



U.S. General Services Administration



Striving for Net Zero

A Client Enrichment Series Presentation

April 20, 2023

Introductions

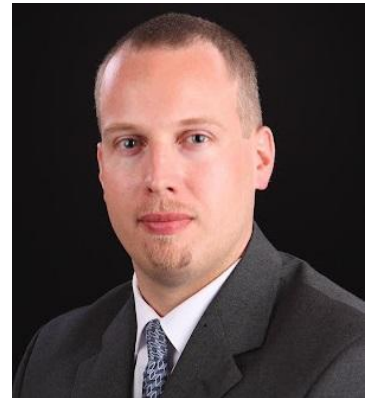
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*Chief Sustainability Officer
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Discussion Topics for Today

Climate and Sustainability Goals

Opportunities for Impact

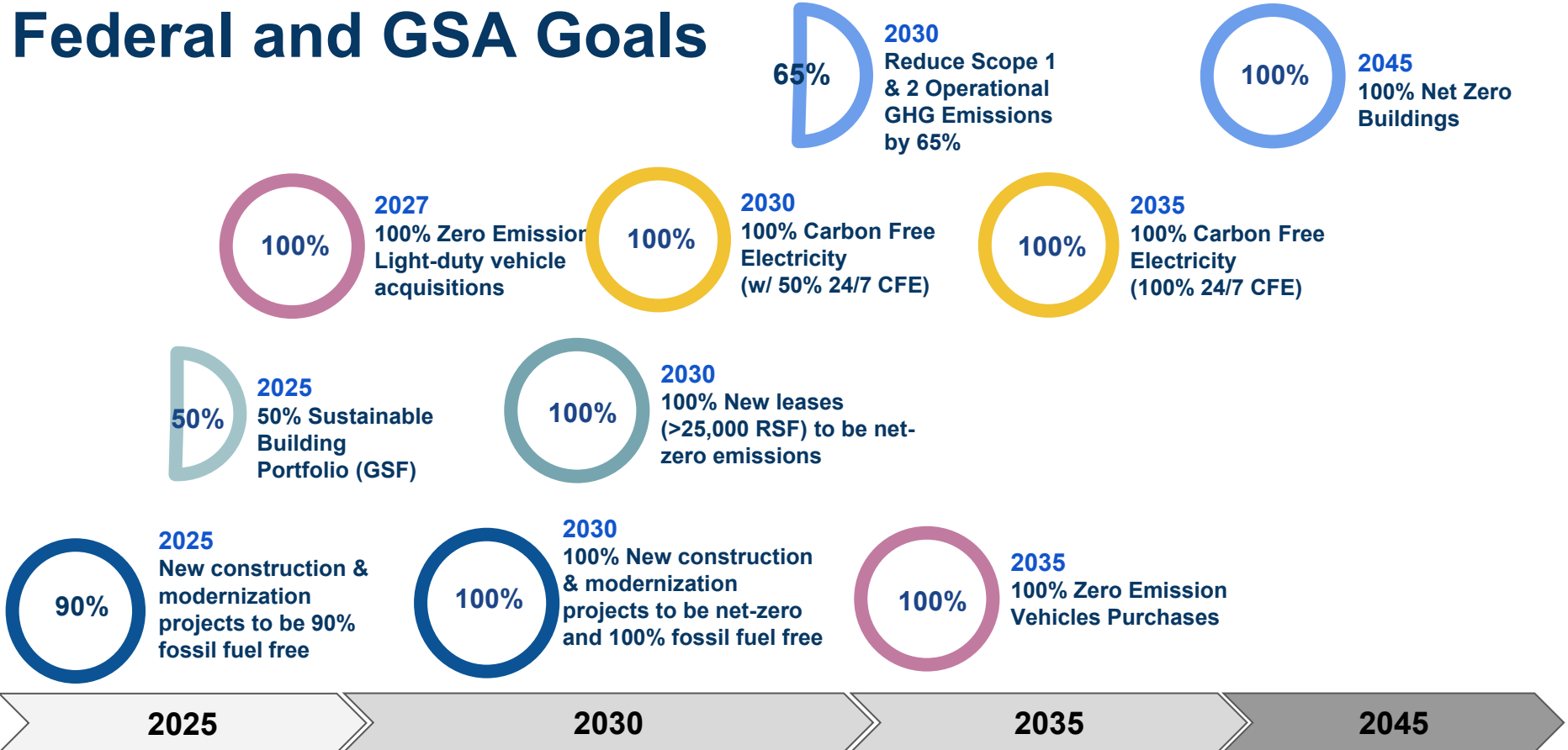
Sustainable Assets and Net Zero Operations

Maximizing Impact

Customer Partnerships

Resources

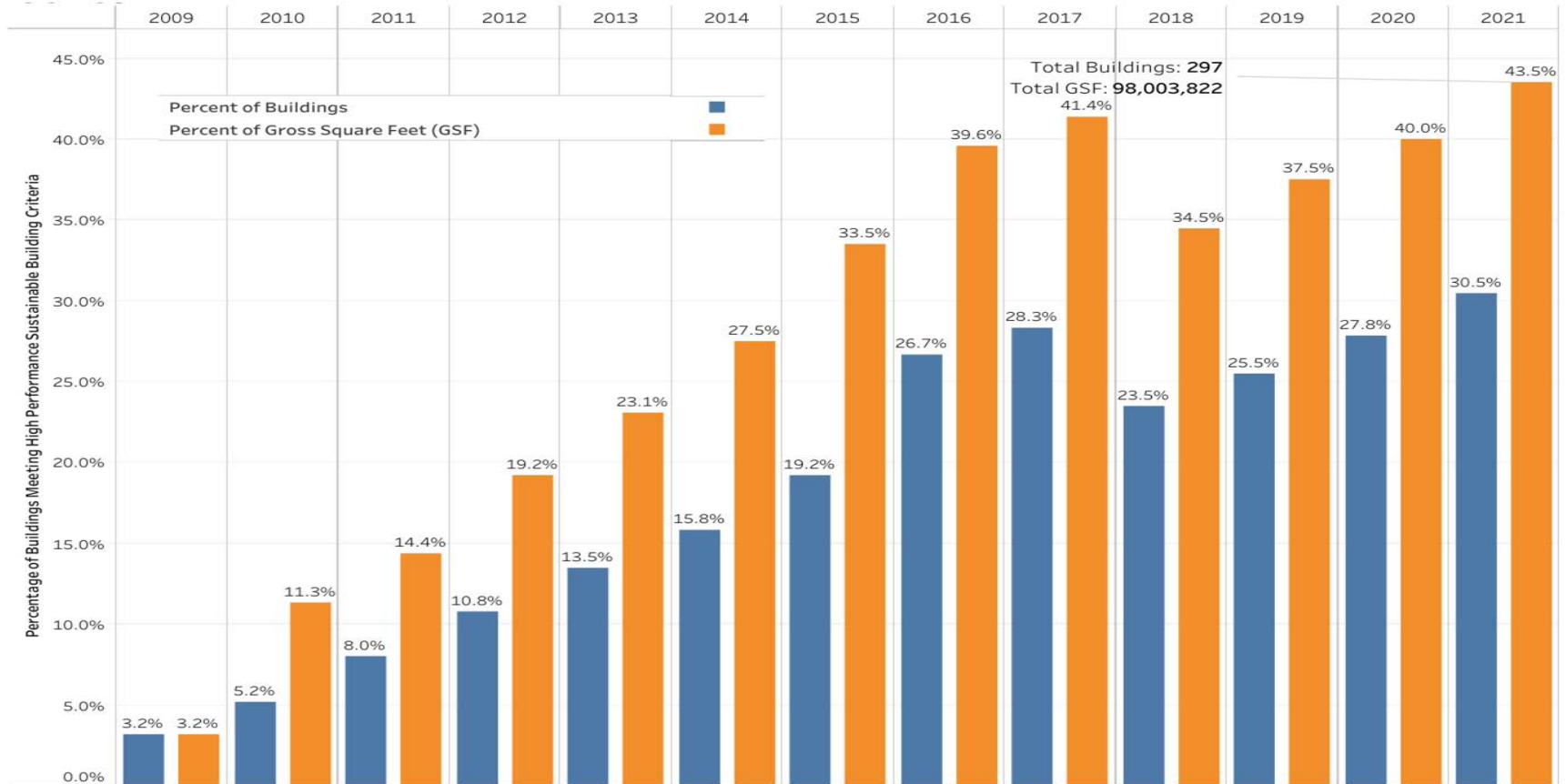
Climate & Sustainability Federal and GSA Goals



Our Opportunity for Impact

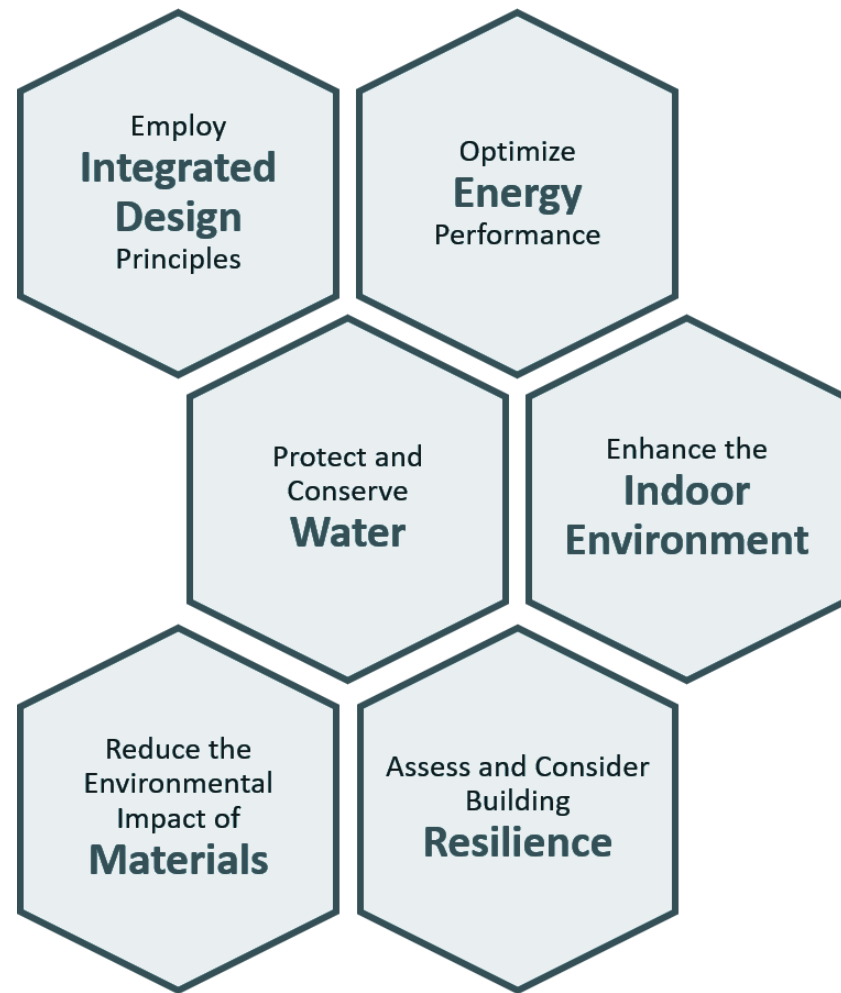
- GSA Portfolio:
 - Serves over 1.1 million employees across 50 federal agencies and 400 bureaus
 - Operates 1,400 owned buildings with over 186 million square feet across the U.S.
 - Manages over 7,000 leases representing an additional ~184 million square feet
 - Pays utilities on a real estate footprint that represents ~6% of the entire federal footprint [\[per DOE FEMP\]](#)
- GSA Energy:
 - 7th largest U.S. federal facilities energy user in [FY20 \[17.9 Trillion Btu\]](#) **5245 GWh**
 - GSA's electricity use alone represents ~4% [\[7.1 Trillion Btu in FY20\]](#) **2081 GWh** of the entire U.S. Federal Government's electricity usage [\[184 Trillion Btu in FY20\]](#)

Building on Sustainable Foundation



Sustainable Federal Buildings

GSA Applies the [2020 Guiding Principles for Sustainable Federal Buildings](#)



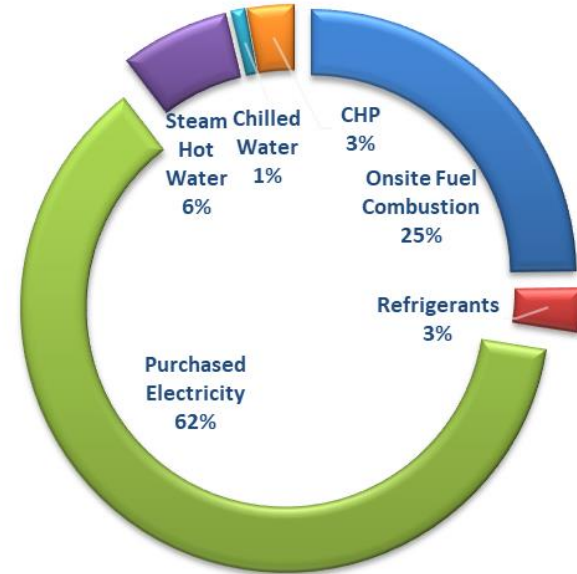
Our Challenge

~50% of our energy is electricity, but it makes up 62% of our total Scope 1 & 2 GHG emissions

~90% of our onsite Scope 1 GHG emissions comes from fuel combustion

~10% of our onsite Scope 1 GHG emissions comes from refrigerant leaks

GSA Scope 1 & 2 GHG Emissions



Ends, Programs, and Performance

Net Zero Operational Greenhouse Gas (GHG)

Net Zero Operations by 2045

- Energy efficiency
- Fuel switching
- Carbon pollution-free electricity
- Refrigerants

- **Tons GHG & % GHG Reduction**
- Energy Use Intensity (Btu/GSF)
- All-Electric Bldgs/Total Bldgs (%)
- CFE (%) & Renewable (%)
- HFC Leaks (lbs) & (MTCO₂e)

Sustainable Portfolio

50% Building GSF by 2025

- Integrated
- Energy
- Water
- Resilience
- Indoor environment
- Waste
- Materials

- **% Sustainable Buildings**
- Energy Use Intensity (Btu/GSF)
- Water Use Intensity (Gal/GSF)
- Waste Diversion (%)
- Green and Net Zero Leases (%)

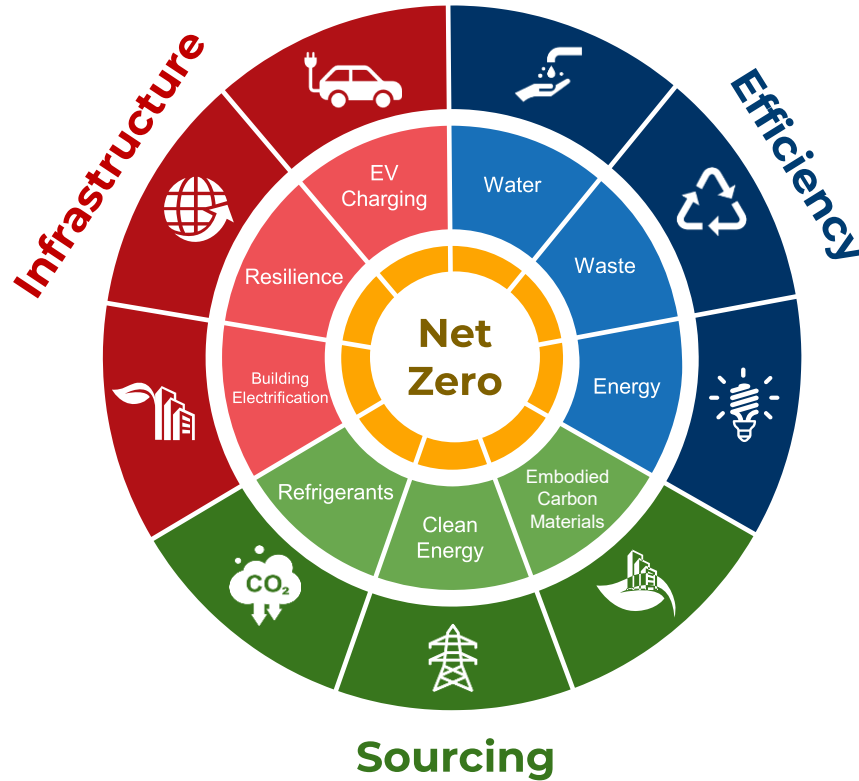
Climate Resilient and Sustainable Projects

High-performing sustainable and resilient buildings

- Net Zero
- Energy Savings
- EV Charging
- Embodied CO₂
- Climate Risk Management
- Cost Savings
- Jobs

- **Net Zero Ready Buildings (#)**
- Utility Savings (\$, Btu, Gallons)
- EV Charging Stations (#)
- Project Climate Profiles (#)
- Job-Years (#) Created

Ways to Achieve Sustainable Assets



Net Zero Federal Facilities



1. Clean energy procurement
2. Onsite clean energy generation
3. Onsite energy storage
4. Grid-interactive efficient buildings
5. Ground source heat pumps
6. Workplace charging
7. Federal zero-emission vehicle fleet
8. Workplace innovation
9. Climate adaptation
10. Sustainable and equitable location
11. Sustainable procurement
12. Embodied carbon
13. End of life

Means to Achieve Net Zero Operations

\$2.15 billion

for low-embodied carbon materials
in construction and renovation
projects.

Obligation Deadline = Sept 2026



\$975 million

for emerging and sustainable
technologies.

Obligation Deadline = Sept 2026



\$250 million

for measures to convert GSA facilities
into High-Performance Green
Buildings

Obligation Deadline = Sept 2031



Maximizing Our Impacts















Strategic Outcomes

- Deep Energy Retrofits
- All Electric Buildings
- Net Zero Energy Facilities
- Sustainable Buildings

Performance Outcomes

- Embodied carbon emissions avoided (MTCO₂e)
- Operational emissions avoided (MTCO₂e)
- Energy Savings (Btus)
- Water Saving (gallons)
- Cost avoided (\$)

Common Language is Foundational

	<u>Terms</u>	Project Requirements	Utilities
Emissions	All Electric Building (Fed. Building Performance Std)		
	Net Zero Operational Emissions Building		
Energy	Net Zero Energy Ready Building	  Designed	 =  +  Designed
	Net Zero Energy Building	  Installed	 =  +  Installed

	No Fossil Fuel Equipment		Fossil Fuel Equipment Allowed		Renewable Electricity		Grid Electricity		Carbon Pollution-Free Grid Electricity
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Note: these definitions address only OPERATIONAL carbon emissions from energy use - not EMBODIED carbon emissions from purchased construction materials.

Customer Partnership

Agency Examples

- [DHS-GSA MOU](#)
- [Climate Risk and Leases](#)

Building Examples

- Wayne Aspinall Federal Building and Courthouse in Grand Junction, CO
- Byron Rogers Federal Building and Courthouse in Denver, CO

Resources

Learn More...

- [GSA Climate and Sustainability Plans](#)
- [Future Facility Infographic](#)
- [Climate Terms](#)
- [More on SFTool.gov](#)

Contacts

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Celebrate Earth Day!

April 22, 2023

earthday.org

Questions???

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eRETA Digest

April 25, 2023
1pm - 2:30pm eastern
[Register Now](#)

June 6, 2023
1pm - 2:30pm eastern
[Register Now](#)

Catch CES sessions on  **YouTube**
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Visit www.gsa.gov/ces
Email clientenrichmentseries@gsa.gov

RWA Policy and Process Fundamentals

May 23rd, 2023
1pm - 3pm eastern
[Register Now](#)

July 20th, 2023
1pm - 3pm eastern
[Register Now](#)

GSA's COVID-19 Resources for Customers
See our [Safer Federal Workplace](#) site 18