

City of Sacramento Existing Building Electrification Strategy Residential Focus



City of
SACRAMENTO
EXISTING BUILDING
ELECTRIFICATION

Public Review Draft Webinar
November 7, 2023

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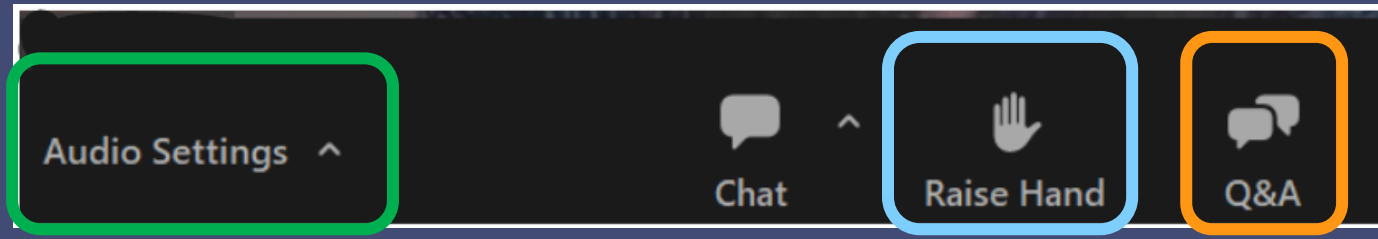
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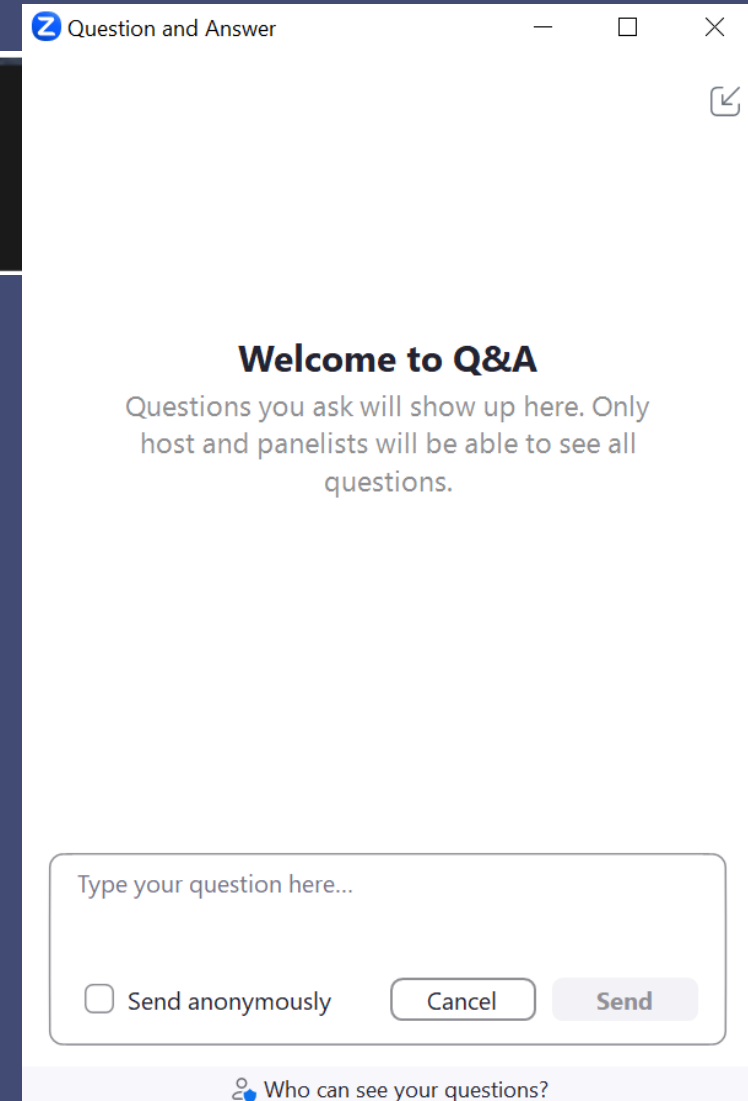
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Using Zoom Webinar Controls



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skolarik@cityofsacramento.org



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



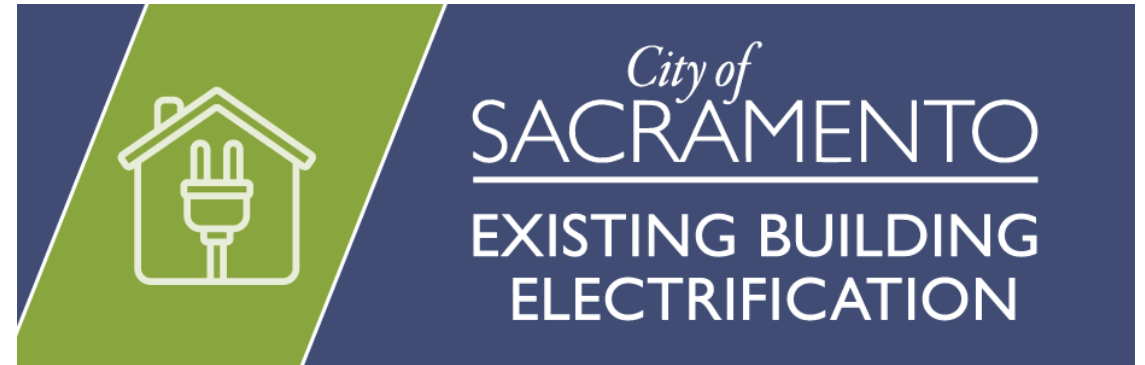
Greenhouse gas emission reductions

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

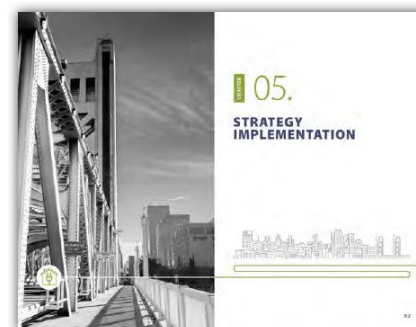
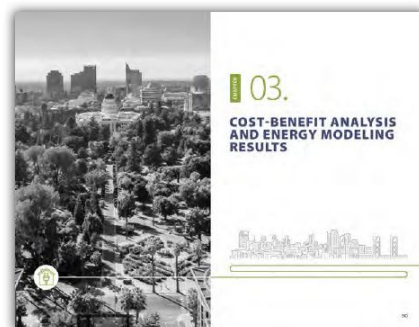
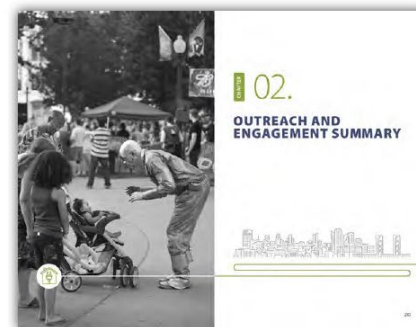
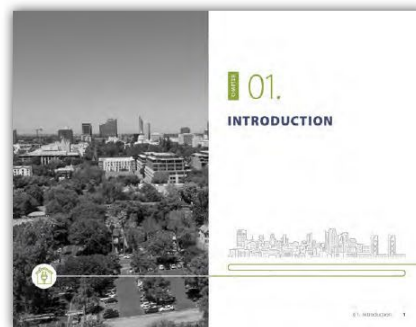
STRATEGY OVERVIEW

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

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

City of SACRAMENTO

Existing Building Electrification Strategy

City of Sacramento
EXISTING BUILDING ELECTRIFICATION STR.

↓ 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?



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



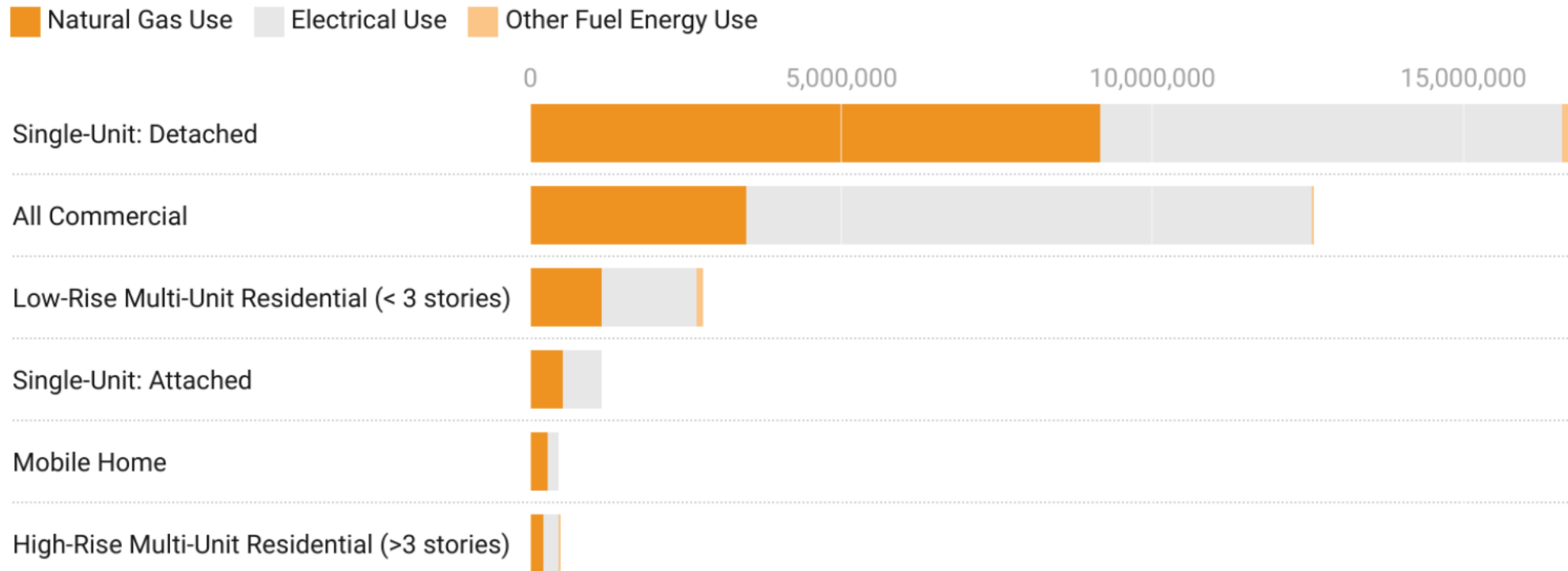
CHAPTER 02.

OUTREACH AND ENGAGEMENT SUMMARY



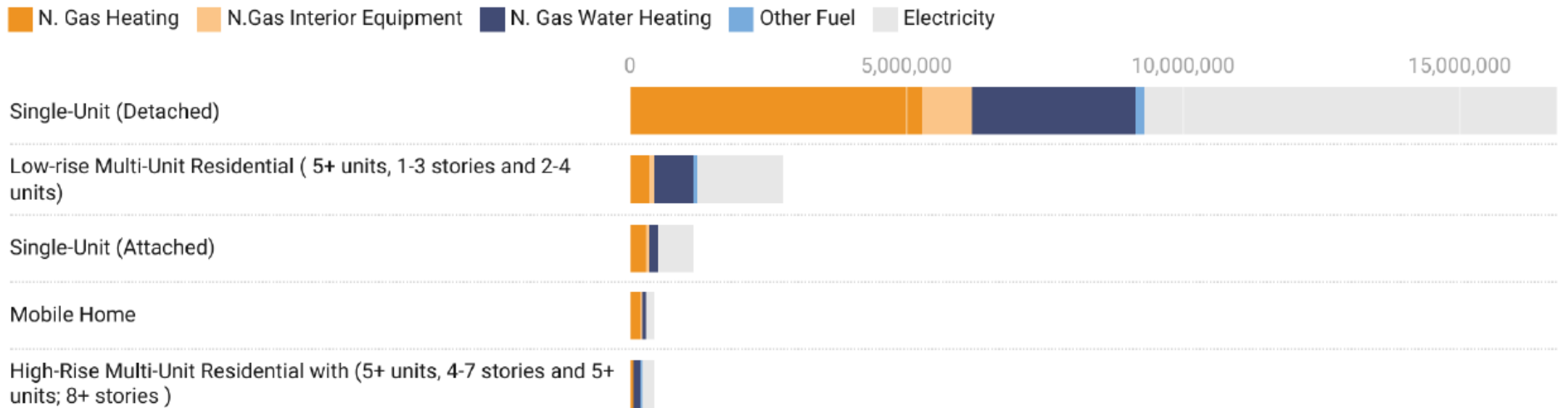
Energy Use from Buildings in Sacramento

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



Residential Building Energy Consumption by End Use

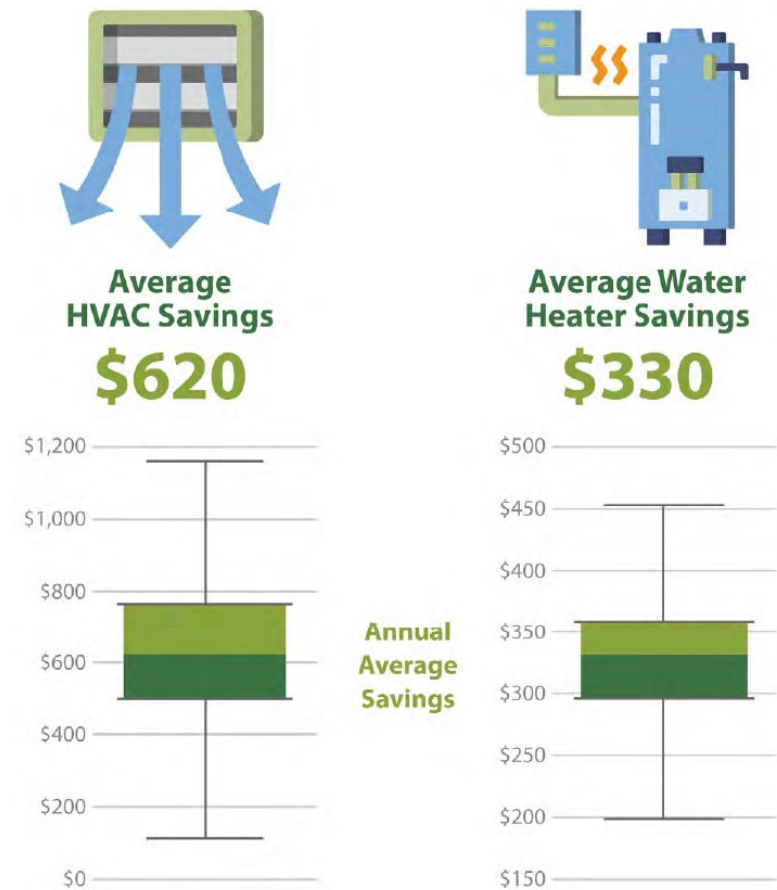
Figure 5. Residential Building Energy Consumption by End Use (MMbtu/Year)



Projected On-Bill Savings for 100% of single-family homes



Figure 8. Annual On-Bill Cost Savings for Single-Unit Residential Homes after Switching to a Heat Pump



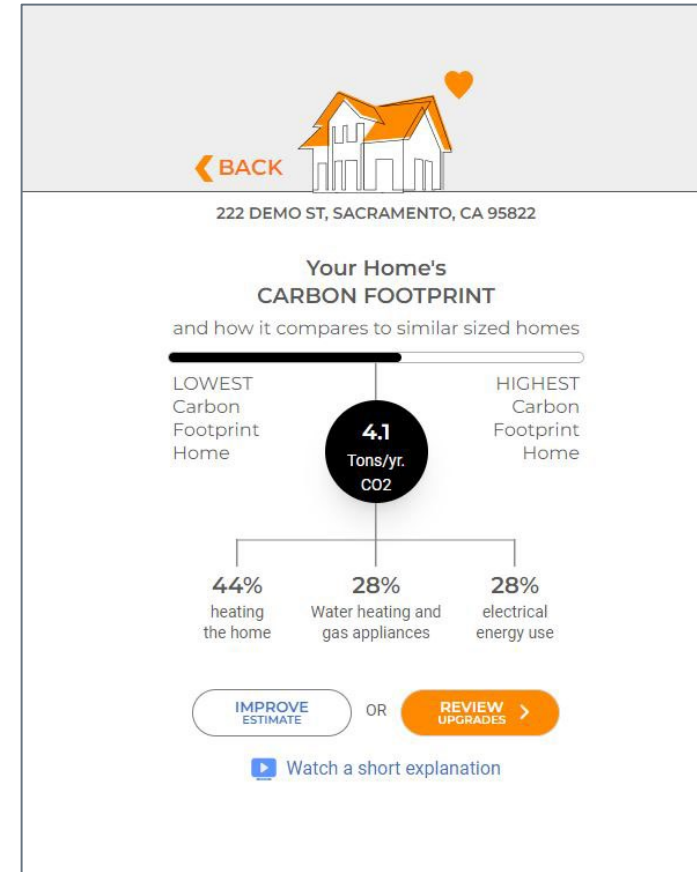
- ▶ Projected savings based on 2022 modeling
- ▶ Customized estimates available through the Xerohome platform
- ▶ State cost effectiveness studies show widespread cost effectiveness for electrification in Sacramento

XeroHome Tool



The XeroHome tool is now open for Sacramento residents!

- ▶ Any single-family home resident can use XeroHome
- ▶ Customized energy model using publicly available data
- ▶ Estimated costs, available incentives, projected utility bill savings and payback periods.



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

Single Unit/Small Multi-Unit Residential: Potential Ordinance Pathways

At time of replacement and/or addition/alteration, in accordance with applicable laws and regulations:

- ▷ Requirement that central air conditioners be replaced with appliances that can provide both heating and cooling;
- ▷ EPCA compliant flexible path reach code, requiring additions/alterations to exceed the State Building Energy Efficiency Standards;
- ▷ Requirement that gas lines be capped; and/or
- ▷ All-electric requirements

Why electrification at time of replacement?

- ▷ **Incentives** for switching from gas to electric appliances
- ▷ **Syncs** with when building owners would replace appliances anyway.



Supportive Actions for Residential Buildings

Action #	Action Description
EQUITY CRITERIA 2: Easy and Affordable Installation	
R-7	Conduct a review of permitting procedures to identify and remove hurdles to electrification.
R-8	Continue to work with SMUD to review and simplify incentive programs.
R-9	Continue to support SMUD in their direct install program for residents under the Energy Assistance Program Rate (EAPR) and leverage complementary City investments.
R-10	Continue to work with SMUD to make information available to help Sacramento households avoid unnecessary panel upgrades and associated time and cost at the time of electrification improvements.
EQUITY CRITERIA 3: Holistic Building Improvements	
R-11	Work with program administrators to investigate the feasibility of integrating electrification education efforts with existing weatherization education programs.
R-12	Support low-income weatherization programs and tie in electrification when feasible to maximize health benefits and cost savings.
R-13	Continue to support building electrification through collaboration with the City's low-income home rehabilitation and repair pilot programs.
EQUITY CRITERIA 4: Culturally Competent Outreach and Education	
R-14	Promote and support local electric cooking pilot collaborations and identify external funding opportunities for implementation.
R-15	Assess opportunities to acquire funding and otherwise collaborate with community organizations and the City's Community Ambassadors regarding best practices for providing culturally sensitive education to the community on electrification opportunities and benefits, links to incentives, financing options, and technical assistance, including education targeted to disadvantaged communities.

What about stoves and dryers?



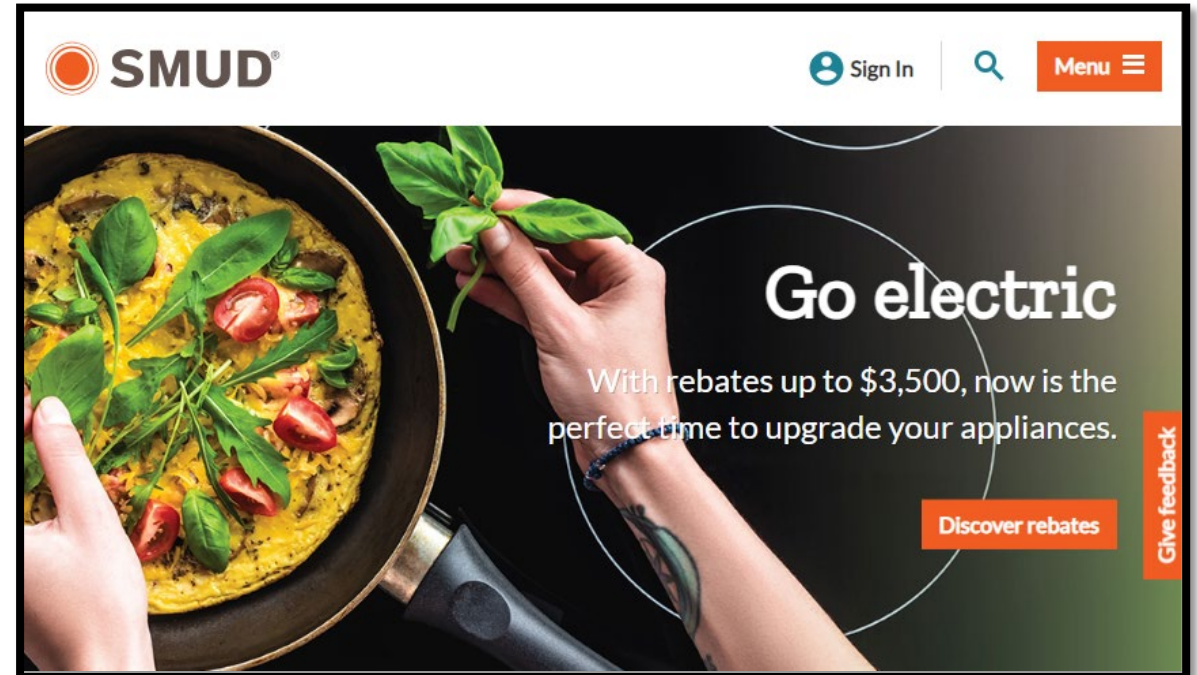
- City is not currently contemplating requirements for stoves or dryers.
- There are indoor air quality, health, and safety benefits to making the switch to an electric or induction stove
- Incentives are available for switching to induction stoves (SMUD and Inflation Reduction Act)

Public Funding to Support Equitable Electrification



SMUD Residential Incentives

- ▷ Rebates for
 - Heat Pump HVAC
 - Heat Pump Water Heaters
 - Induction Stoves
 - Panel upgrades for electric conversion
- ▷ Work with contractor from SMUD contractor network



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

State of California TECH Program

- ▷ Rebate for Heat Pump HVAC
- ▷ Must work with a TECH-enrolled contractor

Public Funding to Support Equitable Electrification

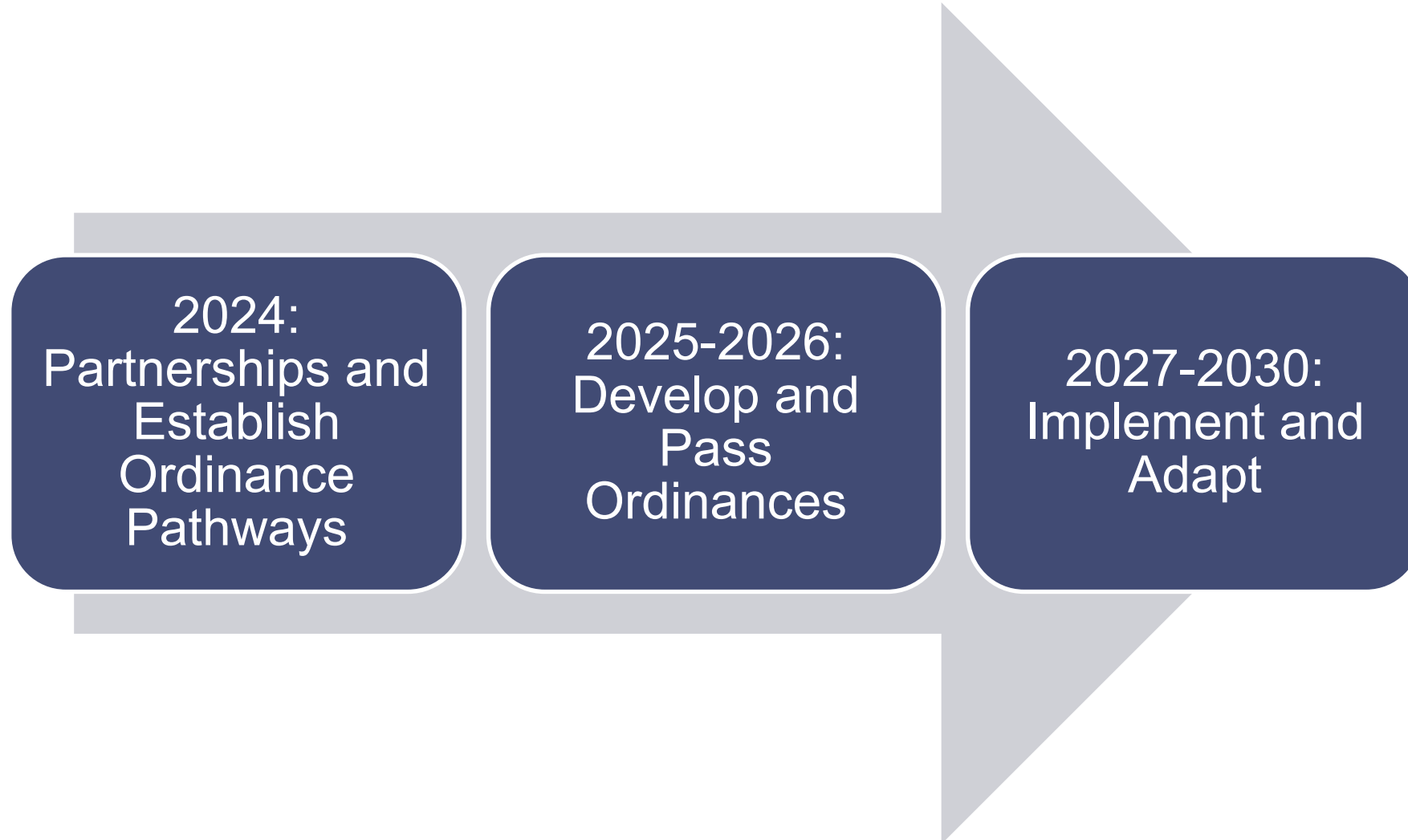


Federal Inflation Reduction Act

- ▷ Tax Credits for Equipment Retrofits
 - Heat pump HVAC
 - Heat pump water heater
 - Weatherization
 - Panel upgrade
 - Battery storage
 - Solar

- ▷ 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



Next Steps

- 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

Contact Us: electrification@cityofsacramento.org