

# SAME NoVA Post Resilience Event

## Objectives

- Objective: Inform attendees about the role electrification has with recent federal government mandates
  - Identify Executive Order 14057 and the 2021 Federal Sustainability Plan high-level goals for carbon-pollution free electricity (CFE); zero-emission vehicles (ZEV); net-zero emissions (NZE) buildings, procurement, and operations; and climate resilience
  - Present the Federal Building Performance Standard (BPS) goal as part of the NZE buildings effort and electrification as the primary pathway to achievement
  - Discuss Electric Power Research Institute (EPRI) decade-long research of electrification solutions for federal government locations and military bases and posts to include small and large office spaces, light industrial and manufacturing, and unique opportunities for aerospace ground equipment (AGE), large equipment maintenance, and large naval ports.



# Electrification Links to EO 14057 and the 2021 Federal Sustainability Plan (FSP)

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Catalyzing America's Clean Energy Economy Through Federal Sustainability

9/7, SAME NoVA Post Resilience Electrification Webinar

# Statutory Requirements to Reduce Greenhouse Gas (GHG) and Related Executive Orders

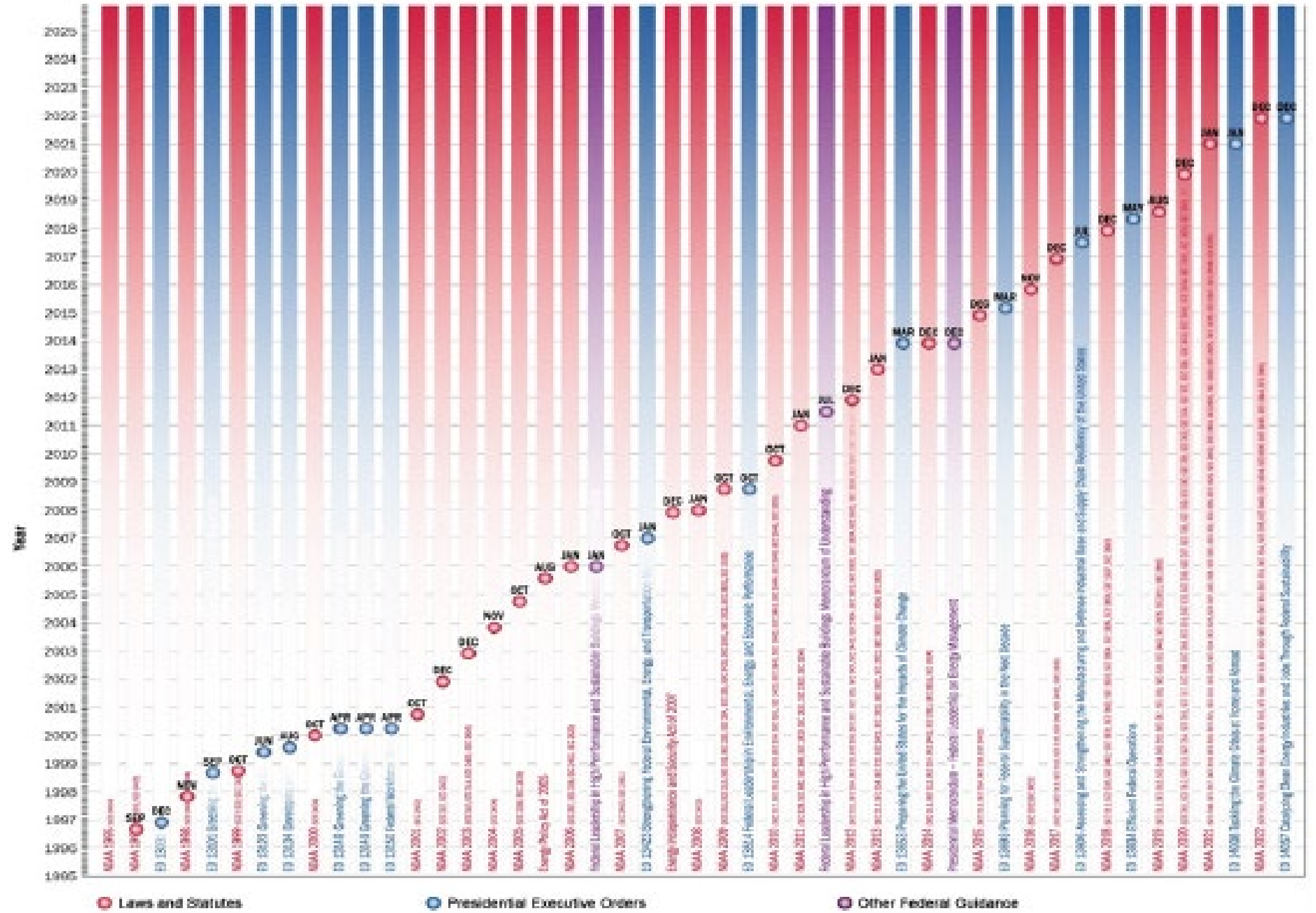
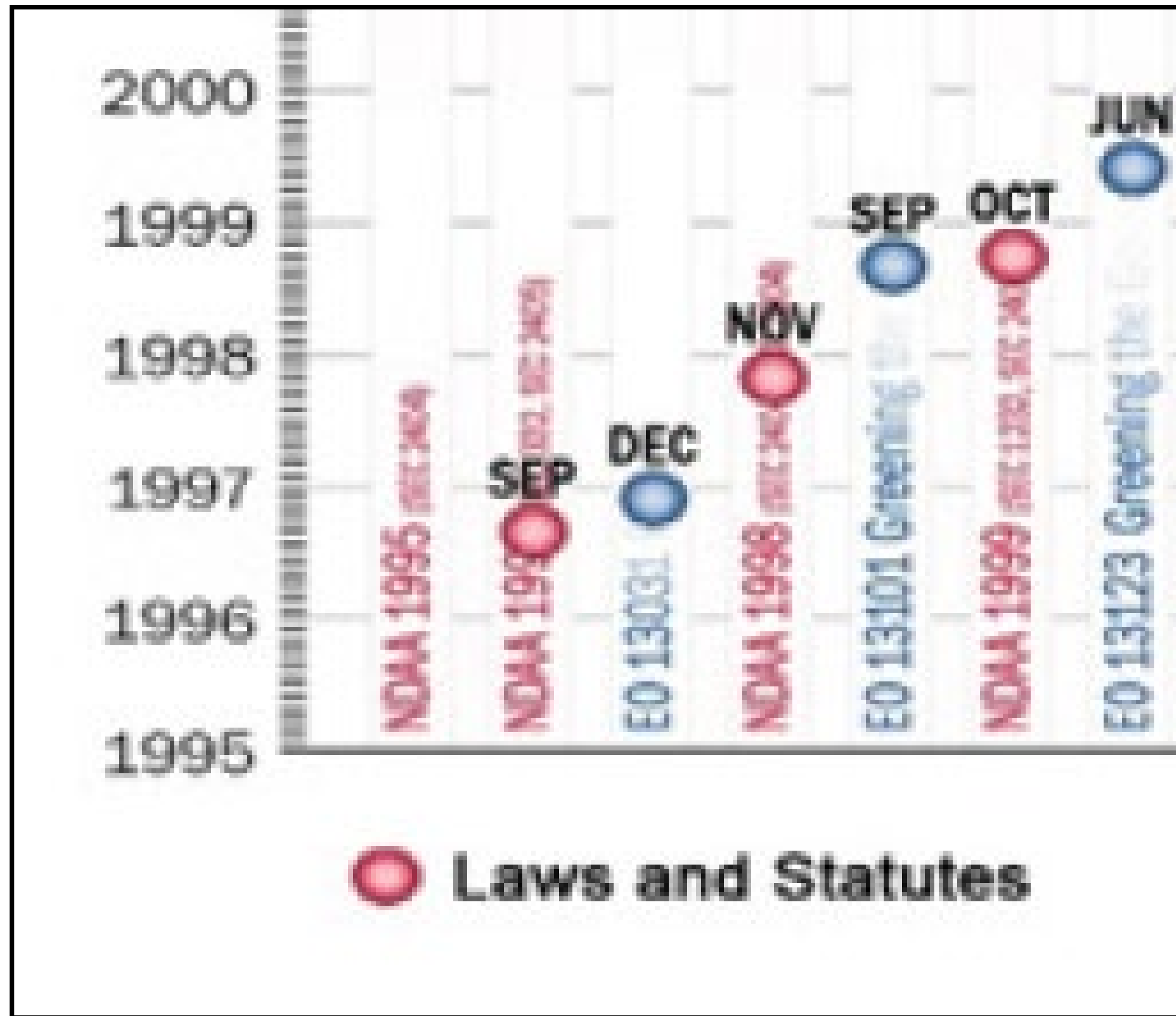
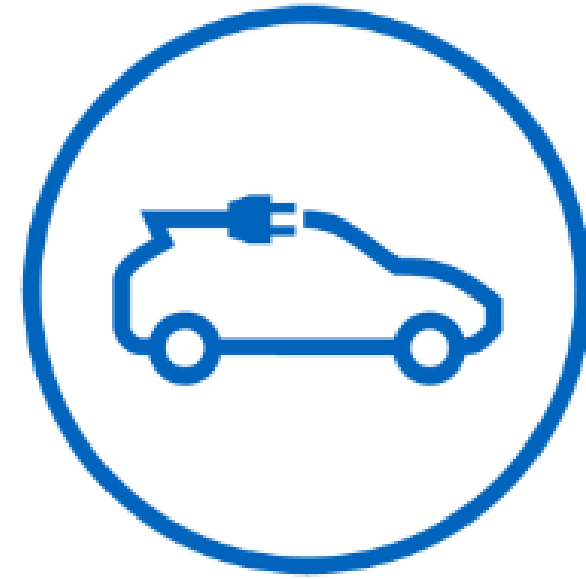


FIGURE 5. EVOLUTION AND TRENDS IN STATUTORY REQUIREMENTS

# EO 14057 and 2021 FSP Goals



100% Carbon Pollution-Free Electricity by 2030, including 50% on a 24/7 basis



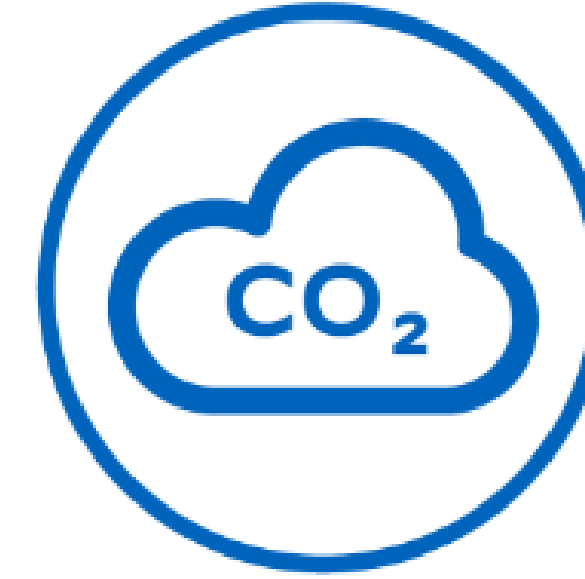
100% Zero-Emission Vehicle Acquisitions by 2035, including 100% light-duty acquisitions by 2027



Net-Zero Emissions Buildings by 2045, including a 50% reduction by 2032



Net-Zero Emissions Procurement by 2050



Net-Zero Emissions Operations by 2050, including a 65% reduction by 2030



Climate Resilient Infrastructure and Operations



Develop a Climate- and Sustainability-Focused Workforce

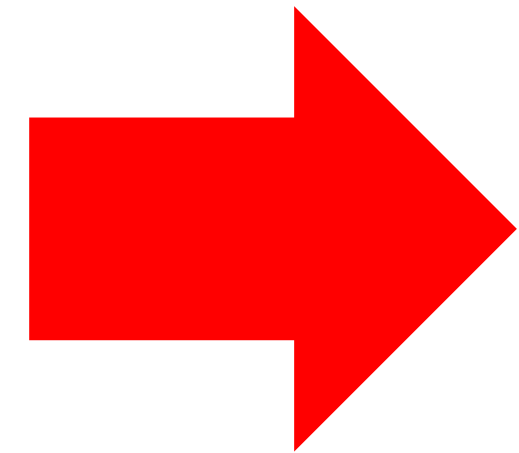


Advance Environmental Justice and Equity-Focused Operations



Accelerate Progress through Domestic and International Partnerships

# Net-Zero Emissions (NZE) Buildings



Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emissions Operations by 2050
Build for net-zero emissions	•	•	•	•	•	•
Implement the Federal Building Performance Standards	•		•	•		•
Increase energy and water efficiency	•	•	•	•	•	•
Reduce waste, minimize use of toxic materials, and drive markets for recycled products			•	•		•
Achieve higher levels of sustainability in owned and leased buildings	•	•	•	•	•	•
Leverage private sector investment	•	•	•	•	•	•
Drive sustainable and equitable siting	•	•	•			
Establish the Net-Zero Emissions Buildings Federal Leaders Working Group			•			•

# Implement the Federal Building Performance Standards (BPS)

## Scope 1 Emissions Defined:

Direct emissions from sources owned or controlled by a reporting company. And a shorthand for scope 1 is “burn” because it includes things your business burns – fuel to heat or power buildings, vehicles, and other equipment. Scope 1 also includes accidental or fugitive emissions like chemical and refrigerant leaks and spills.

# Implement the Federal Building Performance Standards (BPS)

- The goal of the Federal BPS is to eliminate scope 1 emissions from standard building operations –including direct emissions from space heating and cooling, water heating, cooking, backup generators used for non-emergency services (e.g., demand response), and laundry – where **all-electric technology alternatives** exist
- The Federal BPS supports the achievement of multiple goals and requirements of **E.O. 14057 (and the 2021 FSP)**
  - Reducing agency scope 1 GHG emissions (Sec. 202)
  - Achieving net-zero emissions across each agency’s portfolio of buildings, campuses, and installations by 2045 (Sec. 205)
  - Reducing facility GHG emissions by 50 percent by 2032, prioritizing improvement of energy efficiency and elimination of on-site fossil fuel use (Sec. 205).

# Implement the Federal Building Performance Standards (BPS)

- **Goal:** By FY 2030, at least 30 percent of an agency's applicable facilities, measured by gross square footage (GSF), achieve zero scope 1 emissions from on-site fossil fuel use through **building electrification**
- **Applicable Facilities:** All federally owned, EISA-covered facilities located within the U.S. and its territories with scope 1 emissions attributed to standard building operations as of October 1, 2021, and all new facilities that have completed construction after October 1, 2021



# Implement the Federal Building Performance Standards (BPS)

- Pathways to Meet the Goal

- Performance Pathway: Facility achieves zero scope 1 emissions from on-site fossil fuel emissions.
- Alternative Compliance Through the Prescriptive Pathway: **Implement all practicable electrification** by upgrading system-specific equipment for space heating and domestic/service water heating system types (per Appendix 2). In addition, all cooling, cooking, backup generators used for non-emergency services (e.g., demand response), and laundry loads that do not qualify as an exclusion must **be all-electric**.
- Exclusions: Agencies can **exclude** on-site fossil fuel emissions resulting from **mission-critical activities (including national security, as determined by the Head of the agency) and process loads (manufacturing, industrial, and commercial process loads)** for which no practicable strategy exists to eliminate scope 1 emissions. Agencies must separately meter or estimate and account for those loads on a regular basis

# Backup

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# Carbon Pollution-Free Electricity (CFE)

Net-Zero  
Emmissions  
Operations by  
2050

Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emmissions Operations by 2050
Aggregate CFE purchases across regions and agencies	●	●	●	●	●	●
Seek ways to pilot and accelerate promising CFE sources	●		●	●	●	●
Develop public and private sector partnerships	●			●		●
Establish the 100% 24/7 CFE Federal Leaders Working Group	●			●		●

# Zero-Emission Vehicle (ZEV) Acquisitions

Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emmissions Operations by 2050
Optimize agency fleet management		•	•	•	•	•
Align financial planning		•	•	•		•
Expand vehicle charging infrastructure	•	•	•	•	•	•
Improve workforce understanding and effect cultural change		•	•	•		•
Provide State, Tribal, and local government fleets opportunities to benefit from Federal efforts		•		•		
Establish the ZEV Fleets Federal Leaders Working Group	•					•

# NZE Procurement

Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emmissions Operations by 2050
Require major Federal suppliers to publicly disclose GHG emissions and climate risks, and set science-based targets to reduce emissions	•	•	•	•		•
Launch a Buy Clean initiative for low-carbon materials		•	•	•		•
Change Federal procurement rules to minimize the risk of climate change, including factoring in the social cost of GHG in to procurement decisions	•	•	•	•	•	•
Maximize the procurement of sustainable products and services	•	•	•	•	•	•
Establish the Net-Zero Emissions Procurement Federal Leaders Working Group, including a Buy Clean Task Force	•	•	•	•	•	•

# NZE Operations

Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emmissions Operations by 2050
Use 100% CFE by 2030, including 50% on a 24/7 basis	•					•
Achieve 100% ZEV Acquisitions by 2035		•				•
Achieve Net-Zero Emissions Buildings by 2045			•			•
Achieve Net-Zero Emissions Procurement by 2050				•		•
Partner with public, private, and nonprofit sector leaders	•	•	•	•		•

# Climate Resilient Infrastructure and Operations

Actions	CFE	Fleet	Buildings	Procurement	Adaptation	Net-Zero Emmissions Operations by 2050
Routinely assess climate vulnerabililities and risks	•	•	•	•		•
Modernize Federal policy, programs, operations, and infrastructure to support climate resilient investment	•	•	•	•		•
Establish the Climate Adaptation and Resilience Federal Leaders Working Group	•	•	•	•		•