities hardening
- Emergency & back-up generation
- Customer-owned substation and distribution system upgrades
- Distribution system mapping
- Osmose pole inspections/replacements
- Emergency restoration/repairs
- Redundant/alternate feeder
- Infrared scan
- Line extensions
- Lightning protection




Using the EMSA for UESCs

The Authorization for Energy Management Services (EMSA) is used to award UESCs under an AWC.

- **UESC services include:**
  - Project development - preliminary assessment, investment grade audit
  - Task order award - engineering and design, ECM installation
- **How does it work?**
  - Agency and utility agree upon the scope, deliverables, and cost for the service
  - Agency completes EMSA form and attaches task order
  - Agency sends EMSA and customer agreement form to Utility for signature

EMSA Example – GA Power

EXHIBIT "C"

Contractor's ID NO._____(Optional)
Ordering Agency's I.D NO_____(Optional)

GEORGIA POWER COMPANY
AUTHORIZATION FOR ENERGY MANAGEMENT SERVICES
AREAWIDE CONTRACT NO. **GS-OOP-15-BSD-1134**

Ordering Agency:_____
Address: _____

Pursuant to Areawide Contract No. GS-OOP-15-BSD-1134 between Georgia Power Company ("Contractor") and the United States Government, service to the Government under such contract shall be rendered and subject to all the provisions thereof. In the event the Areawide Contract is not renewed at the expiration of the contract term, this Exhibit "C" Authorization shall be cancelled unless the terms of the Exhibit C expressly provide for a term extending beyond the term of the Areawide as provided under Article 19.4.

PREMISES TO BE SERVED:_____

SERVICE ADDRESS: _____

NATURE OF SERVICE: ☐ Preliminary Energy Audit, ☐ ECP Feasibility Study, ☐ ECP Engineering & Design Study,
☐ Energy, Conservation Project (ECP) Installation, ☐ Demand Side Management (DSM) Project, ☐ Other (See Remarks Below)

ALL ENERGY MANAGEMENT SERVICES TO BE PROVIDED BY CONTRACTOR UNDER THIS AUTHORIZATION MAY BE SUBJECT TO THE AUTHORITY OF THE APPLICABLE STATE REGULATORY COMMISSION HAVING JURISDICTION.

POINT OF DELIVERY:_____

ESTIMATED PROJECT COST: $ _____

ACCOUNTING AND APPROPRIATION DATA:_____

LIST OF ATTACHMENTS:

☐ General Conditions	☐ Payment Provisions	☐ Special Requirements	☐ Economic Analysis
☐ Facility/Site Plans	☐ Historical Data	☐ Utility Usage History	☐ ECP Feasibility Study
☐ Design Drawings	☐ Design Specifications	☐ Certifications	☐ Commission Schedules

View and Download the GA Power AWC

Leveraging the AWC

Steps for using AWCs for obtaining utility services:

- **Obtain copy of AWC**
  - AWC List: Download Contracts/ Modifications | GSA
- **Complete applicable authorization form for utility services**
  - Ensure applicable clauses are incorporated
- **Complete necessary standard forms (SF) and customer agreement**
  - Include applicable rate schedule and tariff options
- **Send Authorization and customer agreement form to Utility for signature/Agency should fully execute documentation**

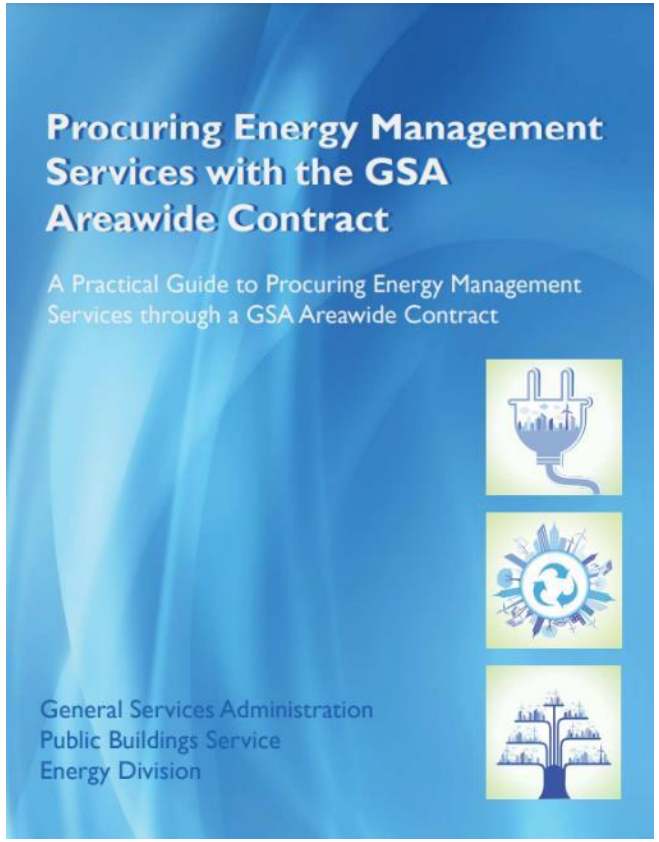
KEY REQUIREMENT

- **Send signed forms to GSA for archiving**
- FAR 41 requirement and important part of the process
- Copies of all agreements should be sent to GSA (energy@gsa.gov)

GSA AWC Resources

GSA Energy Library - Utility Areawide Contracts

- Utility AWC Listing
- Procurement Guide for Public Utility Services
- Utility Areawide Guide
- Procuring Energy Management Services with the GSA AWC
- Sample EV Charging Infrastructure Exhibits (coming soon)



Southern Company

GA Power Areawide Contract Services

Toby Chandler
Resiliency and Sustainability Development Manager

5/22/2024

Topics for Discussion

- **Energy Efficiency**
- **GSA Areawide Contract**
- **Areawide – Exhibits A-D**
  - Fort Moore Electric Vehicle
  - Marine Corps Logistics Base (MCLB) EVSE
  - Marine Corps Logistics Base (MCLB) Total Maintenance & Repair

Our Approach to Energy Efficiency

Southern Company

Customer Focus

- Each customer and every project is unique
- Approach is tailored to suit each customers needs and goals
- Collaborative team made of federal team / utility team representatives
- Frequent updates via workshops and progress meetings

Utilize Internal Resources / Qualified Network of Subcontractors for:

- Preliminary audit to identify energy conservation measures and renewables
- Investment grade feasibility study/detailed engineering study
- Project financing flexibility
- Turnkey project implementation and management
- Post-contract warranty and performance verification
- Local utility/local support – Single source responsibility
- Customized solutions with client knowledge
- Access to energy experts
- Increase energy savings
- Provide platform for new technologies
- Development and pricing transparency
- Fuel neutral approach (include all fuels, water and renewables)
- Leverage energy savings to pay for infrastructure/capital improvements

GSA Areawide - Exhibits

Exhibit A – Electric Service:

- Electric authorization, connection, disconnection terms
- Rates and tariffs
- Payment provisions

Exhibit B – Steam Service:

- Same for Steam
- Mainly unused in Southern Company's footprint

Exhibit C – Energy Management Service:

- Utility Energy Services Contract (UESC) terms
- Paid for out of savings type scopes
- Performance Assurance and Verification processes

Exhibit D – Other Service (I.e. Interconnection Agreement):

- Primary use is terms for interconnecting Government Renewable generation assets to utility grid
- General energy services not covered with A, B or C

Fort Moore Electric Vehicle Chargers

Southern Company

Description:

- Expand electrical infrastructure to 23 new locations
- Privatized electrical distribution system
- Quick implementation required to support EV acquisitions
- Turnkey EV charging station installations

Key Points:

- Investment: $3,999,602 (Funded)
- AWC Authorization: Exhibit A – Electric Service
- NTP 2/1/2023; Completion 1/30/2024
- Additional scope likely as needs grow

Marine Corps Logistics Base EV Chargers

Southern Company

Description:

- Expansion of the electric distribution system
- 21 chargers at 9 locations
- Ongoing maintenance of the equipment and software
- Leveraged Georgia Power incentive dollars (Make Ready Infrastructure Program)

Key Points:

- AWC Authorization: Exhibit A – Electric Service
- Leveraged Georgia Power incentive dollars (Make Ready Infrastructure Program)
- Modifying contract to utilize ChargePoint brand chargers for more robust usage and cost tracking

Marine Corps Logistics Base TMR

Southern Company

Description:

- Total Maintenance & Repair (TMR) - Routine inspection and maintenance of the customer's electric distribution system
- Second year of maintenance contract term
- Added customer generator scope
- Customer provides material, GPC provides labor

Key Points:

- AWC Authorization: Exhibit A – Electric Service
- $5,037,380 Funded project
- NTP 9/30/2023; Completion 9/30/2028
- Additional scope likely as needs grow

Southern Company

Toby Chandler: dlchandl@southernco.com

Utility Energy Service Contracts (UESCs)

Jeff Gingrich
Project Manager, FEMP Utility Program
National Renewable Energy Laboratory

What are Utility Energy Service Contracts (UESCs)?

Performance contracts that allow agencies to do energy and water projects with little to no up-front costs and appropriations from Congress.

- Savings from reduced consumption and improved efficiency used to pay for a variety of measures
  - Infrastructure upgrades
  - Replacement of aging, inefficient equipment
  - Renewable energy systems
- Capital costs paid for through financing and available agency funds

Federal Drivers: EA 2020 and Energy Management Requirements

42 U.S.C. § 8253 Energy and Water Management Requirements

- Annual requirements for evaluation of 25% of covered facilities (EISA audits)
- EA 2020 - Requires installation of life-cycle cost (LCC) effective energy conservation measures within 2 years of audit
- EA 2020 – Requires use of performance contracting to address at least 50% of LCC ECMs
  - Applies to measures identified in evaluations completed on or after ***December 27, 2020***

FEMP Guidance

Performance Contracting Requirements Related to the Energy Act of 2020

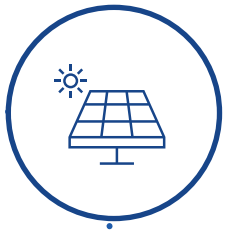
How do UESCs Work?

Select contractor

Competition limited to serving distribution utilities

Conduct assessments* to evaluate energy/water savings opportunities

Contractor identifies cost effective energy conservation measures (ECMs)



Implement ECMs

Utility secures financing and installs measures

Make payments from cost savings

Contract term of up to 25-years to pay for ECMs

Implement Performance Assurance Plan to monitor and sustain savings

Via operations & maintenance / savings verification/other

**Preliminary Assessment typically provided at no cost*

Authorizing Law: Utility Energy Service Contract (UESC)

Authorized and encouraged under the Energy Policy Act of 1992 (42 U.S.C. § 8256 and 10 U.S.C. § 2913 for DOD)

- Agencies are authorized to participate in utility incentive programs and accept any financial incentives, goods, or services generally available
- Defined as a limited-source acquisition between a federal agency and serving utility for energy management services, including:
  - Energy efficiency improvements
  - Water efficiency improvements
  - Demand reduction services
  - Distributed Energy

UESCs are Limited Source Acquisitions

Competition is limited to serving distribution utilities (electricity, natural gas, and water).

Key Advantages of UESCs

- **Intended to achieve savings or be budget neutral**
  - Paid for through energy/water savings and/or available agency funds
  - Utility is responsible for obtaining financing
- **Contract term up to 25 years**
- **Sites/facilities within GA Power's service territory may be included in a single task order**
- **Performance Assurance Plan and/or savings guarantee is required**
  - Utility can perform operations & maintenance, repair/replacement, measurement and verification
  - Georgia Power can offer a savings guarantee
- **Contracts are firm-fixed-price**
- **GA Power is single point of contact for entire project – evaluation, design, installation, post-installation services**

Energy Conservation Measures

Common Examples

(not exhaustive)

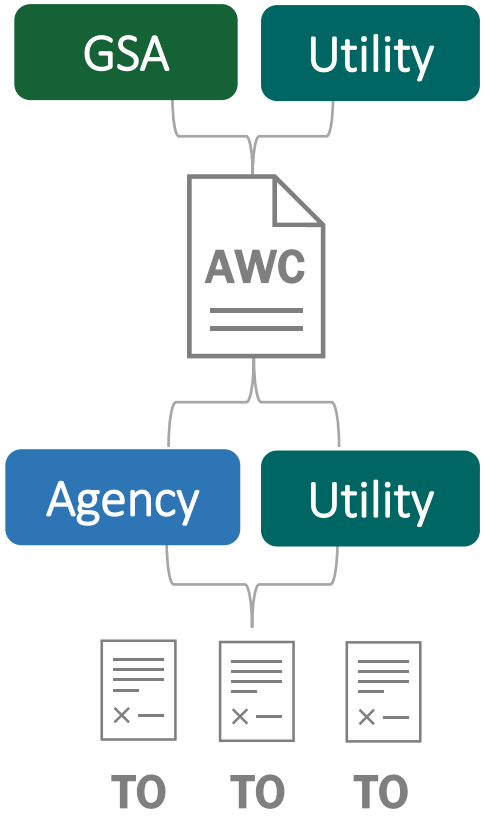
- Boiler and chiller upgrades
- Energy management control systems
- Commissioning/Retro-commissioning
- Building envelope
- HVAC
- Chilled/hot water, steam distribution
- Lighting and lighting control improvements
- Electric motors/drives
- Refrigeration
- Renewable Power Generation Systems
- Electrical peak shaving/load shifting
- Rate adjustments
- Appliance/plug load reductions
- Energy consuming devices and support structures
- Water and wastewater



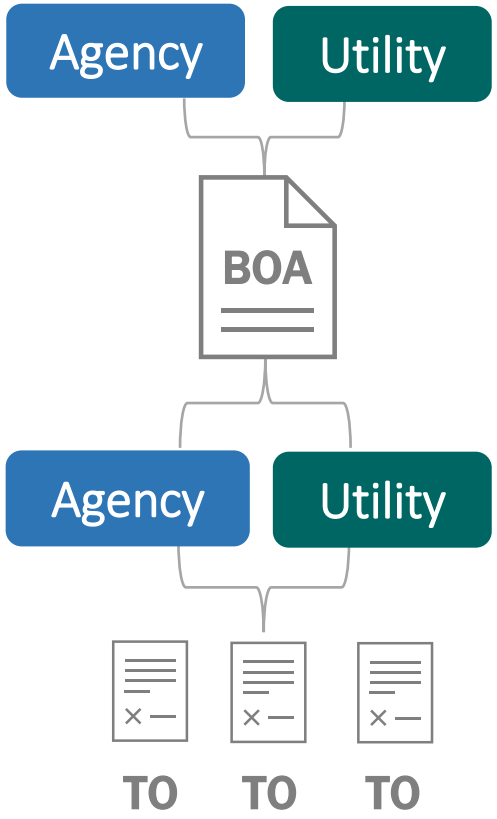



UESC Contracting Options

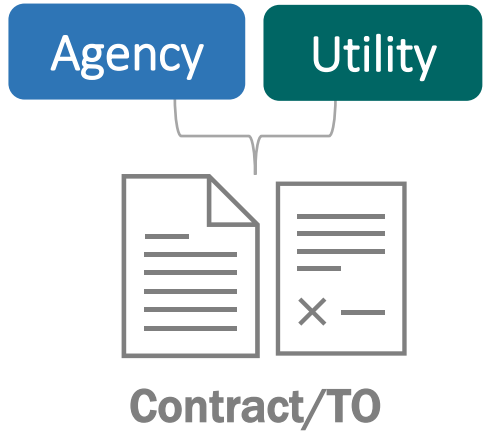
Areawide Contract (AWC)



Basic Ordering Agreement (BOA)



Separate Contract



FAR Part 41.205 Separate Contract | FAR Part 41.204 GSA Areawide Contracts | FAR Part 16.703 Basic Ordering Agreement

Getting Started with a UESC

- **Set goals for your project**
  - Energy/water efficiency, equipment replacement, decarbonization and electrification, resilience, etc.
- **Review facility/energy consumption data and identify known ECM opportunities**
  - Leverage existing audits, multi-year site plans, and facility data
- **Identify eligible utility providers (other than GA Power)**
  - Contact your serving utilities (electricity, natural gas, water) to learn about program availability and experience
- **Evaluate funding options**
  - Identify available appropriations, grants, and incentives that may help expand scope or shorten contract term
- **Contact FEMP for training and technical support**

UESC Support and Resources

FEMP offers various types of support to set projects up for success:

- General consultations with Federal Project Executives
- Project Facilitators (PF) to act as advisors through the Preliminary Assessment
  - *PF at cost starting at IGA
- Project support provide by technical and contracting SMEs through DOE National Labs
- Training on contracting and technical topics for agency teams
- Online templates and other resources
- Federal Utility Partnership Working Group
  - 2024 FUPWG Seminar tentatively set for week of August 19, 2024

How much does FEMP support cost?

Nothing!

Most support can be provided at no cost*

Visit the FEMP UESC website to learn more

Southern Company

GA Power UESC Program

Jim Holton
Senior Project Developer

5/22/2024

Topics for Discussion

- **UESC Authority**
- **UESC Process / Path to Projects**
- **Energy Management Services (UESC) & Ancillary Services**
  - Federal Agencies Served – Energy Conservation Measures Delivered
  - Air Force Base (RAFB) UESC
  - Fort Eisenhower/Gillem Enclave Energy Conservation & Resiliency Project
  - Kings Bay UESC

UESC Process / Path to Projects

Southern Company

1. Preliminary Audit (PA)

1. Analyze utility rates, rebates/incentives, potential funding options
2. Conduct site surveys to determine condition and operating practices
3. Identify potential energy, water conservation, and renewable opportunities

2. Investment Grade Audit (IGA)

1. Validate PA baselines through metering and regression analysis
2. In depth savings calculations through computer modeling and bin analysis
3. Conceptual engineering design to create scopes of work for each ECM
4. Cost estimates supported by a minimum of 3 bids for each specialty

3. Project Construction

1. Consistent communication with customer team
2. Alignment of goals for scheduling and completion
3. Safety and Security a priority

4. Performance Phase

1. Performance verification at the end of warranty period
2. Measurement and Verification (M&V)
3. Operations and maintenance training
4. Periodic inspections and verification of appropriate O&M performance
5. Reporting of deficiencies and opportunities to optimize equipment performance

Energy Management Services (UESC)

Mechanical System Installation, Maintenance & Controls

- Central Chilled Water Plants
- Waste Heat Recovery
- Variable Speed / Variable Refrigerant
- Energy Management Systems
- Industrial Process Improvements

Electrical Component Installation, Maintenance & Controls

- Electrical system replacements
- LED Lighting
- Solar PV, BESS, Micro-grids
- Infrared Heating
- EV Charging infrastructure

Water Conservation

- Low Flow Fixtures
- Infrared Activated Fixtures
- Water Treatment (Condensing Water)
- Water Filtration
- Leak Detection & Repair

Ancillary Services

Electrical Infrastructure Support & Maintenance

- Renewable Energy Sources
- Standby/Backup Generation
- Micro Grids/EV Infrastructure
- ArcFlash Studies – NFPA 70E Code Compliance
- Low/Medium Voltage Electrical Systems

O&M Programs

- System Preventative Maintenance
- Total Maintenance and Repair

Federal Agencies Served

Southern Company

Energy Conservation Measures Delivered

Southern Company

- LED Lighting Upgrades and Lighting Controls
- Water Conservation Measures: domestic water, cooling towers, irrigation systems, etc
- Building Automation Systems
- Commissioning, Re-Commissioning, and Retro-commissioning
- Air distribution system and Air handling unit upgrades
- Chiller Replacements and Central Plant Optimization
- Boiler Replacements and Decentralization of Heating systems to minimize losses
- Resiliency Measures: CHP, Prime Power, Back-up power, Microturbines, Fuel Cells
- Electrical upgrades: sub-stations, switch gear, voltage regulation, interconnection, transformers, microgrids, DG, Distributed Energy Resource (DER)
- Utility Privatization, Advanced Metering, and O&M
- Renewables: Solar Photovoltaic / Solar Thermal / Geothermal / Wind / Biomass
- Indoor Air Quality: Make up air, UV lights, Dehumidification, Ozone, O2 Controls, Demand Control Ventilation
- Building Envelope Measures
- Total Maintenance & Repair – TMR; Utility infrastructure O&M (10-year Exhibit A)

Robins Air Force Base (RAFB) UESC

Southern Company

Description:

- Recapitalizing aging Compressed Air Plants
- Two locations with just over 14,000 tons of compressor capacity
- Supporting over 40 downstream production buildings
- Resiliency focused energy savings project – compressors, dryers, towers and switchgear
- Interconnected two plant locations

Key Points:

- $29,767,578 UESC
- NTP 9/24/2018; Completion 9/30/2020
- Cost Savings $591,821/yr.
- Energy Savings:
  - Reduced electricity 7,949,241 kWh/yr.
- Also awarded ongoing maintenance and daily inspection service

Fort Eisenhower/Gillem Enclave: Energy Conservation and Resiliency Project

Southern Company

Description:

- Collaboration with across multiple areas of Georgia Power & Southern Company, and other affiliates to provided a comprehensive response for base wide energy conservation, power generation, distributed generation, resiliency solutions.
- Projected project duration 2 years
  1. Preliminary Audit completed and submitted Q2 2019
  2. Investment Grade Audit approved by Ft Eisenhower Q2 2022 Completed Q4 2023
  3. Project awarded Q1 2024
- Project value $71.8M

Key Points:

- 15 MW of peak-shaving generators proposed
- Demand Side Management (DSM)
- Interior and exterior LED lighting
- Improvement in chiller plant delta T
- Base wide Distribution Pumping Strategy
- Replace 4 - 2,000-ton chillers
- New Pumps and Motors
- RCx – Controls Optimization
- Thermal Energy Storage
- Utility Controls Management System (UCMS)
- Dehumidification
- SCS Incorporated Gillem Enclave Buildings in TO

From Google Maps

Kings Bay UESC

Southern Company

Description:

- $15.6 Mil, Task Order Negotiated by Navy and GPC
- Energy Conservation Measures (ECM) included:
  - Whole Building LED lighting retrofits in 28 buildings + Waterfront Pier
  - Controls upgrades in 22 buildings
  - Stepdown Transformers replacement 22 buildings
  - Building Envelope 27 buildings

Key Points:

- $15,645,207 project cost
- Awarded 1st Quarter FY2020
- 2.5M SF; Cost Savings $1,558,767 /yr.
- Energy Savings: Reduce electricity 9,992,818 kWh/yr.

Southern Company

Jim Holton: JBHOLTON@southernco.com

Final Q&A, Resources, and Next Steps

Southern Company

David Banks

Regional Manager
Federal Services

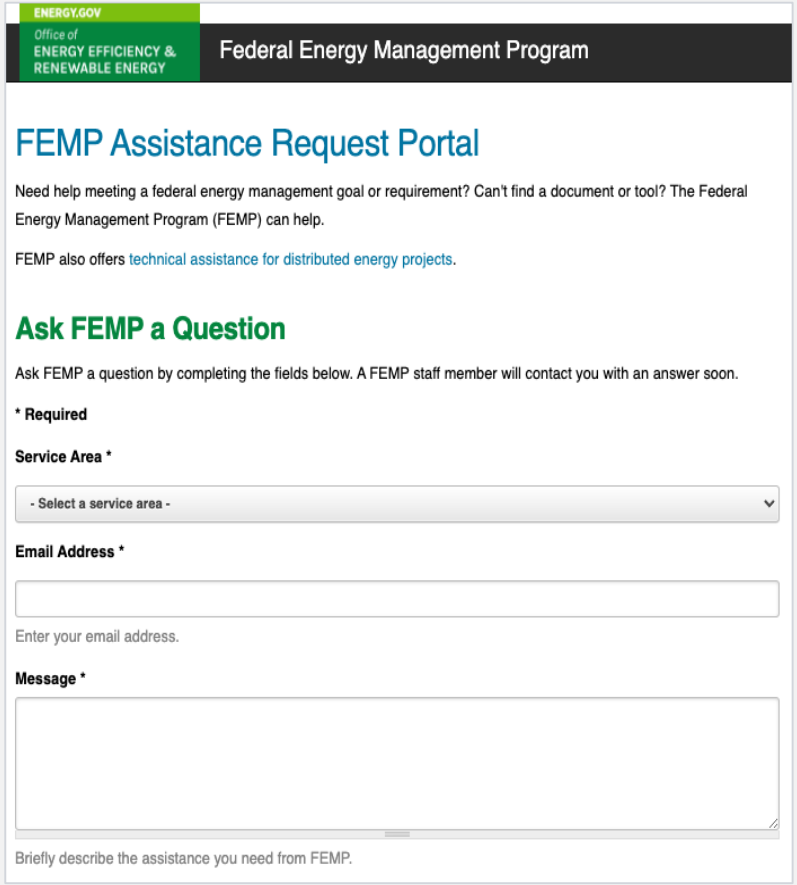
FEMP Technical Assistance

FEMP offers free support to federal agencies via the Assistance Request Portal:

- Staff training
- Project assistance
- Analysis* (utility rates, renewable energy optimization, resilience, etc.)
- Resources (guides, templates, etc.)

** Subject to available funding and scope of request*

FEMP Assistance Request Portal



AFFECT BIL FAC: $250 Million to Advance Net-Zero Facilities

Assisting Federal Facilities with Energy Conservation Technologies (AFFECT)
Bipartisan Infrastructure Law (BIL) Federal Agency Call (FAC)
Advancing Net-Zero Federal Facilities (DE-FOA-0003026)

Topic Areas (updated March 22, 2024)	
Topic Area 1A	Assistance with Net-Zero Buildings Project Development
Topic Area 1B	Assistance with Net-Zero Buildings Program and/or Procedures Development
Topic Area 2	Modify Existing Projects for Net-Zero Buildings
Topic Area 3	New and/or In Development Net-Zero Buildings Projects

Only Federal Agencies May Apply for AFFECT

Application Submission Deadlines	
Phase 1	May 31, 2023 (closed)
Phase 2	June 27, 2024 (now open)
Phase 3	April 18, 2025 (forthcoming)

Resources

- FAC and Application Forms
- FAC Informational Webinar Recording and Slides
- Slides Summarizing Recent FAC Modifications
- Applicant Questions and Answers
- Upcoming Training and Guidance Information

Selected projects announced approximately 6 months following the submission deadline.

Questions? Email AFFECTBIL@hq.doe.gov.

FEMP Webinars and On-Demand Training

Live and on-demand webinars can be accessed through the FEMP Training Catalog

- Continuing Education Units available
- Curriculums include:
  - UESC and DR/TVP
  - Distributed Energy Procurement
  - Resilience Planning and Integration
  - Facility and Fleet Optimized Design
  - Legislative and Mandate Guidance
  - Energy and Cyber Security Integration

Utility Engagement			
Title	**Level**	**Length**	**CEUs**
Evaluating Your Utility Rate Options	Introductory	1 hour	0.20
Taking Advantage of Demand Response and Time-Variable Pricing Offerings	Introductory	1.5 hours	0.20
UESC Comprehensive Training: Day 1 - Fundamentals and Planning	Introductory	2 hours	.3
UESC On-Demand Webinar Series: Phase 1 - Acquisition Planning	Introductory	1 hour	0.20
UESC On-Demand Webinar Series: Phase 2 - Utility Selection and Preliminary Assessment	Introductory	1 hour	0.20
UESC On-Demand Webinar Series: Phase 3 - Project Development	Introductory	1 hour	0.20
UESC On-Demand Webinar Series: Phases 4 and 5 - Project Implementation and Construction and Post-Acceptance Performance	Introductory		0.20
UESC On-Demand Webinar Series: UESC Introduction Part 1 - Overview and Background	Introductory	1 hour	0.20
UESC On-Demand Webinar Series: UESC Introduction Part 2 - Legislation and Contracting	Introductory	1 hour	0.20
Utility Energy Service Contracts (UESC) New Utility Toolkit	Introductory	1 hour	0.2
Financing for UESCs: Ensuring the Best Value for the Government	Intermediate	1 hour	0.20
UESC On-Demand Webinar Series: Special Topic - Performance Assurance for Utility Energy Service Contracts	Intermediate	1 hour	0.20

Click here to view all courses!

Next Steps: Schedule a Follow-Up Meeting

Request a consultation with FEMP or your utility to:

- *Discuss your site's energy goals, challenges, and priorities*
- *Identify program offerings that align with your needs*
- *Sign up for incentives*
- *Connect with subject matter experts to learn more about any of the topics discussed today*

Consultation Request Form

Fill out this *linked form* or scan the QR code below.

FEMP will connect you with the appropriate party for follow-up, which may include FEMP technical experts, utility POCS, and/or the relevant Utility Lead Agency.

Next Steps: Review Available Georgia Power Programs

- **Energy Efficiency Rebates**
  - Commercial Energy Efficiency Rebate Program (*D.O.D. not Eligible*)
- **Demand Response Programs**
  - Demand Response Credit (DRC) Tariff
  - Demand Plus Energy Credit (DPEC) Program
  - Curtailable Load Program *(Website Coming Soon)*
- **Time Variable Pricing Rates**
  - Real Time Pricing Program
- **Utility Energy Services Contracts *(Website Coming Soon)***

- **EV/EVSE Programs and Rebates**
  - Make Ready Infrastructure Program
  - Business EV Charger Plus Rebate Program
  - TOU EV Charging Rate
  - Charge It Rate Rider
- **Carbon Free Energy Program**
  - CARES program
- **Resilience**
  - Resiliency Asset Service Program
  - DER Colocation Program *(Website Coming Soon)*
  - DER Customer Owned Program *(Website Coming Soon)*

Contact Information

DOE FEMP / Lab Staff / GSA

Name	Program
John Michael Forrest	UESC
Tracy Niro	CFE
Ethan Epstein	Resilience
Jason Koman	GEB and Fleet/EVSE
Billie Holecek (LBL)	Demand Response and TVP
Jeff Gingrich (NREL)	UESC
Ebony Atkinson (GSA)	Areawide Contracts

Contact FEMP SMEs via the

FEMP Assistance Request Portal

Georgia Power

Name	Program
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Tony Castro (tacastro@southernco.com)	Real Time Pricing
Tray Leslie (tdleslie@southernco.com)	Electric Vehicles, Carbon Free Energy, & Resiliency/DER Solutions
Toby Chandler (dlchandl@southernco.com) Jim Holton (jbholton@southernco.com)	AWC Services & UESCs

This Training Offers IACET CEUs

How to obtain your CEUs:

1. Visit the Whole Building Design Guide (WBDG) at wbdg.org to log in or create an account
2. Enroll in the training
3. Attend the training in full
4. Return to your WBDG account's Enrolled courses
5. Select the training's "Proceed to Course" button
6. Complete an assessment
7. Submit a training evaluation
8. Download your certificate.

What's an IACET CEU?

An International Association for Continuing Education and Training (IACET) continuing education unit (CEU) is a unit of credit equal to 10 hours of participation in an accredited program designed for professionals with certificates or licenses to practice various professions.

Stay in Touch

Ask Questions

Visit FEMP's Technical Assistance Portal to ask questions ranging from general to project-specific.

Sign Up for FEMP Updates

Receive periodic emails to stay informed of FEMP news, trainings, tools, resources, and more.

Find More Trainings

Search the FEMP Training Catalog to find upcoming live trainings, events, and on-demand courses.

Follow FEMP

Follow FEMP on LinkedIn for event announcements, examples of agency success, and of-the-moment news.

Thank You!

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