

# City of Sacramento Existing Building Electrification Strategy Commercial Focus



*City of*  
**SACRAMENTO**  
EXISTING BUILDING  
ELECTRIFICATION

Public Review Draft Webinar  
November 2, 2023

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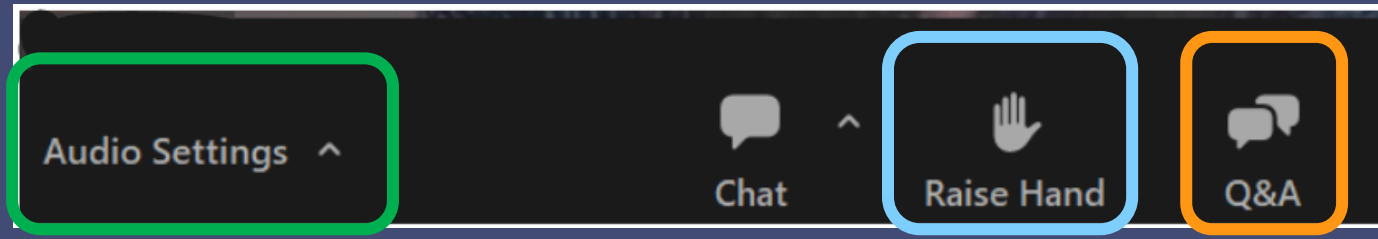
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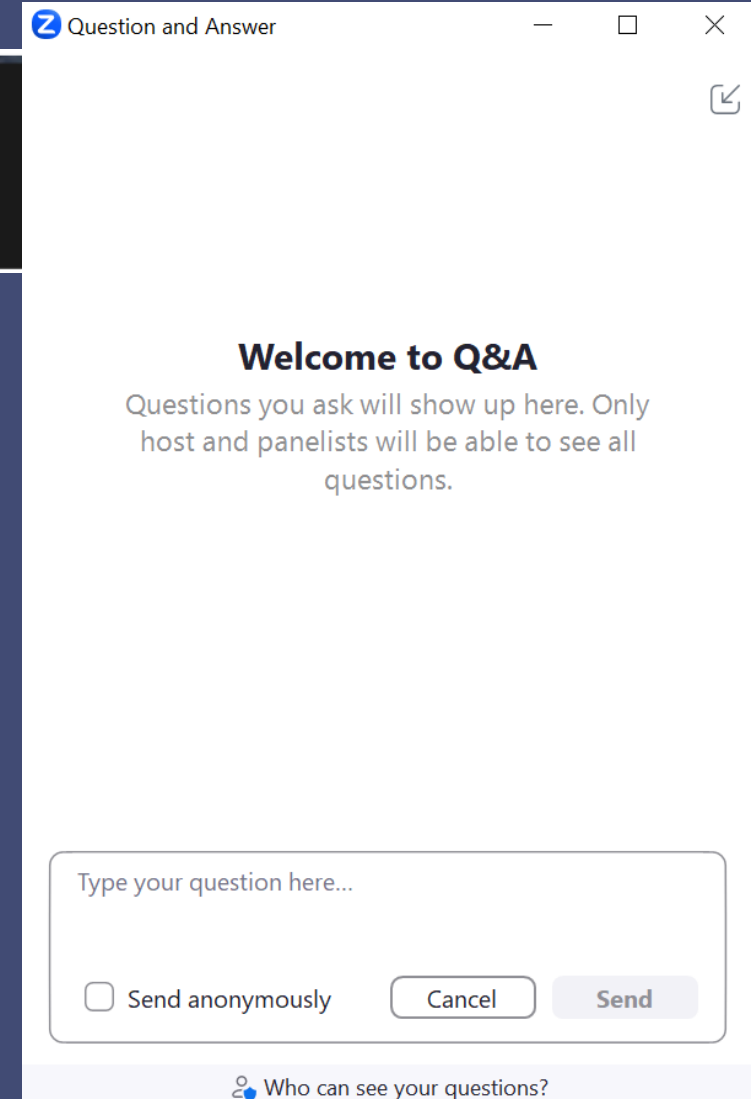
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# Agenda

- ▷ Background
- ▷ Strategy Overview
- ▷ How to Participate
- ▷ How the Strategy Works
- ▷ Q & A
- ▷ Wrap Up

To meet our climate goals, Sacramento's building stock must be **carbon neutral by 2045**



City of  
**SACRAMENTO**

## **Climate Action & Adaptation Plan**



**Public Review Draft**  
April, 2023





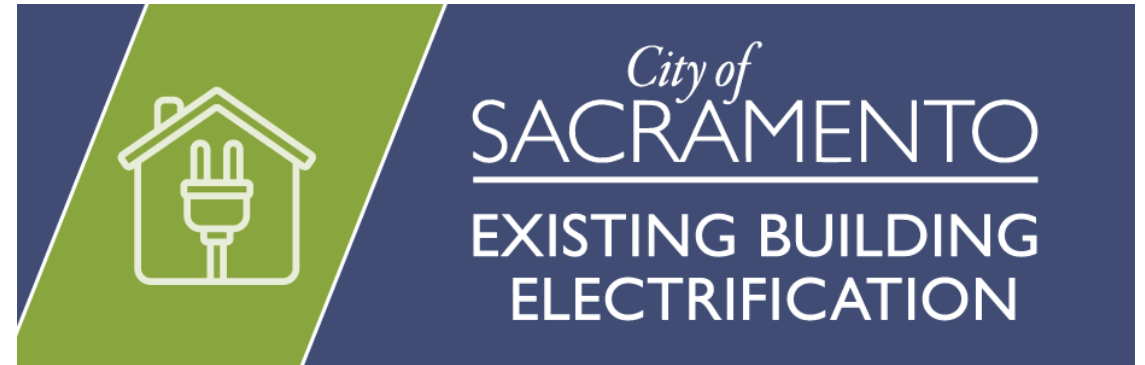
# Greenhouse gas emission reductions

Building electrification leverages SMUD's 2030 Zero Carbon Vision





- ▷ **Adopted standards for new buildings** 3 stories or less, with some limited exemptions.
- ▷ Effective January 1, 2023
- ▷ Impacted by court decision in CRA v. City of Berkeley



- ▷ **Proposed long-term policies** to transition **existing buildings** to all electric by 2045
- ▷ **Draft Strategy** out for public review
- ▷ Will be finalized following adoption of the General Plan and Climate Action & Adaptation Plan

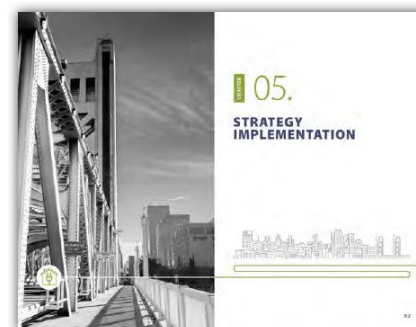
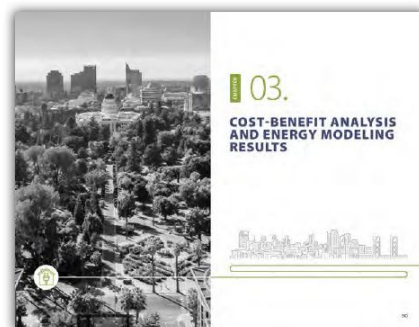
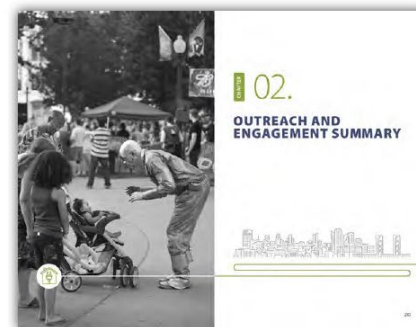
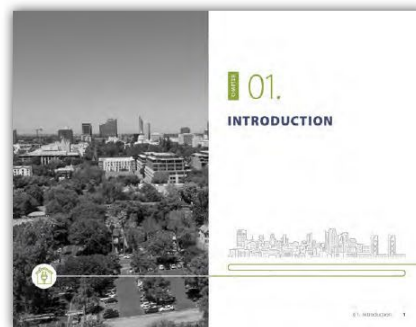
# STRATEGY OVERVIEW

City of Sacramento  
**EXISTING BUILDING  
ELECTRIFICATION STRATEGY**



## Reading this Document

The Strategy is divided into five chapters and includes a technical appendix. *Chapter 02* summarizes the outreach efforts that informed the Strategy. *Chapter 03* covers cost analysis and energy modeling results. *Chapter 04* outlines core policies and supporting actions, and *Chapter 05* details the implementation timeline and implementing departments.





# Provide your input!

Review the Strategy and provide feedback using the Konveio online platform

OR

View/download the PDF of the Strategy and email your comments to:  
[electrification@cityofsacramento.org](mailto:electrification@cityofsacramento.org)

Click anywhere in the document to add a comment. Select a bubble to view comments.

City of SACRAMENTO

## Existing Building Electrification Strategy

Guided Tour Hide

Step through this 10 part tour to learn more about each section of the strategy. Do the tour all at once, or feel free to exit the tour as you find sections of interest. You can review and comment on the strategy and pick up where you left off!

Next →

Guided Tour Full Document

# How do we **electrify existing buildings**?

Replace gas appliances with energy efficient electric appliances



Gas furnace



Electric air source  
heat pump provides  
heating & *cooling*



Gas water heater



Electric heat  
pump water heater



Gas stove



Electric resistance  
or induction  
cooktop & oven



Gas clothes dryer



Electric resistance  
or heat pump  
clothes dryer

# What are the Benefits of Electrifying Existing Buildings?

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## Greenhouse gas emission reductions

- Building gas accounts for 15% of GHG emissions in Sacramento



## Community Health

- Electric appliances → improved air quality, reduced risk of asthma



## Energy Affordability

- On bill savings now, increasing savings over time.



## Resilience & Safety

- Decreased fire & carbon monoxide risk, increased resilience with solar



## Equity

- Equitable access to health, safety, comfort, and economic benefits.

# Equity and Effectiveness Criteria

## Equity Criteria



**Affordable and Reliable Energy**



**Easy and Affordable Installation**



**Holistic Building Improvements**



**Culturally Competent  
Outreach and Education**

## Effectiveness Criteria



**Cost-Effectiveness**



**Programmatic Feasibility**



**Measurable and Sustained Impact**



**Technological and  
Regulatory Feasibility**



**Energy Security**

# How Community Shaped the Strategy

- Tailored approach for residential and commercial building types
- Community helped develop equity criteria
- Equity criteria informed supportive actions in the strategy
- Difficult to electrify end uses are being addressed with a phased and flexible approach



## CHAPTER 02.

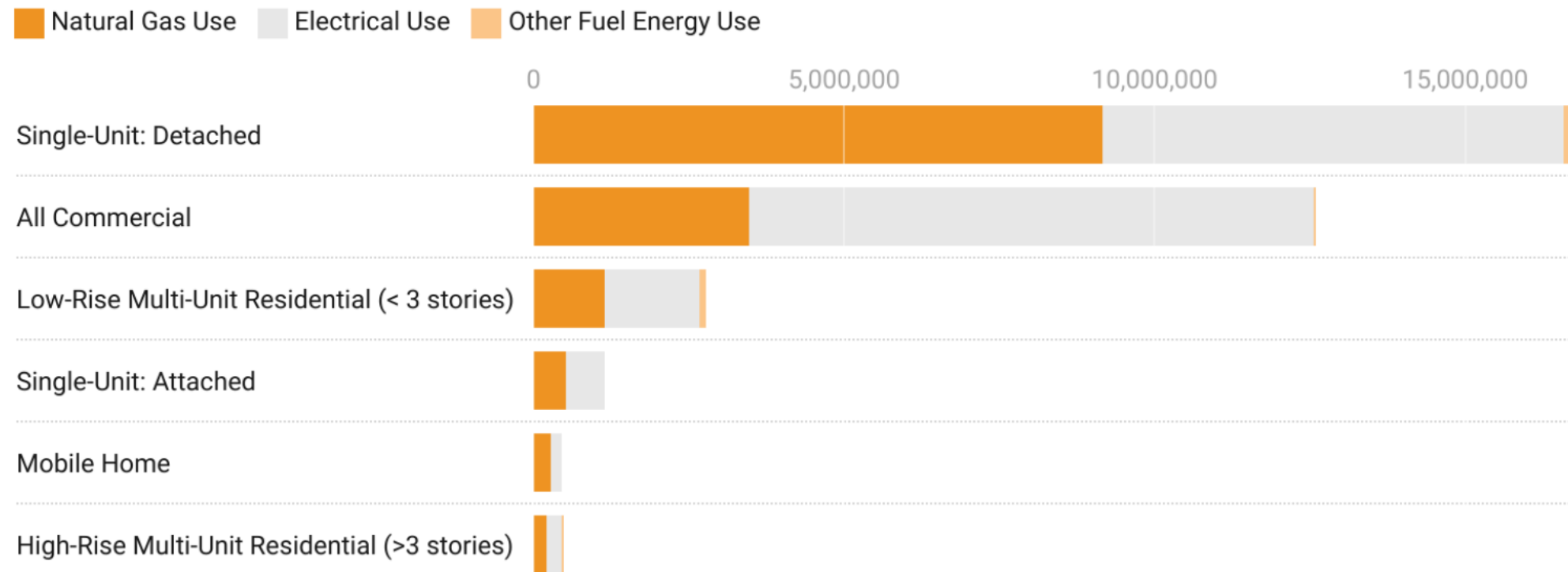
### OUTREACH AND ENGAGEMENT SUMMARY





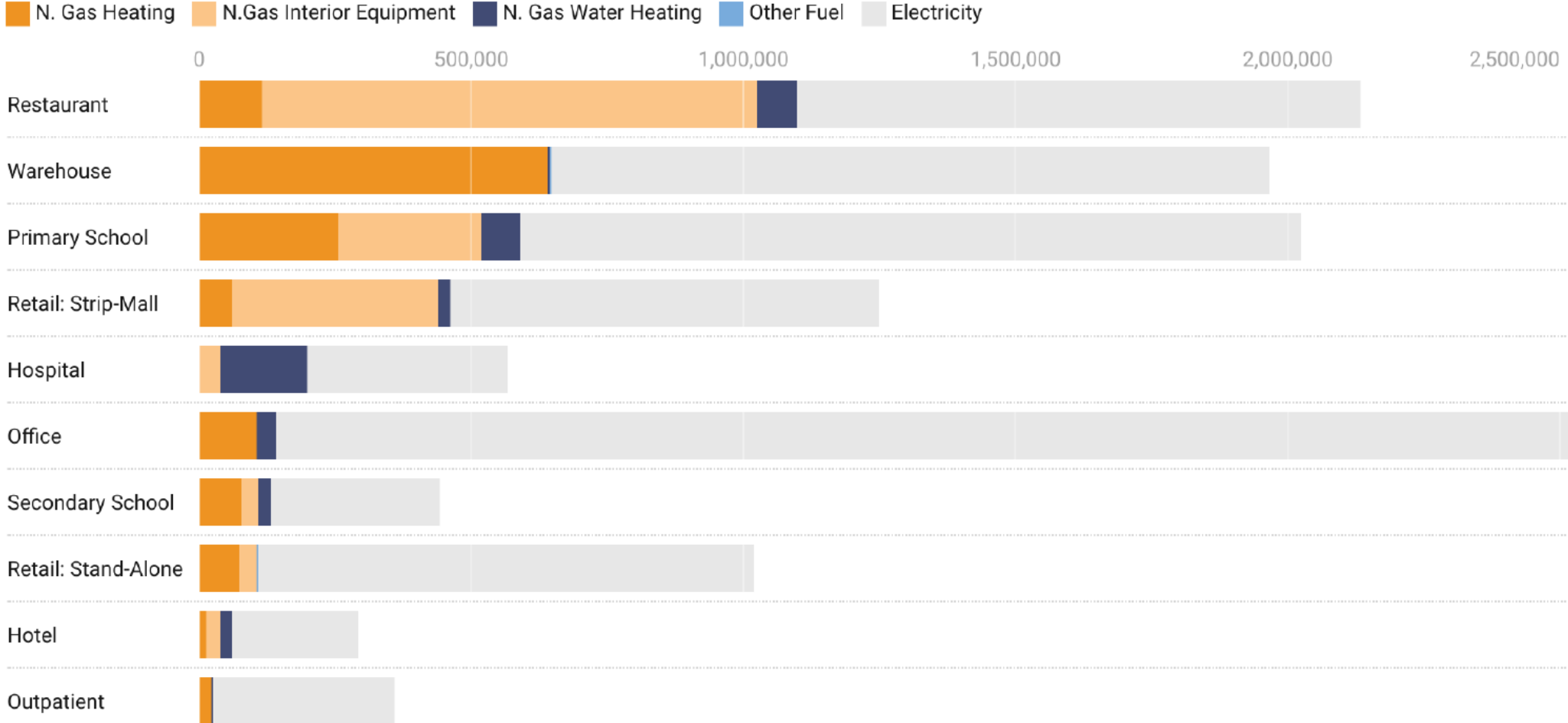
# Energy Use from Buildings in Sacramento

Figure 4. Total Sacramento Energy Use by Building Type (MMBtu/Year)



# Commercial Building Energy Consumption

Figure 6. Commercial Building Energy Consumption (MMbtu/Year)



**HOW WILL WE ACHIEVE ALL  
ELECTRIC BUILDINGS BY 2045?**

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# POLICY FRAMEWORK AT A GLANCE

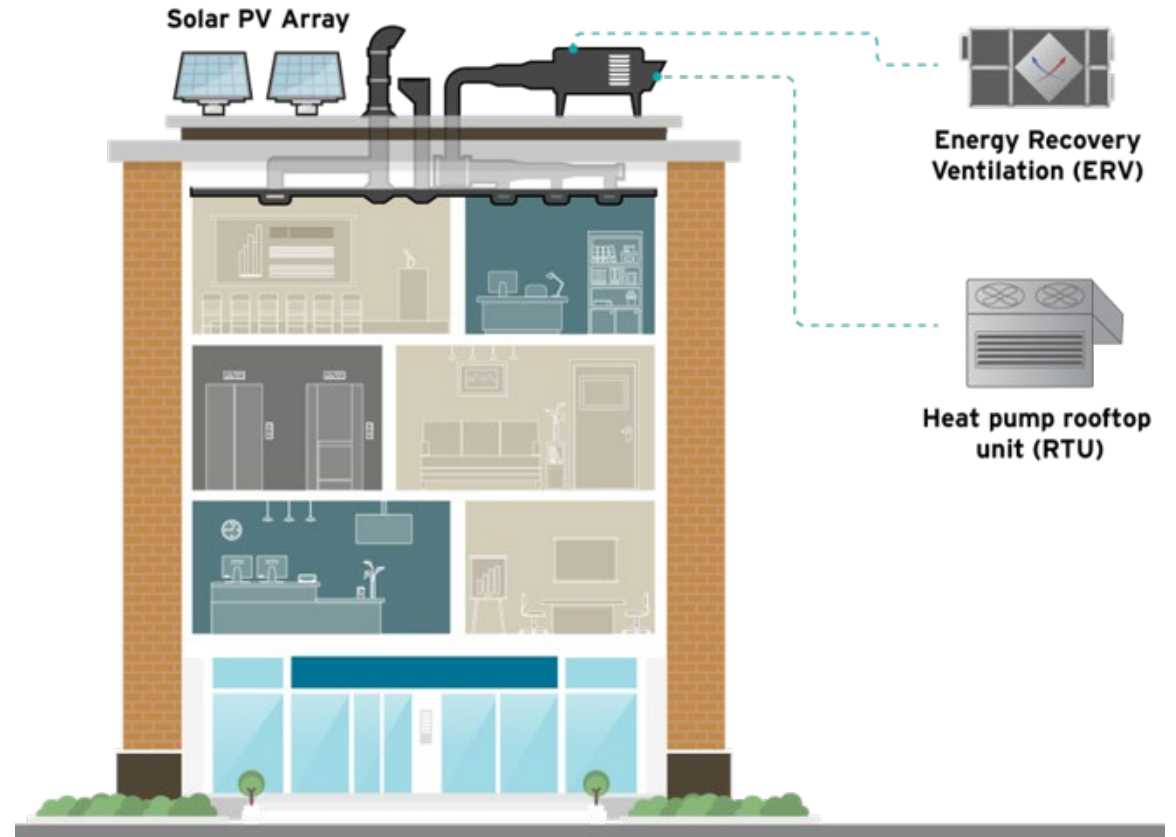
## DRAFT STRATEGY

	Appliance Type	
Building Type*	HVAC	Stoves and other appliances
Small commercial non-residential	Convert to heat pump at time of AC replacement for rooftop packaged HVAC	Education, support and incentives
Large Multi-Unit residential	Benchmarking/Building Performance Standards	
Large commercial non-residential	Benchmarking/Building performance standards	

# Commercial Buildings Strategy:

## Time of Replacement for Rooftop Package Unit HVAC

- ▶ Rooftop package HVAC (furnace and AC packaged together) are typically cost effective and relatively straightforward to replace with a heat pump unit.
- ▶ California Energy Commission is proposing a prescriptive requirement for gas-fired single zone rooftop unit replacements to be heat pump based in Alterations.

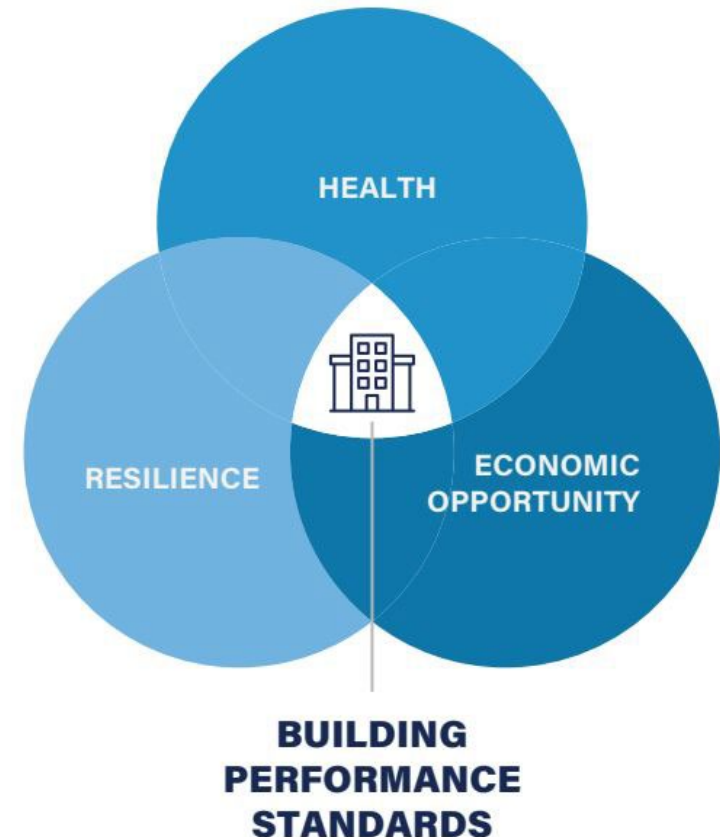




# Commercial Buildings Strategy:

## Benchmarking and Building Performance Standards

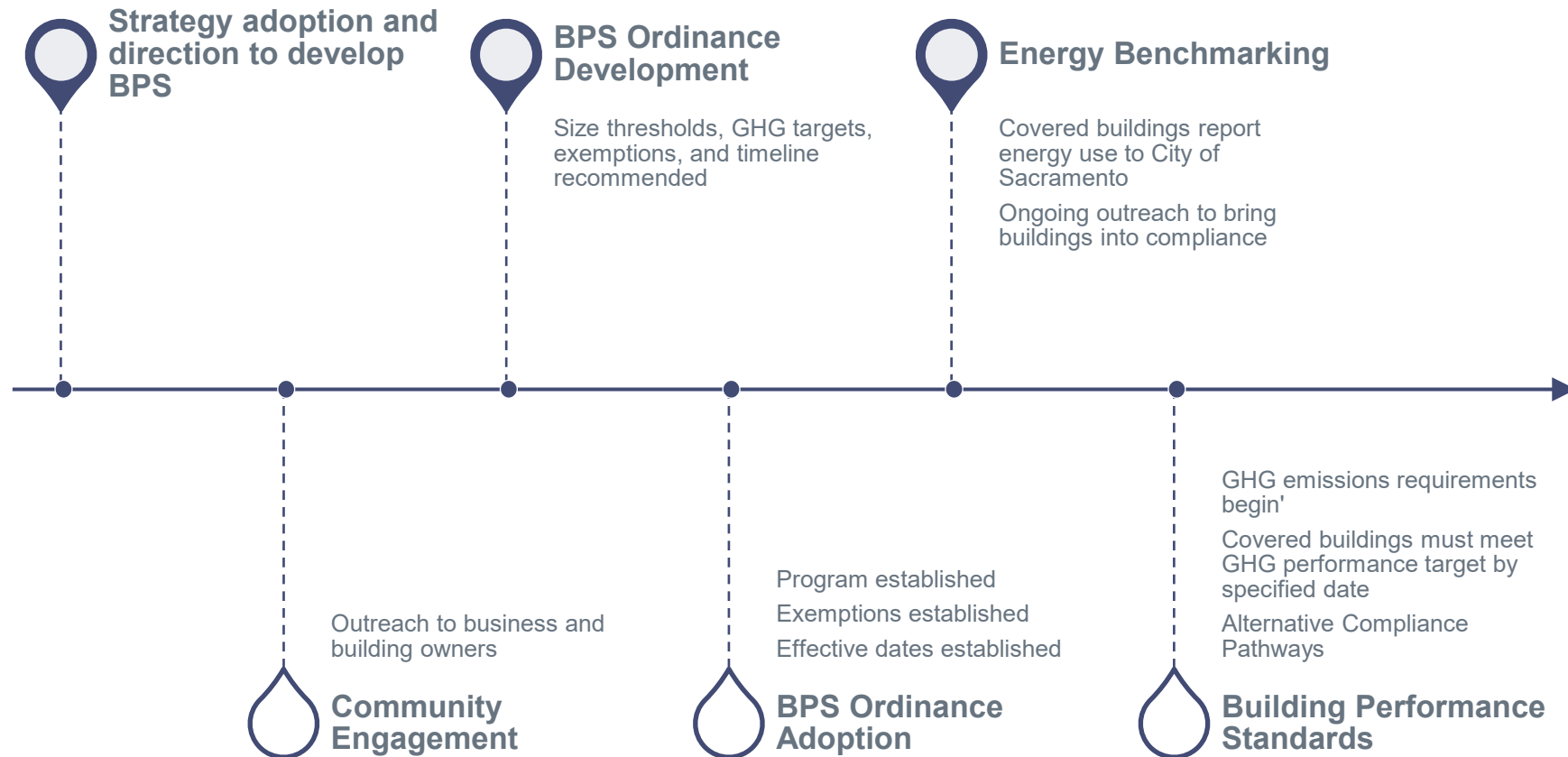
- ▶ Benchmarking gives the City and building owners a detailed understanding of building energy use.
- ▶ Building Performance Standards would require buildings to meet GHG performance targets by specific deadlines
- ▶ Flexible approach to help building owners use less energy, provide cleaner air, increase comfort, and reduce utility bills.



# Building Performance Standard **Benefits**



# Building Performance Standards (BPS) Program Development Process



# Benchmarking and BPS: State Level Action

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## AB 802

- ▷ Effective January 1, 2016
- ▷ Requires owners of buildings 50,000 square feet and larger to report energy use to the State
- ▷ Goal of reducing energy use in large buildings.

## SB 48

- ▷ Signed by Governor Newsom in September 2023
- ▷ Will require the California Energy Commission to develop a strategy for state level Building Performance Standards by 2026

# Supportive Actions for Commercial Buildings

Action #	Action Description
C-8	Dedicate staff time to assisting small and medium-sized building owners to access rebates and other incentives for electrification through partners like SMUD and State and federal programs.
C-9	Work with leaders in the local business community with the aim of identifying, piloting, and scaling large energy efficiency and electrification projects.
<b>EQUITY CRITERIA 2: Easy and Affordable Installation</b>	
C-10	Connect to building owners covered by the BPS program to SMUD for incentives, financing, education, and information to support buildings undergoing electrification retrofits.
<b>EQUITY CRITERIA 3: Holistic Building Improvements</b>	
C-11	Promote the inclusion of energy efficiency and optimization upgrades to commercial buildings to avoid upsizing of electrical infrastructure and appliances.
<b>EQUITY CRITERIA 4: Culturally Competent Outreach and Education</b>	
C-12	Collaborate with local ethnic businesses, restaurants, and associations to advance education and partnership for innovative electric and zero-carbon cooking technologies.
C-13	Explore opportunities to support and collaborate with local CBOs for culturally appropriate, multilingual outreach campaigns about building electrification in environmental justice communities and Black, Indigenous, and People of Color-run businesses, with a focus on hard-to-electrify building types (e.g. commercial kitchens).
C-14	Identify chefs and restaurateurs to collaborate with to promote all-electric commercial kitchen training through local business-led collaboration and partnerships.
<b>EQUITY CRITERIA 5: Support City and Regional Efforts to Avoid Displacement for Households and Business, Prioritize Low-Income and Under-Resourced Communities and Small Businesses</b>	
C-15	Develop and expand pilot programs to support building repair and electrification of small businesses to reduce monthly costs and support anti-displacement.

Benchmarking a



# What about stoves and dryers?



- City is not currently contemplating requirements for stoves or dryers.
- There are indoor air quality, health, and safety benefits to making the switch to an electric or induction stove
- Incentives are available for switching to induction stoves (SMUD and Inflation Reduction Act)

# Public Funding to Support Equitable Electrification



## Popular rebates

Our rebates range from simple to custom energy upgrades.  
Don't know where to start? Connect with your [Strategic Account Advisor](#).



### Lighting

Whether you're replacing a few lights or doing a complete overhaul, we have options for you.

[Learn more](#)



### Refrigeration

Explore our refrigeration rebates, including efficiency options.

[Learn more](#)



### HVAC

Cut costs to install a new heating or cooling system, including parts and contractor fees.

[Learn more](#)

## SMUD Commercial Incentives

- ▶ Energy efficiency rebates for complex projects
- ▶ Rebates for refrigeration, food service equipment, lighting, HVAC equipment

# Public Funding to Support Equitable Electrification



## State of California Equitable Building Decarbonization Program

- ▷ ~\$150 million allocated for Northern California Region in CEC Equitable Building Decarbonization Program
- ▷ Direct install program
- ▷ Program guidelines adopted by the CEC on October 18, 2023
- ▷ Competitive solicitation for program administrators expected soon

# Public Funding to Support Equitable Electrification

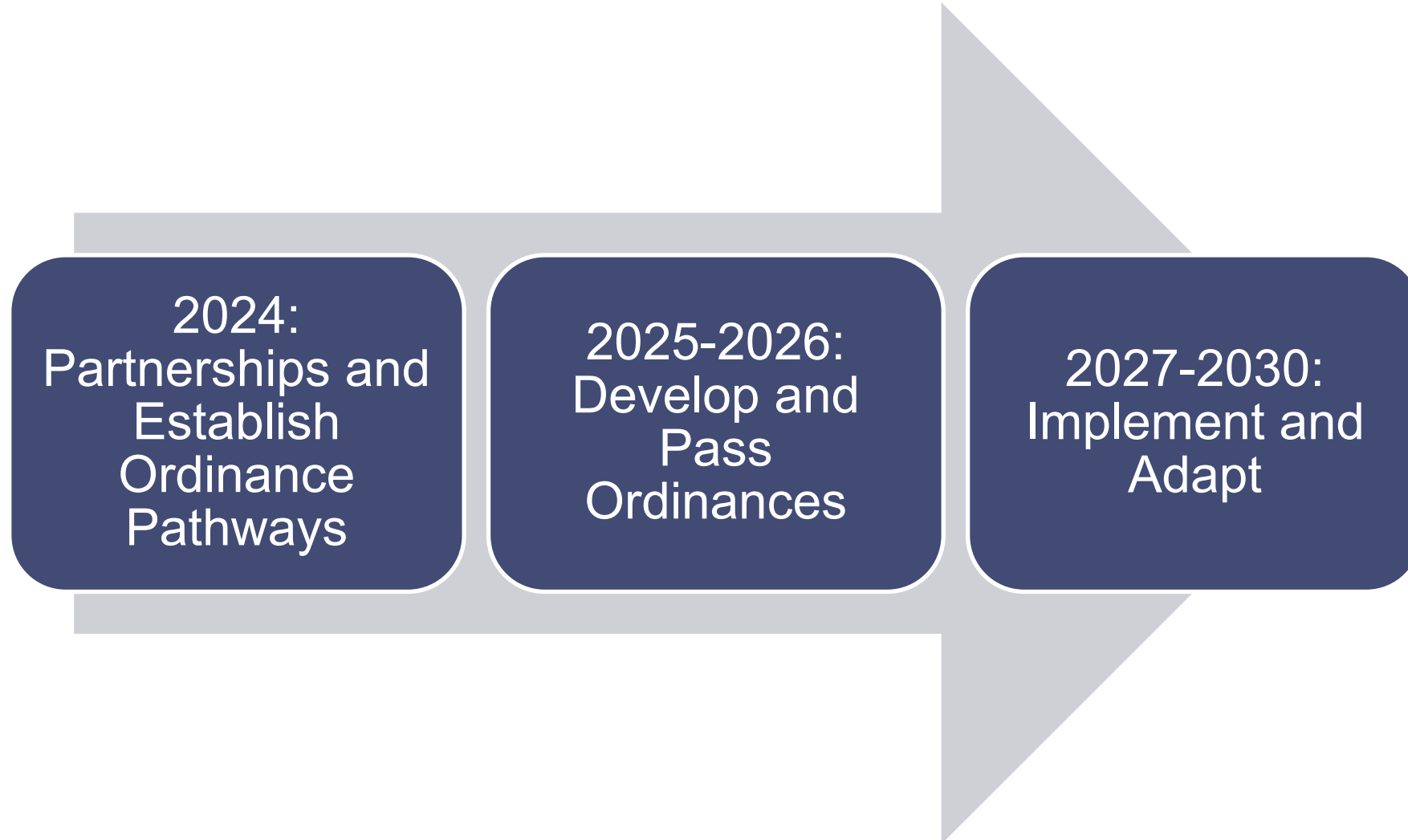


## Federal Inflation Reduction Act

- ▷ Tax Credits for Equipment Retrofits
  - Heat pump HVAC
  - Heat pump water heater
  - Weatherization
  - Panel upgrade
  - Battery storage
  - Solar
- ▷ Tax Credits for Energy Efficiency
  - Per square foot tax credit for improving energy efficiency by at least 25% in commercial buildings
- ▷ Up Front Incentives
  - Available in 2024
  - Will cover 100% of project costs for up to 80% AMI
  - Will cover 50% of project costs for up to 150% AMI
  - Rebate cap based on equipment/project type
  - Total rebate cap of \$14,000

# Implementation Timeline

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# Next Steps

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- Public Comment open through December 17th, 2023
- Strategy Revisions based on public comment
- Planning and Design Commission and City Council Spring 2024
- 2024 and beyond: Continued outreach, strategy implementation and ordinance development

# Q&A



# Thank You!

Learn More: [www.cityofsacramento.org/electrification](http://www.cityofsacramento.org/electrification)

Contact Us: [electrification@cityofsacramento.org](mailto:electrification@cityofsacramento.org)