

City of Sacramento Existing Building Electrification Strategy



City of
SACRAMENTO
EXISTING BUILDING
ELECTRIFICATION

Residential Buildings Workshop
March 1, 2023

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Agenda

- ▷ Introductions
- ▷ Background / What Is Household Electrification?
- ▷ Strategy Development to Date
- ▷ Residential Policy Framework
- ▷ Centering Equity
- ▷ Other Considerations
- ▷ XeroHome Demo
- ▷ Questions/Discussion



City of
SACRAMENTO

Preliminary
**Climate Action &
Adaptation Plan**



Public Review Draft
July 1, 2022

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

Greenhouse gas emission reductions

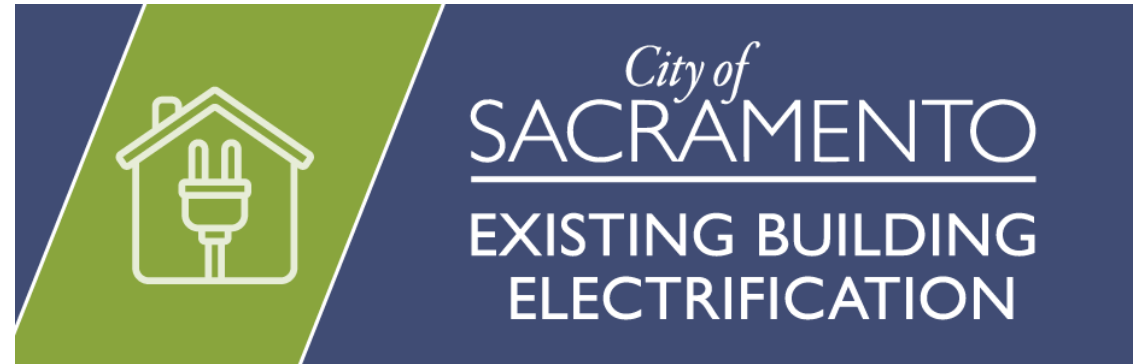


Building electrification leverages SMUD's 2030 Zero Carbon Vision





- ▶ As of January 1, 2023, **new low-rise construction** must be all electric
- ▶ Starting in 2026, **all new construction** must be all electric



- ▶ Long-term policies to transition **existing buildings** to all electric by 2045
- ▶ **Strategy** draft by summer 2023

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.

Outreach to date: What We Heard

- Tailored approach for residential and commercial building types
- Emphasis on anti-displacement
- Cultural concerns (i.e., cooking)
- Need for ongoing education, in-language outreach
- Questions about grid readiness/resilience
- Need for centralized installation support
- Need for financial support
- Workforce concerns

Residential Buildings

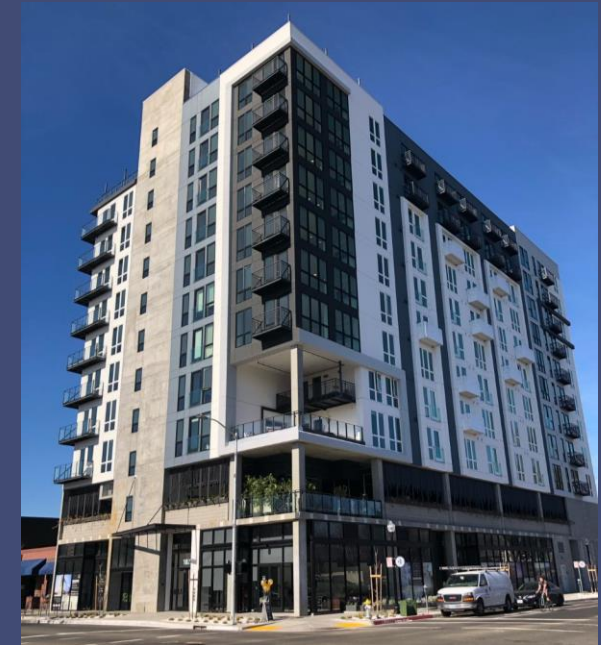
Single Unit



Small Multi-Unit



Large Multi-Unit



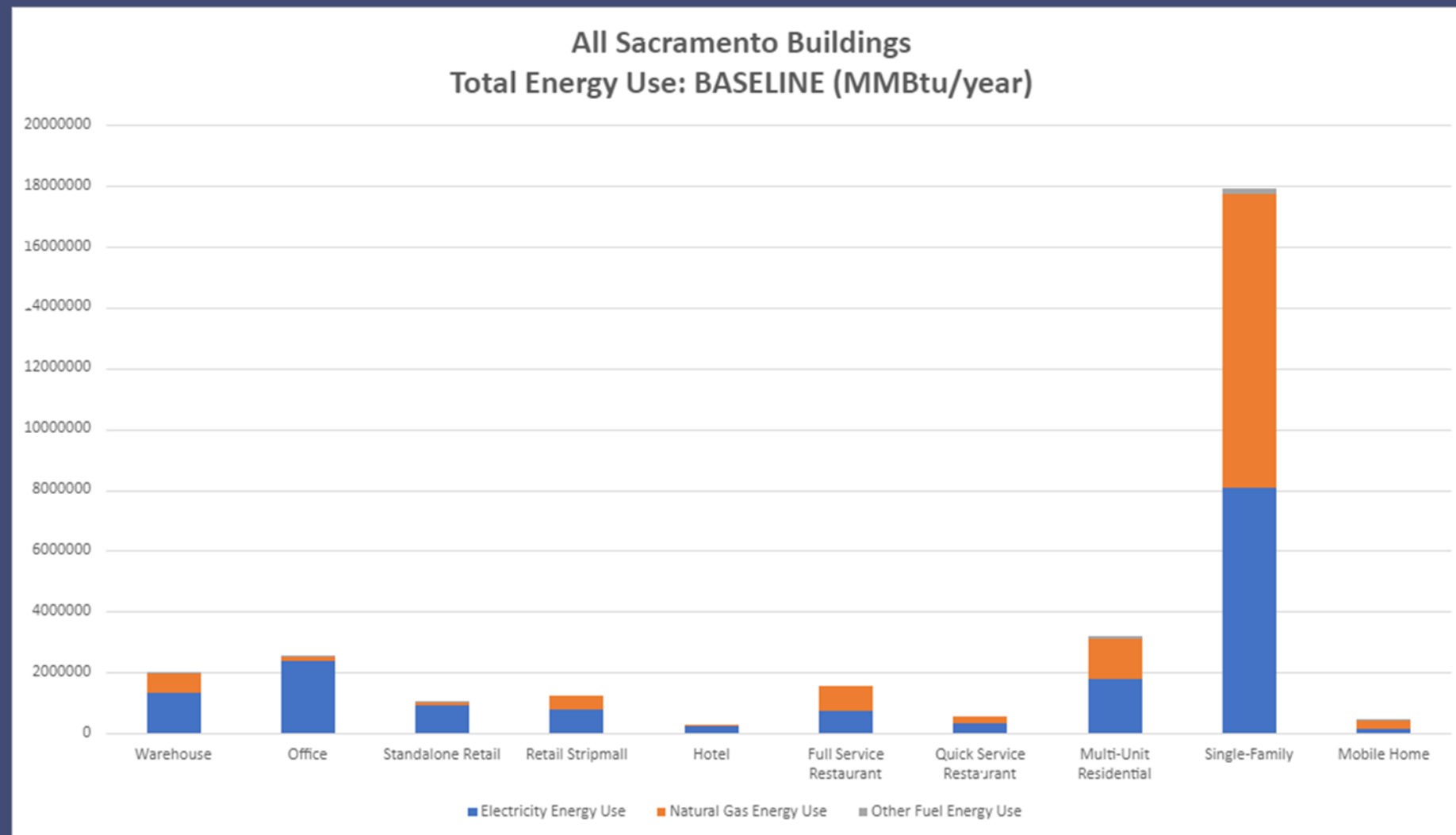
Residential Buildings
Policy

Residential Buildings
Policy

Commercial Buildings
Policy

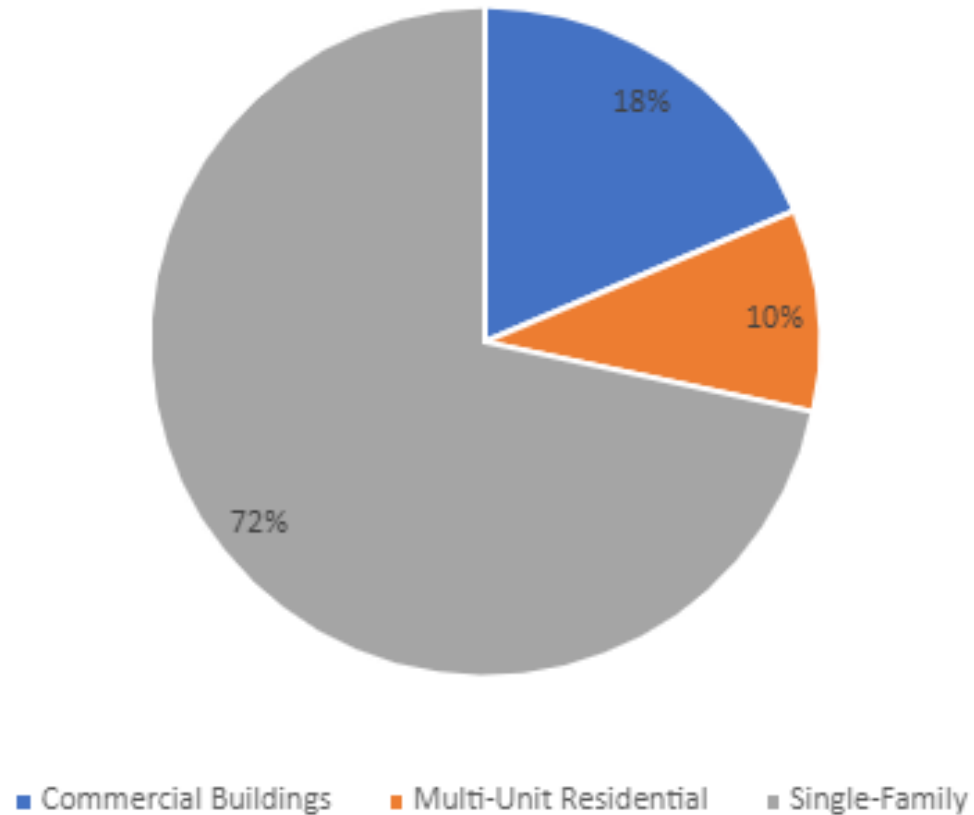
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Energy Use from Buildings in Sacramento



Sacramento Building Stock Natural Gas Usage by Sector

Natural Gas Energy Use by Building Type in Sacramento

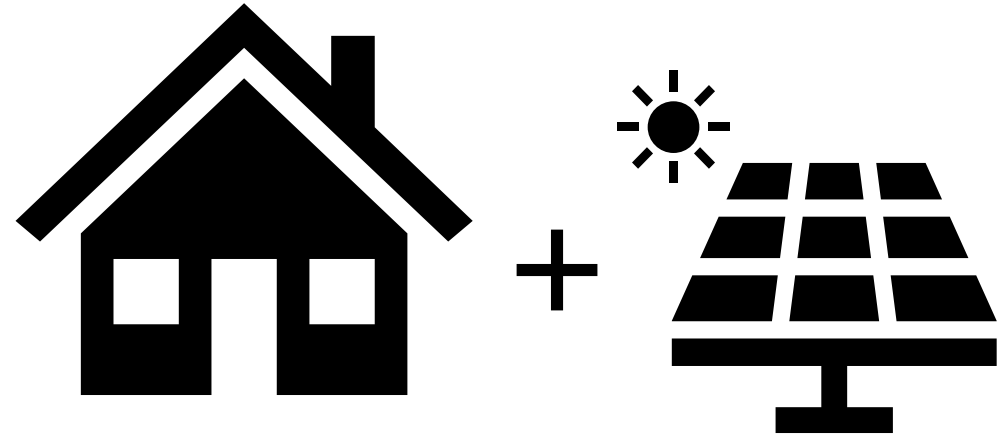


Projected On-Bill Savings for 100% of single-family homes



\$680* \$/year

Median annual savings
for homes without solar.



\$1,520*

\$/year
Median annual savings
for homes with solar.

Equity Criteria



Affordable and reliable energy



Easy and affordable installation



Holistic building improvements



Culturally competent outreach and education

Support City and regional efforts to:

- Avoid displacement for households & businesses
- Prioritize low income and under resourced communities and small businesses
- Support the just transition of our workforce and promote high quality green job opportunities

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

Near-Term Residential Buildings Strategy:

Electrification at time of replacement : HVAC and Water Heating

- ▶ When gas powered furnaces or water heaters stop working or are removed, they would need to be replaced with electric alternatives.
- ▶ No new gas lines in existing buildings



Why electrification at time of replacement?

- ▷ 100% of homes will see **on-bill cost savings** for whole-home electrification
- ▷ **Incentives** make switching to electric appliances affordable
- ▷ **Syncs** with when residents would replace appliances anyway.



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)

XeroHome

Free Custom Energy Modeling

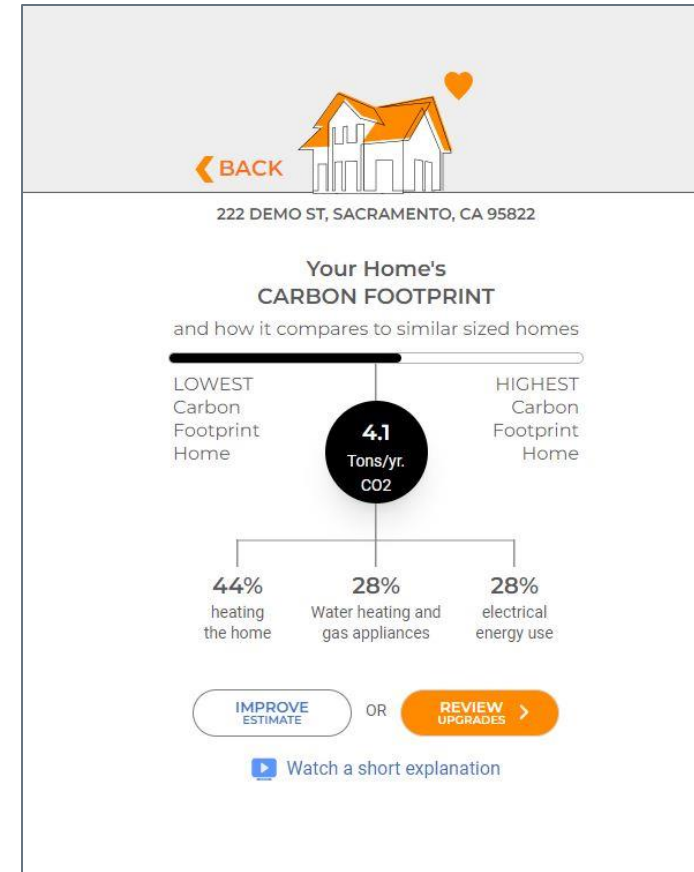


XeroHome Tool



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.



Public Funding to Support Equitable Electrification



SMUD Incentives

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

State of California Equitable Building Decarbonization Program

- ▷ \$922 million allocated for building decarbonization
- ▷ Program development is underway

Federal Inflation Reduction Act

- ▷ Tax Credits
 - Available now
 - Not income-based
- ▷ Up front Incentives
 - Available late 2023
 - 100% for up to 80% AMI
 - 50% for up to 150% AMI

Retrofits for Low Income Households

- Higher up-front incentives for low-income households can make electric retrofits cheaper than "like-for-like" gas appliance replacement
- Additional State and Federal support to be programmed late 2023 or early 2024; City staff will track these programs
- Potential to help low-income households develop equity and realize ongoing utility bill savings
- Grant funded pilot programs that pair home repair with electrification

Impacts for Renters

- Housing Element Policy H-5.2 to strengthen tenant protections
- Ongoing communication/collaboration with tenant protection program and rental housing inspection program
- Incentives for rentals reduce opportunities for pass-through costs
- Electrification can improve indoor air quality and reduce utility bills



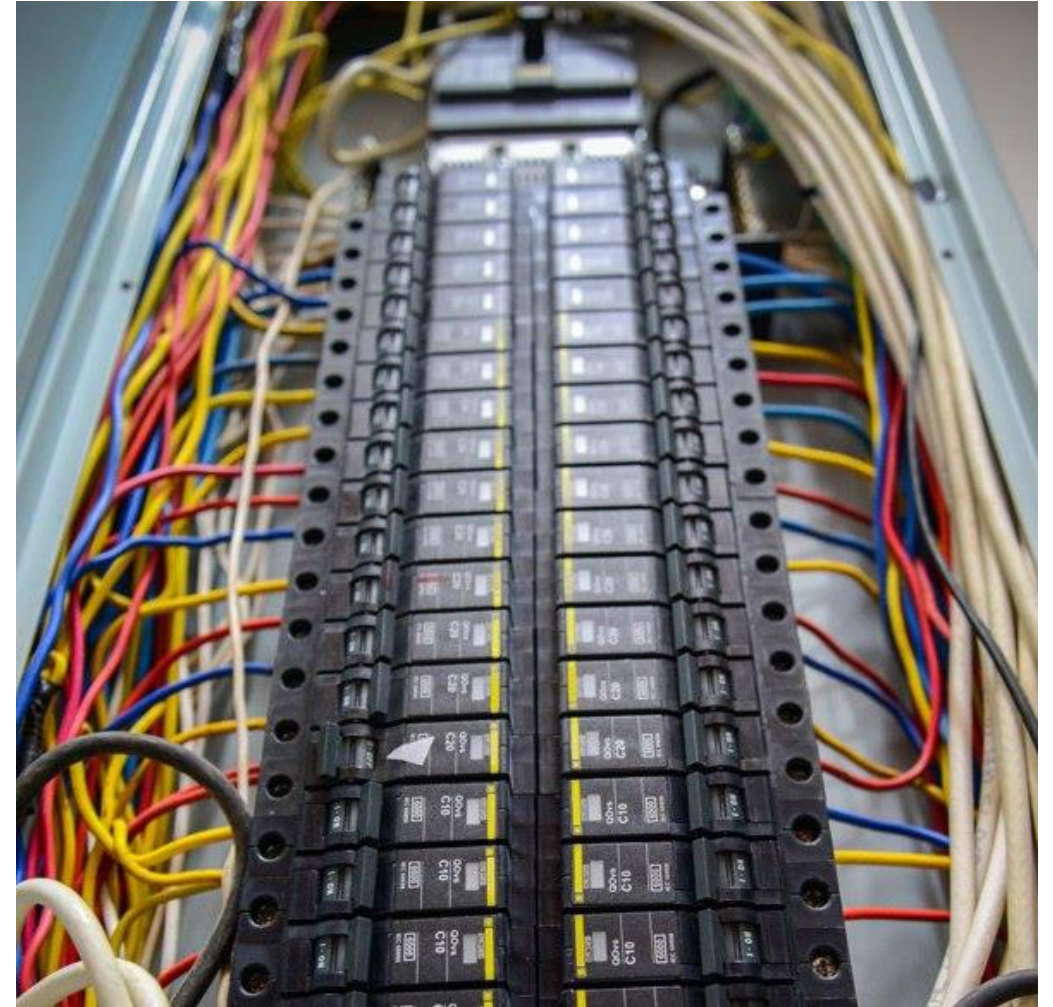
Are all older homes going to need panel upgrades?

Transitioning to electric appliances can increase electricity use.

- ▷ Panel upgrades could be necessary if current panel is close to capacity.
- ▷ SMUD rebate for panel upgrade when paired with electrification project

Panel upgrades can be avoided in many instances

- ▷ Power sharing between major appliances (splitter)
- ▷ Choosing power efficient appliances



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Next Steps

- Ongoing: Community & Stakeholder Outreach
- 3/8: Citywide virtual workshop—Commercial Building Electrification
- Spring: Public Review Draft Strategies & Actions
- Late spring: Planning and Design Commission & Law and Legislation Committee
- Summer: City Council

XeroHome Demo



Q&A

What actions would you add to support the strategy?

What have we missed?

What questions do you have?



Thank You!

Learn More: www.cityofsacramento.org/electrification

Contact Us: electrification@cityofsacramento.org