

# GSA Decarbonization Task Force

*Spring 2023 Update to the Green Building Advisory Committee*

**May 10, 2023**

# Task Group Members and Observers

## GBAC Members

- Roger Chang, Buro Happold, Co-Chair
- Donnel Baird, BlocPower, Co-Chair
- Kevin Bates, Sharp Development
- Brett Bridgeland, RMI
- Ralph DiNola, NBI
- Gerald Johnson, DOD
- Joyce Lee, IndigoJLD
- Clay Nesler, Nesler Group
- John Park, VA
- Keiva Rodrigues, MAA
- Jane Rohde, JSR Associates
- Costa Samaras, OSTP
- Tim Unruh, NAESCO
- Conan Wilson, EPA

## Observers from organizations including:

- GSA OFHPGB & PBS
- CEQ
- DOE FEMP & BTO
- PNNL
- NREL
- LBNL
- ASHRAE
- AGA
- AWC
- NBI
- RMI
- Branch Pattern
- IUPAT

## **Presentations – Year to Date**

- City of Denver: Electrification Policy
- Department of Energy Building Technologies Office: Heat Pump Research
- Institute for Market Transformation: High Efficiency HVAC
- Google: Decarbonization
- LBNL/DOE: Better Buildings Program
- Department of Energy: Energy Justice
- GSA: Denver Federal Center Adaptive Reuse Project

## Themes of Interest

- Total Cost of Ownership: Navigating Barriers and Maximizing Opportunities
- Demand Reduction: Electrical Service and Grid Considerations
- Equipment Replacement
- Integrated Benefits: Social Cost of Carbon, Comfort, Health, Equity
- Prioritization Matrix: Deeper Dive into Future Grid Emissions and Utility Costs
- Technology Barriers: High Temperature Thermal Energy Systems, High-GWP Refrigerants
- Emerging Technologies
- Streamlined Audits: Virtual Building Electrification/Decarbonization Audits
- Phased Retrofits

# Suggested Priority Themes

- Role of Social Cost of Carbon for Life Cycle Cost Analysis
- Equipment Replacement - Near-Term
- Phased Retrofits

■ High ■ Medium ■ Low

Installed cost - navigating first and life cycle cost barriers.

Demand reduction - electrical service and grid impacts.

Equipment replacement - avoiding emergency like-for-like replacements.

Additional benefits - social cost of carbon, comfort, health, and equity.

Prioritization matrix - deeper dive on impact of future grid emissions and costs.

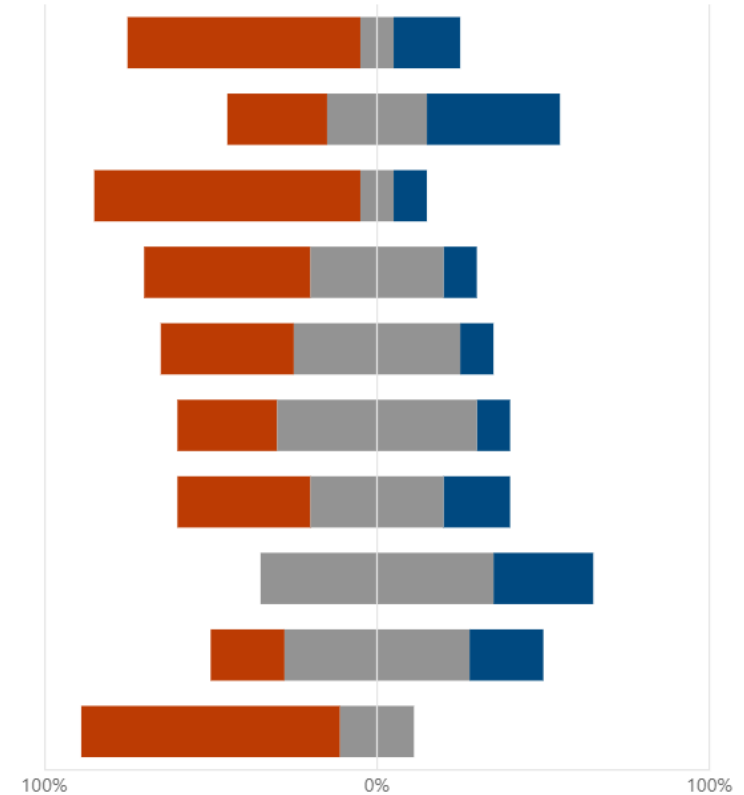
Product procurement - leveraging GSA purchasing power to lower installed costs.

Technology barriers - high temperature central hot water and district thermal systems.

Emerging technology - next generation "green proving ground" technologies.

Streamlined audits - virtual building decarbonization audits.

Phased retrofits - building electrification roadmap development.



## Next Steps

- Additional Topics to Explore:
  - Procurement for equipment (Blanket Purchasing Agreements - BPAs)
  - Evolution of the P-100: Facilities Standards for the Public Building Service
  
- Your thoughts, ideas, questions?