Statewide Energy Efficiency Collaborative

SEEC Virtual Forum: Webinar 18

November 12, 2020 | 10:00 – 11:30 PM PST

One Vision, Many Policy Paths to Local Decarbonization

TRC

SILICON VALLEY CLEAN ENERGY

CITY OF SAN LUIS OBISPO

California Housing Partnership

CITY OF BERKELEY

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Statewide Energy Efficiency Collaborative

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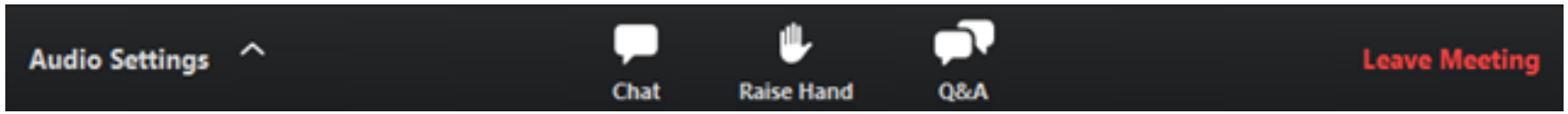
Q&A

- Submit questions for panelists through the Q&A module at any point during the webinar.
- Upvote questions that you are interested in hearing responses to.



Chat

- Engage in a dialogue with your peers – share resources, case studies, and best practices
- Reach out to LGC staff if you encounter technical issues or have questions about the SEEC Forum.

Introducing Today's Panelists

Farhad Farahmand
Senior Project Manager
TRC

John Supp
Account Services Manager
Silicon Valley Clean Energy

Chris Read
Sustainability Manager
City of San Luis Obispo

Sarah Moore
Sustainability Program Manager
City of Berkeley

Srinidhi Sampath Kumar
Sustainable Housing Policy and Program Manager
California Housing Partnership

Electrification and Reach Codes Brief Overview

SEEC Forum

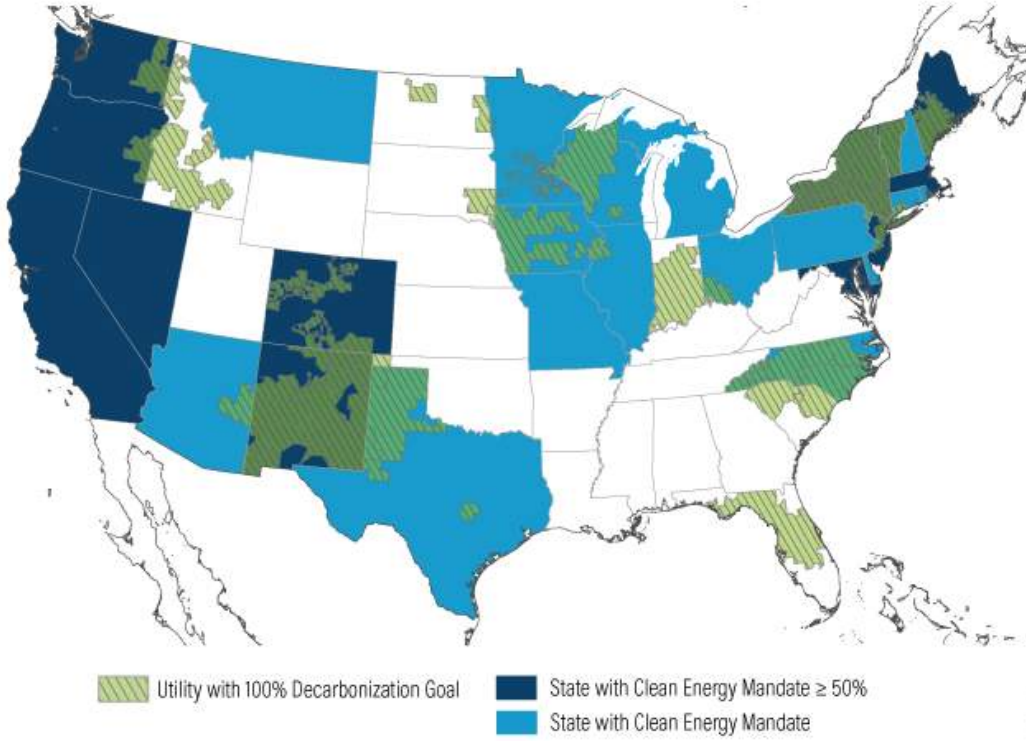
November 12, 2020

Farhad Farahmand
Senior Project Manager
TRC

PRODUCE [PURPOSE] PIONEER

Electrification, Compared to Fossil Fuels

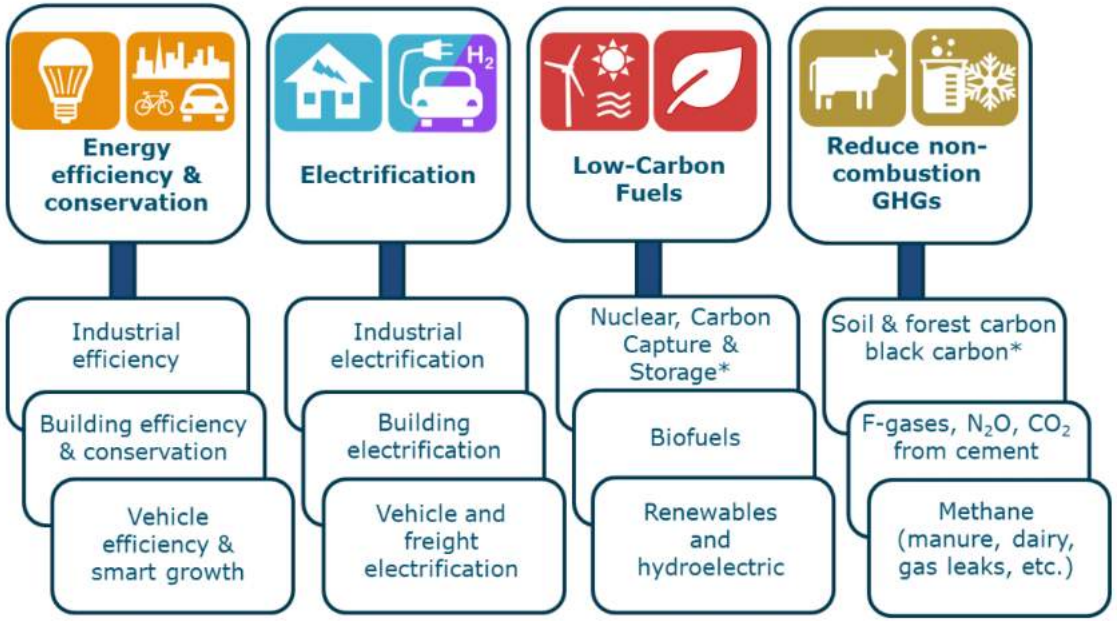
- Emissions reductions and decarbonization
  - CA Executive Order B-55-18 for Carbon Neutrality by 2045
  - Electricity grid getting cleaner every day with increased renewable generation



U.S. States with Clean Electricity Mandates & Utilities with Decarbonization Goals, 2019.
Source: World Resources Institute and Smart Electric Power Alliance (Bird 2019).

Electrification, Compared to Fossil Fuels

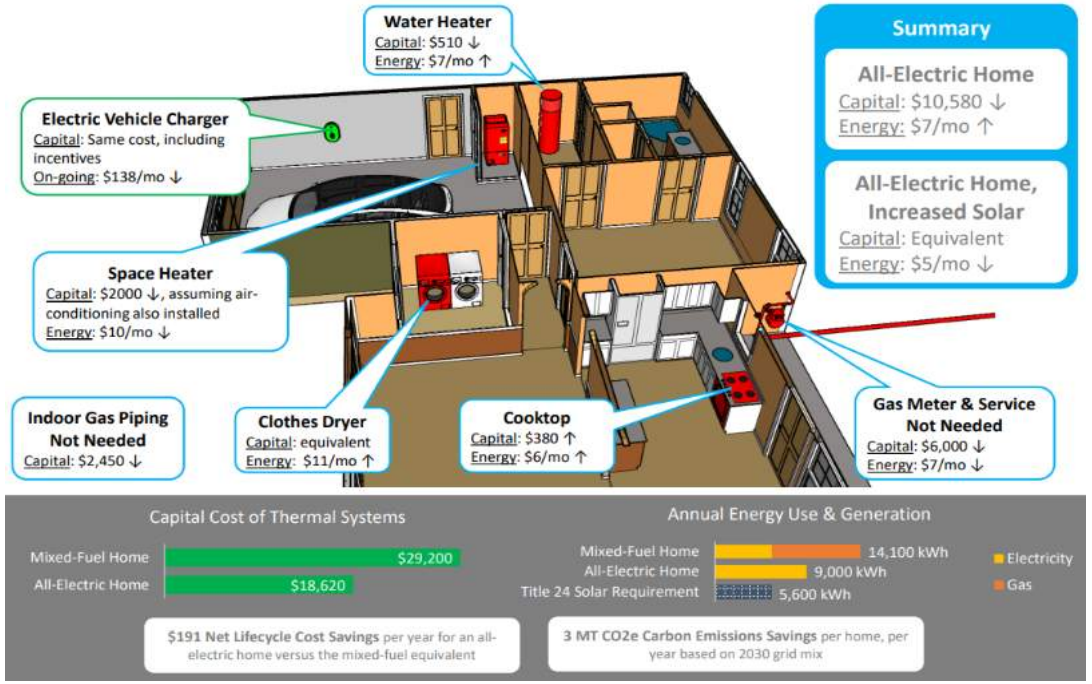
- Emissions reductions and decarbonization
  - CA Executive Order B-55-18 for Carbon Neutrality by 2045
  - Electricity grid getting cleaner every day with increased renewable generation
- Lower-risk pathway according to California Energy Commission



Pillars of Decarbonization
Source: Deep Decarbonization in a High Renewables Future, California Energy Commission (E3 2018).

Electrification, Compared to Fossil Fuels

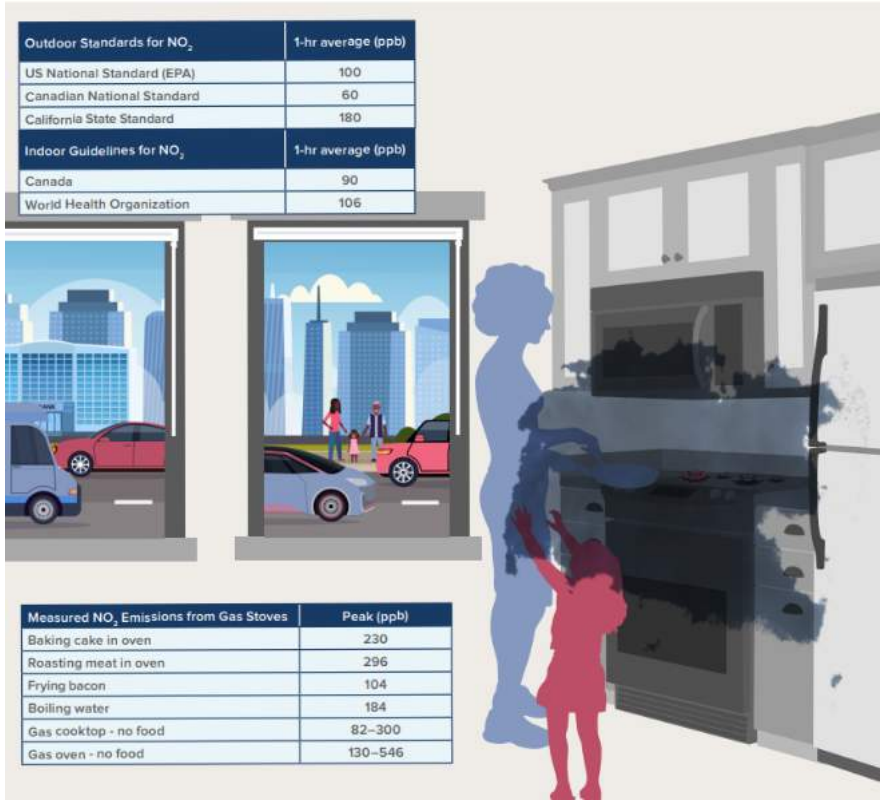
- Emissions reductions and decarbonization
  - CA Executive Order B-55-18 for Carbon Neutrality by 2045
  - Electricity grid getting cleaner every day with increased renewable generation
- Lower-risk pathway according to California Energy Commission
- Cost savings
  - Lower first costs for avoided gas infrastructure
  - Operational costs vary but are comparable
  - All-electric homes can achieve zero-net-energy while being *immediately* cost-effective



Single Family Home Cost Effectiveness, All-Electric Compared to Mixed-Fuel
Source: TRC and DNV-GL, available on SiliconValleyReachCodes.Org

Electrification, Compared to Fossil Fuels

- Emissions reductions and decarbonization
  - CA Executive Order B-55-18 for Carbon Neutrality by 2045
  - Electricity grid getting cleaner every day with increased renewable generation
- Lower-risk pathway according to California Energy Commission
- Cost savings
  - Lower first costs for avoided gas infrastructure
  - Operational costs vary but are comparable
- Healthier indoor air from eliminating indoor combustion
  - NO, NO_X, NO_2
  - Formaldehyde
  - Carbon Monoxide



Gas Stoves Can Emit Elevated Indoor Nitrogen Dioxide (NO2) Levels Often Exceeding Indoor Guidelines and Outdoor Standards.
Source: Health Effects from Gas Stove Pollution, Rocky Mountain Institute, 2020, https://rmi.org/insight/gasstoves-pollution-health.

The heck is a reach code?

Approved Zero Emission Building Codes in California as of 10/28/2020

Jurisdiction	Approach			Systems			Building Types								Add-Ons	
	Natural Gas Infrastructure Moratorium	All-Electric Reach	Electric-Preferred	Whole Building	Water Heating	Space Heating	Low Rise Residential	City-Owned Properties	High Rise Residential	Hotel	Retail	Office	Restaurant	Life Sciences	Additional Solar	Electric Vehicles
Alameda	X			X				X								
Berkeley**	X		X	X			X	X	X	X	X	X	X	X	X	X
Brisbane		X			X	X	X	X	X	X	X	X	X			X
Burlingame		X		X	X	X	X	X	X	X	X	X		X		
Campbell		X			X	X	X									X
Carlsbad	X	X			X		X								X	
Cupertino*		X		X			X	X	X	X	X	X	X			X
Davis			X	X			X									
East Palo Alto		X		X			X	X	X	X	X	X		X		
Hayward		X	X	X			X	X	X	X	X	X	X	X	X	
Healdsburg		X			X	X	X	X	X	X	X	X	X	X		
Los Altos*		X		X	X	X	X	X	X	X	X	X				X
Los Altos Hills		X			X	X	X	X	X	X	X	X	X			
Los Gatos		X		X			X									X
Marin County			X	X			X	X	X	X	X	X	X	X		X
Menlo Park*		X			X	X	X	X	X	X	X	X	X		X	X
Millbrae		X			X	X	X	X	X	X	X	X	X	X		
Mill Valley			X	X			X		X							X
Milpitas			X	X			X	X	X	X	X	X	X	X		
Morgan Hill	X			X			X	X	X	X	X	X	X	X		
Mountain View*		X		X			X	X	X	X	X	X	X		X	X
Ojai		X		X			X	X	X	X	X	X		X		
Pacifica		X			X	X	X	X	X	X	X	X	X		X	X
Palo Alto*		X	X	X			X	X	X	X	X	X	X	X		X
Piedmont		X		X			X								X	
Redwood City*		X		X			X	X	X	X	X	X				X
Richmond		X		X	X	X	X	X	X	X	X	X				X
San Anselmo			X	X			X	X	X	X	X	X	X	X		
San Francisco	X		X	X			X	X	X	X	X	X	X		X	X
San Jose*	X		X	X			X	X	X	X	X	X	X	X	X	X
San Luis Obispo			X	X			X	X	X	X	X	X	X	X	X	
San Mateo**		X		X			X		X			X			X	X
San Mateo County		X		X			X	X	X	X	X	X	X			X
Santa Cruz	X			X			X	X	X	X	X	X		X		
Santa Monica			X	X			X	X	X	X	X	X	X	X	X	X
Santa Rosa		X		X			X									
Saratoga		X			X	X	X	X	X	X	X	X	X	X		X
Sunnyvale*		X		X			X	X	X	X	X	X	X	X		X
Windsor		X		X			X									

* Council went beyond staff recommendation
** Multiple ordinances passed to strengthen/expand scope

BUILDING DECARBONIZATION COALITION

- Local amendment to the state code, adopted at any time. Address:
  - New construction
  - Building electrification
  - Electric vehicle charging infrastructure
- Adopted by 39 (and counting) cities -- over 10% of state's population
- Improves economic, energy, and emissions performance of buildings
- More information available at:
  - LocalEnergyCodes.com
  - BuildingDecarb.org/Active-Code-Efforts.html
  - SiliconValleyReachCodes.org

Reach Code Types

Type	How it Works
All-Electric *Preferred*	Allows mixed fuel buildings with high energy performance - Additional energy efficiency measures - Battery storage - Electric-ready (pre-wiring)
All-Electric *Required*	Appliances must be electric - Exceptions allowed (e.g., commercial kitchens) - Conduits or conductors for exempted appliances
Natural Gas Ban	No gas hookup allowed (via municipal ordinance)

Thank You

Farhad Farahmand
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SILICON VALLEY CLEAN ENERGY

Regional Decarbonization

November 2020

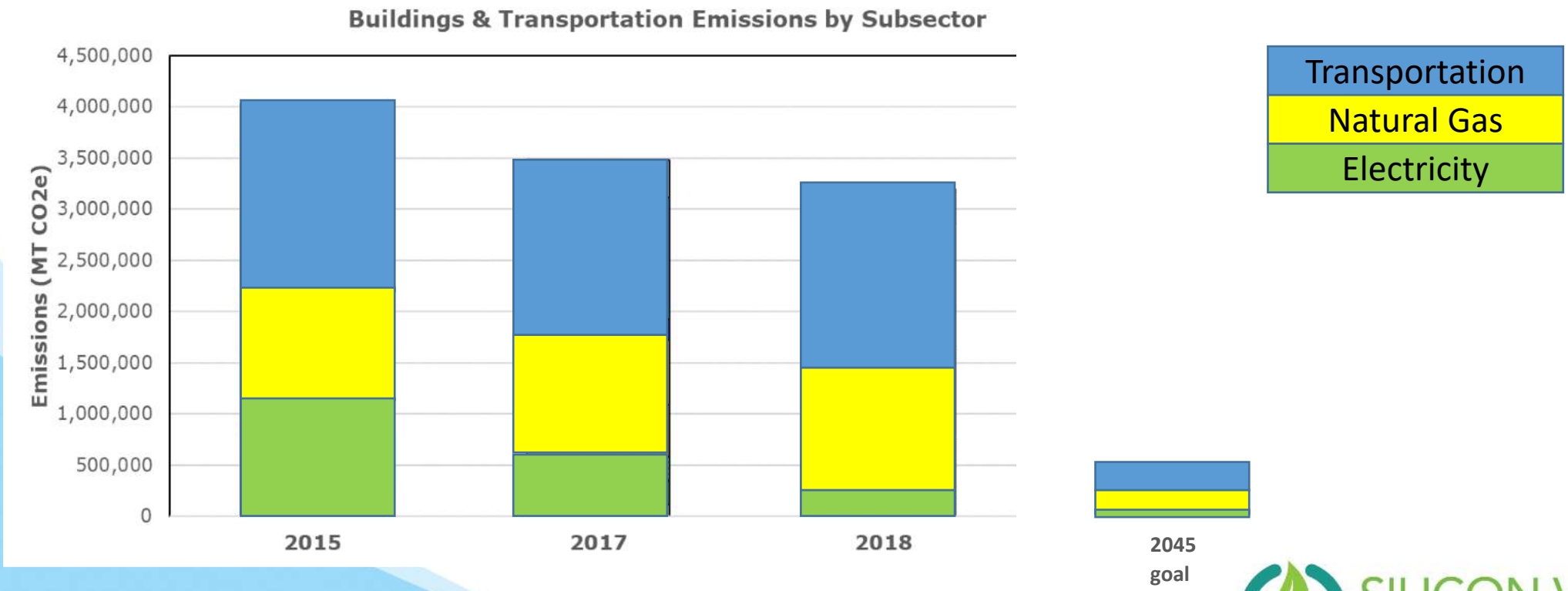
Outline

1. Motivation
2. Baseline
3. Considerations
4. Approach
5. Results

SILICON VALLEY CLEAN ENERGY

Baseline

- SVCE carries out annual GHG inventory



SILICON VALLEY CLEAN ENERGY

Residential Buildings Overview

- Property types analyzed
  - Single-family homes/townhomes
  - Condos
  - Multi-family
- Building attributes analyzed
  - Square footage
  - Vintage
  - All-electric vs. mixed fuel
  - EV vs. non-EV
  - Solar vs. non-solar
- Metrics
  - Electricity consumption (kWh)
  - Gas consumption (therms)
  - Energy use intensity / EUI (energy/ft2)

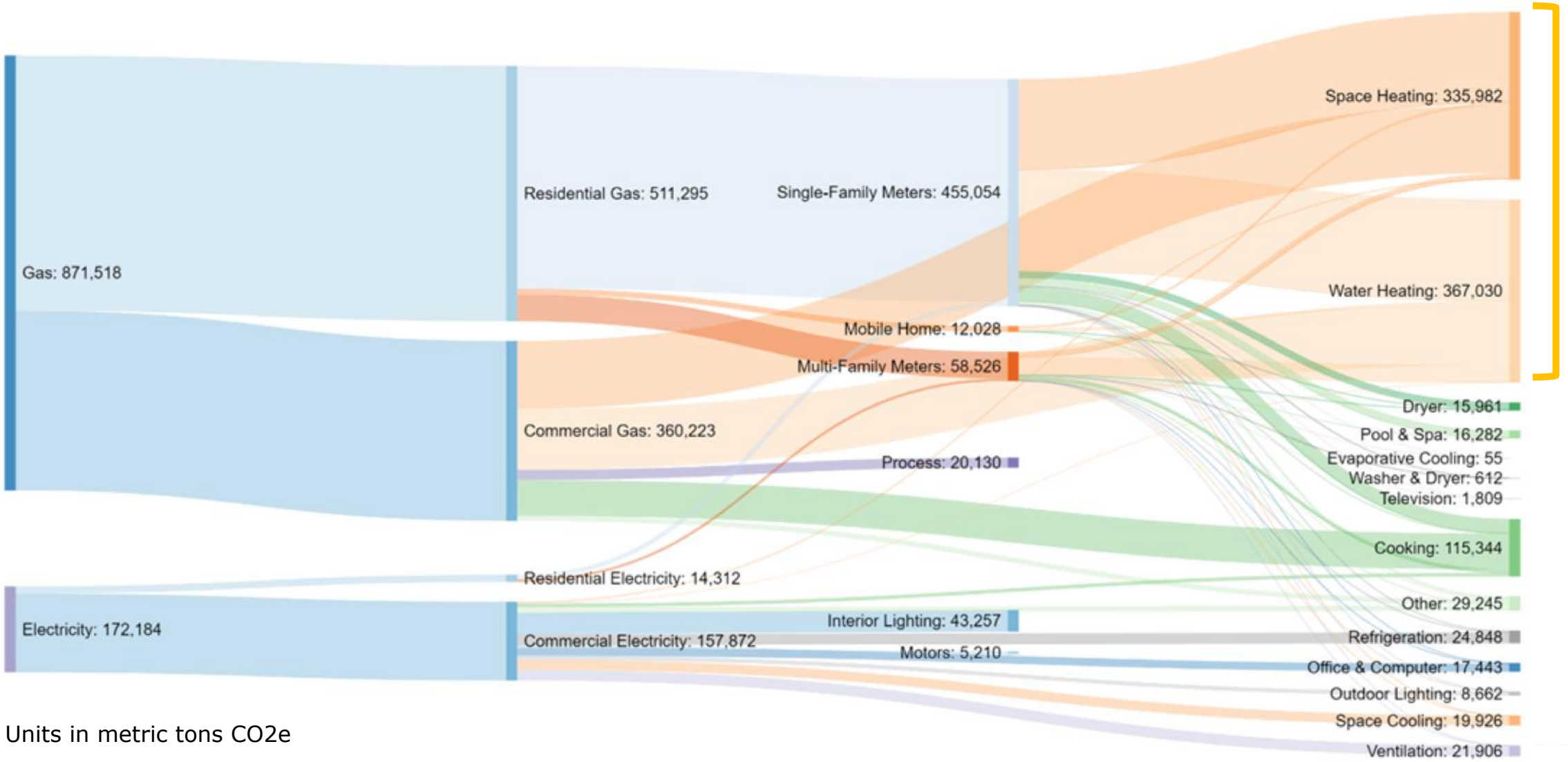
Overview of residential buildings in SVCE territory

Property Type	Number of Units	Total Building Area [ft^2]	Fuel Type	% by Unit
Single-Family Home	154,945	310,023,893	All-electric	5%
			Mixed fuel	95%
Condo	9,181	7,938,004	All-electric	17%
			Mixed fuel	83%
Multi-Family	63,711	59,250,244	All-electric	8%
			Mixed fuel	92%

SILICON VALLEY CLEAN ENERGY

Baseline

Buildings Emissions by End Use (2018)



Units in metric tons CO2e

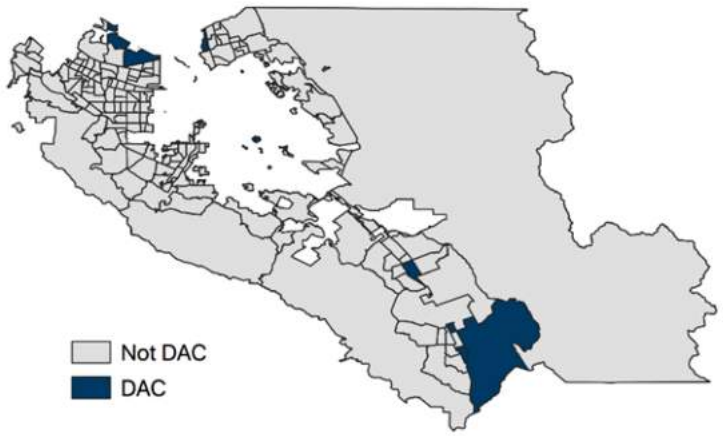
Considerations

Awareness	Availability	Assuredness	Affordability
Top of mind	Equipment	Established	First cost
Ubiquity	Expertise	Longevity	Ongoing
Resources	Supply Chain	Support	Disparities

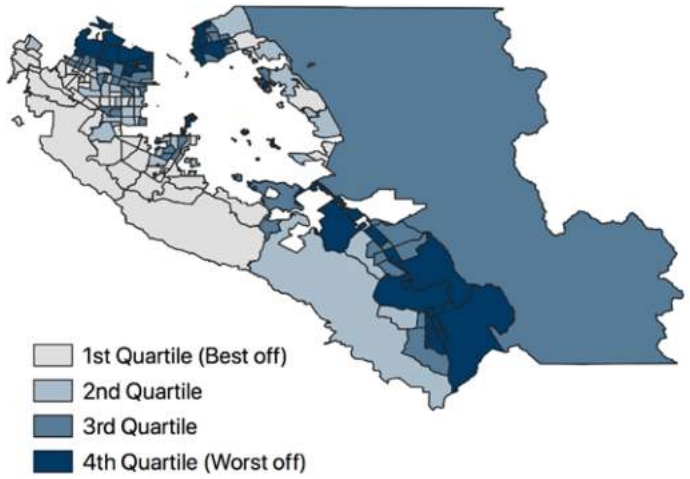
Markets and Mandates	Transparency
Individual and Community	Data
Local and Regional	Collaboration

SILICON VALLEY CLEAN ENERGY

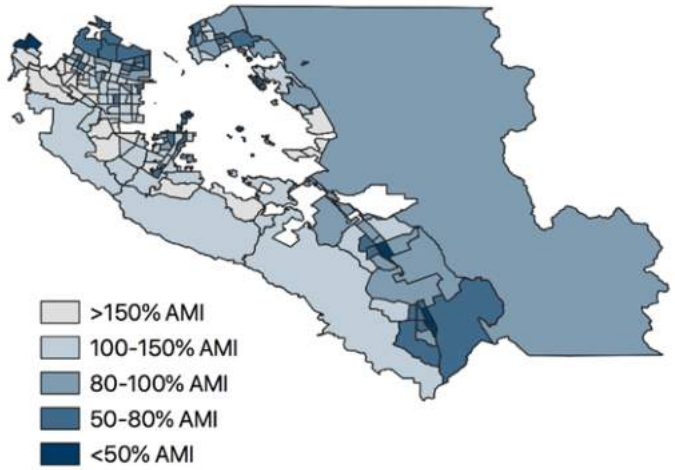
A. CalEnviroScreen – DAC



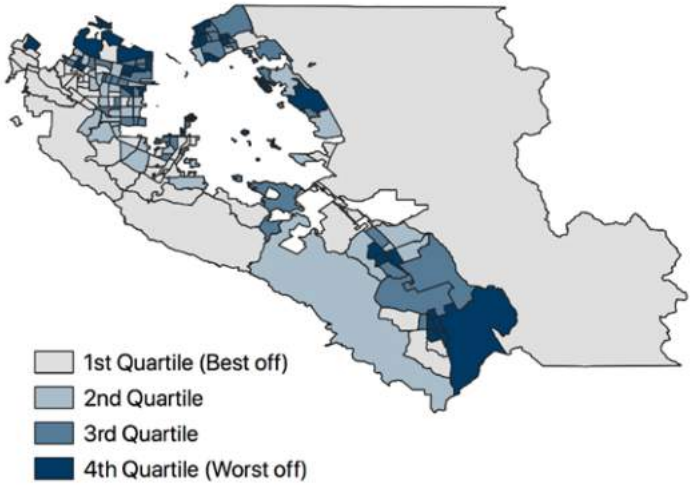
B. Regionalized CalEnviroScreen – CES



C. Area Median Income – AMI



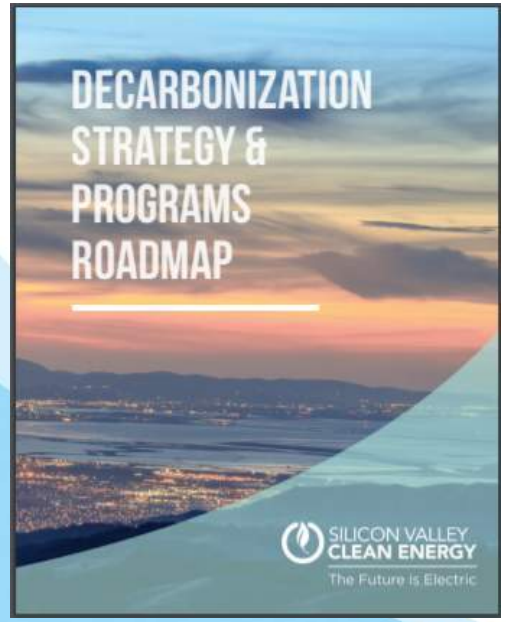
D. Socioeconomic Vulnerability Index – SEVI

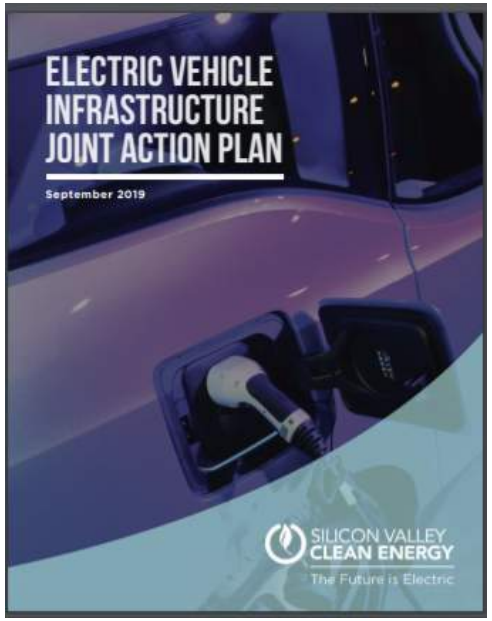


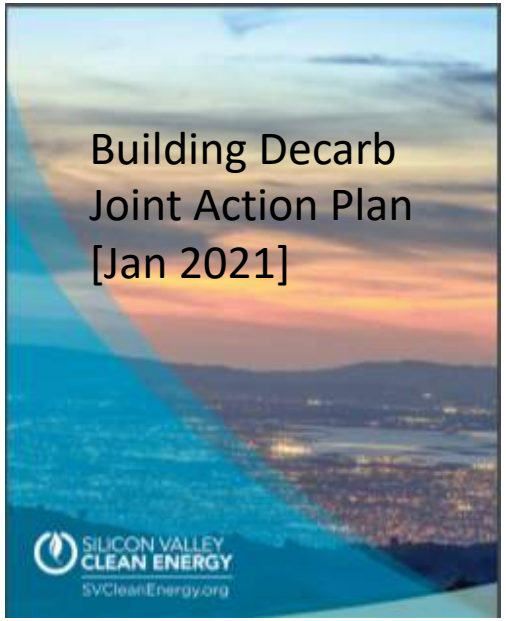
Disparity Analysis

Approach

Develop a series of collaboratively constructed joint action plans with our city partners and other stakeholders







SILICON VALLEY CLEAN ENERGY

Approach

City partners
Utilities
CCAs
Entrepreneurs
Advocates
DOE
Local Business

SILICON VALLEY
CLEAN ENERGY

Cost-Effectiveness

CALIFORNIA ENERGY CODES & STANDARDS
A STATEWIDE UTILITY PROGRAM

Title 24, Parts 6 and 11
Local Energy Efficiency Ordinances

2019 Cost-effectiveness Study:
Low-Rise Residential New Construction

Table 53: Single Family Climate Zone 4 Results Summary

Climate Zone 4 PG&E Single Family		Annual Net kWh	Annual therms	EDR Margin[4]	PV Size Change (kW)[5]	CO2-Equivalent Emissions (lbs/sf)		NPV of Lifetime Incremental Cost ($)	Benefit to Cost Ratio (B/C)	
						Total	Reduction		On-Bill	TDV
Mixed Fuel[1]	Code Compliant									
	Efficiency-Non-Preempted									
	Efficiency-Equipment									
	Efficiency & PV/Battery									
All-Electric[2]	Code Compliant									
	Efficiency-Non-Preempted									
	Efficiency-Equipment									
	Efficiency & PV									
	Efficiency & PV/Battery									
Mixed Fuel to All-Electric[3]	Code Compliant									
	Efficiency & PV									
	Neutral Cost	2,166	0	10.0	1.35	0.70	1.18	$0	>1	>1

With <u>equal construction costs</u> ("Neutral Cost"),

All-electric homes are <u>More energy efficient</u> (TDV benefit >1)

and

<u>Have lower utility bills</u> (On-Bill benefit >1).

Beneficial impact on Housing Affordability

https://localenergycodes.com/download/1180/file_path/fieldList/2019%20Res%20Retrofit%20Cost-eff%20Report.pdf

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Approach – Reach Codes

Regional Effort (34 Cities) in collaboration with another CCA
3rd Party Technical Expertise – TRC + DNV/GL
3rd Party Outreach support – Joint Venture Silicon Valley
Dedicated informational website (www.siliconvalleyreachcodes.org)
$10k grant upon presenting reach code for vote

SILICON VALLEY CLEAN ENERGY

Approach – Reach Codes

TRC – DNV/GL	JVSV	SVCE
Prepare model codes Website Technical support Stakeholder meetings Templates Assistance post adoption	Conduct meetings: Labor Affordable Housing Developers	Engage Cities: Council members City managers Sustainability Building officials Advocates

Share progress with elected officials in group meetings

SILICON VALLEY CLEAN ENERGY

Approach

Challenges	Solutions
Reach code as local policy option	City council study sessions
Existing energy efficiency (EE) bias	Translate EE into GHG reduction
Awareness of code cycle	Outreach to impacted groups
Former truths (gas is cheaper for heat, heat pumps not ready)	Handouts, presentations, website, graphics, data, discussions
Some cities lacked community support	Advocacy groups collaborated
Belief that utility can’t handle growth	PG&E provided support letter to each city
Developer opposition	Pro-electrification peer developers, lots of engagement

Approach – Reach Codes

Given - New construction comprises a small percentage of overall buildings in our territory
Given - Buildings last 50+ years

Therefore – building codes in effect today contribute to 50+ years of GHG reductions

Any building not built to reduce GHG today becomes a future retrofit program expense…
at a much higher cost to address!

SILICON VALLEY CLEAN ENERGY

Results – Reach Codes

9 communities have adopted.

2 more on deck.

Member Agency	Status	Next Meeting	Date of Next Meeting	Code Language	Building Reach: Encourage Electric (1 + 2 + 2A)	Building Reach: Mostly Electric (1 + 2A)	Building Reach: All Electric (1 only)	EV Reach: Higher than CalGREEN
Mountain View	🍃🍃🍃🍃	Approved		Begins on pg. 23			X	X
Morgan Hill	🍃🍃🍃🍃	Approved		Begins on pg. 45			X	
Milpitas	🍃🍃🍃🍃	Approved		Begins on pg. 1132	X			X
Monte Sereno	🍃🍃🍃🍃	Approved		Begins on pg. 3	X[1]			X
Saratoga	🍃🍃🍃🍃	Approved		Begins on pg. 33		X		X
Los Gatos	🍃🍃🍃🍃	Approved		Begins on pg. 93			X	X
Cupertino	🍃🍃🍃🍃	Approved		Ordinance			X	X
Los Altos Hills	🍃🍃🍃🍃	Approved		Ordinance		X		X
Campbell	🍃🍃🍃🍃	Approved		Begins on pg. 41		X		
Los Altos	🍃🍃🍃	2nd Vote	Nov 2020	Ordinance		X		X
Sunnyvale	🍃🍃🍃	2nd Vote	Dec 2020	Ordinance			X	X
Santa Clara County	🍃🍃	Staff Proposal	postponed					
Gilroy	-	Declined						

Results – assessment

Exceeded expectations

Goal = 3 reach codes Actual = 11 reach codes (ok, 9… but 2 are close)

Improvements for next cycle:

- Longer engagement window
- Possible emphasis on regional consistency where applicable
- Success stories from current cycle

SILICON VALLEY CLEAN ENERGY

Thank you!

John Supp
SVCE
John.supp@svcleanenergy.org

SILICON VALLEY CLEAN ENERGY

HOW CAN CITIES LEAD THE WAY?

SEEC | NOVEMBER 12, 2020

NO FOSSIL FUELS IN NEW BUILDINGS

Our Approach

BUILDING CODE AMENDMENTS

Electric-Preferred | Technical Assistance | Regulatory Flexibility

QUALIFIED CAP & GHG THRESHOLDS

Compliance Checklist | Discretionary Review

CARBON OFFSET PROGRAM

Offsetting New Emissions

DEEP FOSSIL FUEL REDUCTIONS IN EXISTING BUILDINGS

Our Approach

CONVENE PARTIES

Local Governments are Trusted and Connected

EXPLORE PILOTS AND REGULATION

Who is Interested? | What is Possible? |

How is Equity Centered? | Lead by Example

CALL FOR COLLABORATION

How can we work together?

THANKS!

CHRIS READ | SUSTAINABILITY MANAGER CREAD@SLOCITY.ORG

California Housing Partnership
California's Experts on Affordable Housing Finance, Advocacy & Policy

PATH FORWARD: GETTING TO ZERO CARBON EQUITABLY

Srinidhi Sampath Kumar
Sustainable Housing Policy and Program Manager
ssampath@chpc.net
Nov 12th, 2020

Why electrify affordable housing?

- Gas infrastructure, stranded assets
- Considerable increase in gas rates
- Health concerns
- Increasing climate related emergencies
- Programs and incentives that support electrification in low-income multifamily buildings but largely for existing buildings

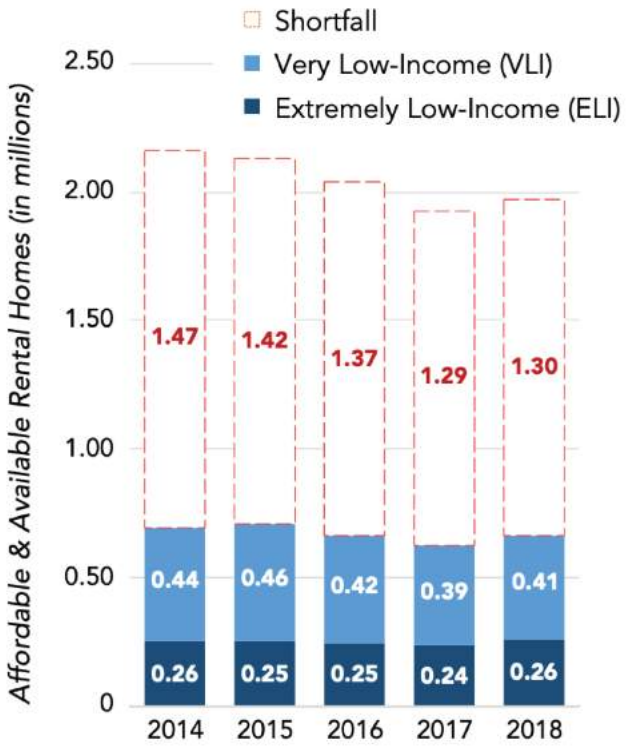
Programs Funding Decarb Efforts

- Existing Buildings
  - Low Income Weatherization Programs (LIWP)
  - Solar On multifamily Affordable Housing (SOMAH)
  - Self Generation Incentive Program (SGIP)
  - Local REN, CCA programs
- New Construction
  - Building Initiative for Low Emissions Development (BUILD)

What are we waiting for then?

CALIFORNIA NEEDS 1.3 MILLION MORE AFFORDABLE RENTAL HOMES

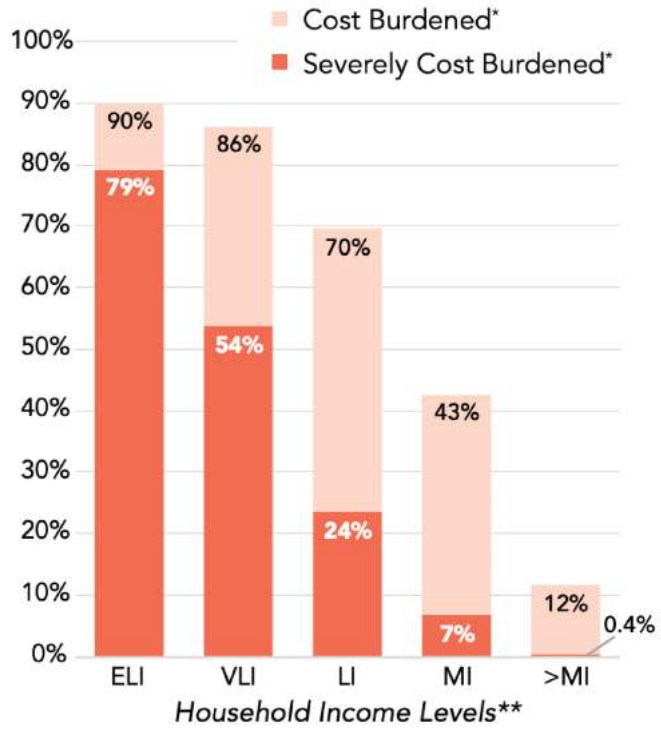
While the shortfall has declined by 11% since 2014, the share of housing need not being met has remained relatively constant because the number of low-income households has also declined.*



Source: *California Housing Partnership analysis of 2018 1-year American Community Survey (ACS) PUMS data with HUD income levels. Methodology was adapted from NLIHC gap methodology.*

**The proportion of total unmet housing demand for low-income renters (shortfall / total demand) from 2014 to 2018, was 68%, 67%, 67%, 67%, and 66%, respectively.*

79% OF CALIFORNIA'S EXTREMELY LOW-INCOME HOUSEHOLDS ARE SEVERELY COST BURDENED COMPARED TO 7% OF MODERATE-INCOME HOUSEHOLDS

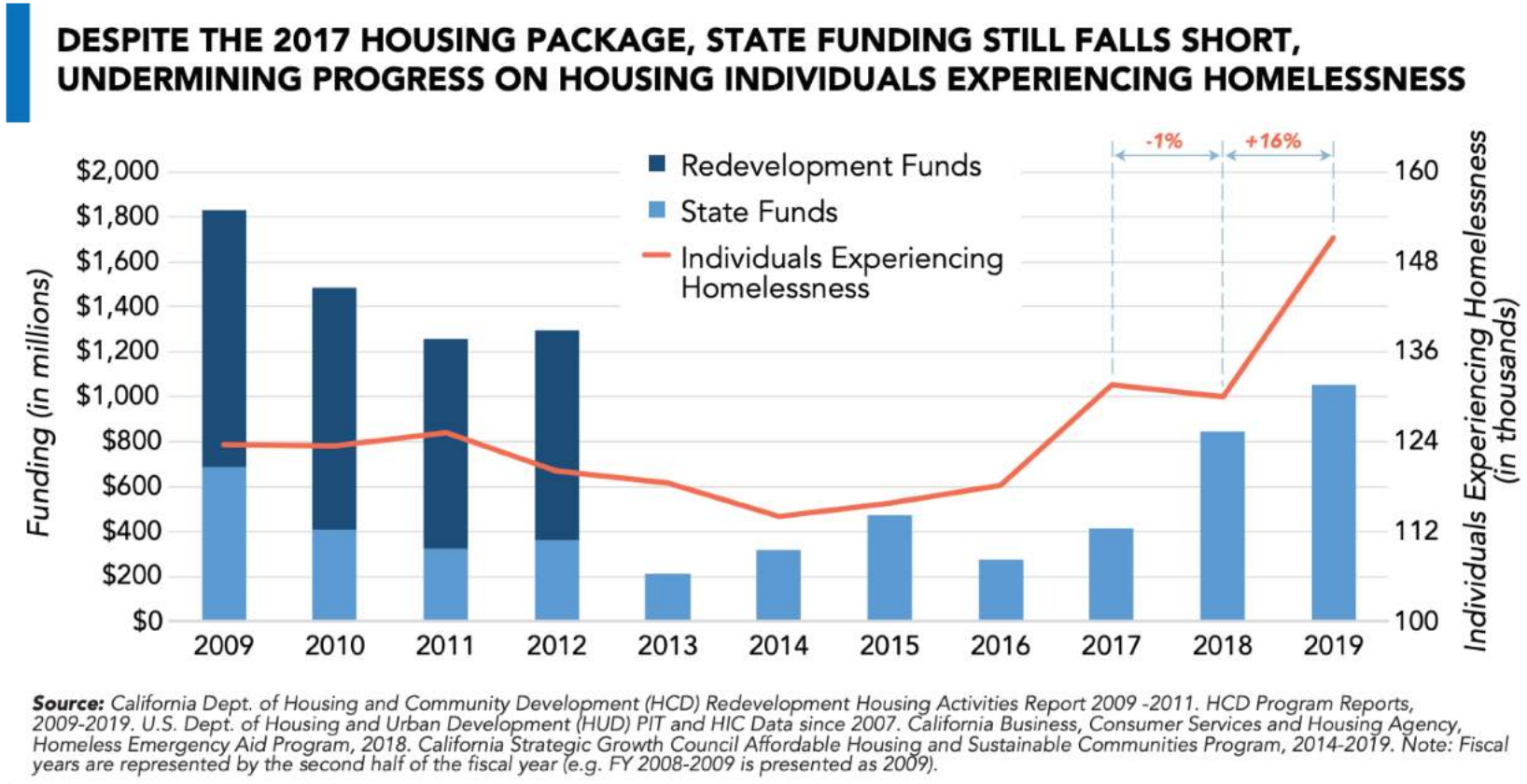


Source: *California Housing Partnership analysis of 2018 1-year American Community Survey (ACS) PUMS data with HUD income levels. Methodology was adapted from NLIHC gap methodology.*

**Cost burdened households spend 30% or more of their income towards housing costs. Severely cost burdened households spend more than 50%.*

***ELI: Extremely Low-Income, VLI: Very Low-Income, LI: Low-Income, MI: Moderate-Income, >MI: Above Moderate-Income*

Housing Financing Landscape and Other Costs Considerations



Source: *California Dept. of Housing and Community Development (HCD) Redevelopment Housing Activities Report 2009 -2011. HCD Program Reports, 2009-2019. U.S. Dept. of Housing and Urban Development (HUD) PIT and HIC Data since 2007. California Business, Consumer Services and Housing Agency, Homeless Emergency Aid Program, 2018. California Strategic Growth Council Affordable Housing and Sustainable Communities Program, 2014-2019. Note: Fiscal years are represented by the second half of the fiscal year (e.g. FY 2008-2009 is presented as 2009).*

Other Challenges

- Developer size
- Property size
- Portfolio region and disparate local reach codes
- Maintenance staff and vendors
- Availability of equipment that have operating history, contractor availability and experience, willingness of the team
- Equipment challenges: central domestic hot water and laundry systems
- Resilience during shut offs and storage issues
- System Sizing issues

Partnership led Affordable Housing Convenings

- Gas stoves
- EV
- Prevailing Wages
- Costs
- Commercial lease
- Funding
- Risks

Recommendations

- T24 and housing program alignment
- Increased Technical Assistance
- Just more funding (like SB 1477)
- Guidance document for property managers on how to be decarb ready
- Training: residents, contractors, engineers
- Fast- tracking permits both from utilities and code enforcement
- Pilot decarb buildings in different regions and track costs gaps
- Huge opportunity to do health related upgrades
- Align goals of providing affordable housing and electrification

Resources

- 2020 California Affordable Housing Needs Report: https://chpc.net/resources/2020-statewide-housing-needs-report/
- COVID-19 Exacerbates Cost of Living Challenges Throughout the State: https://chpc.net/covid-19-exacerbates-cost-of-living-challenges-throughout-the-state/
- To release in Q1 2020: Guidance document on Affordable Housing Decarbonization

Decarbonization Efforts in Berkeley

SEEC Virtual Forum

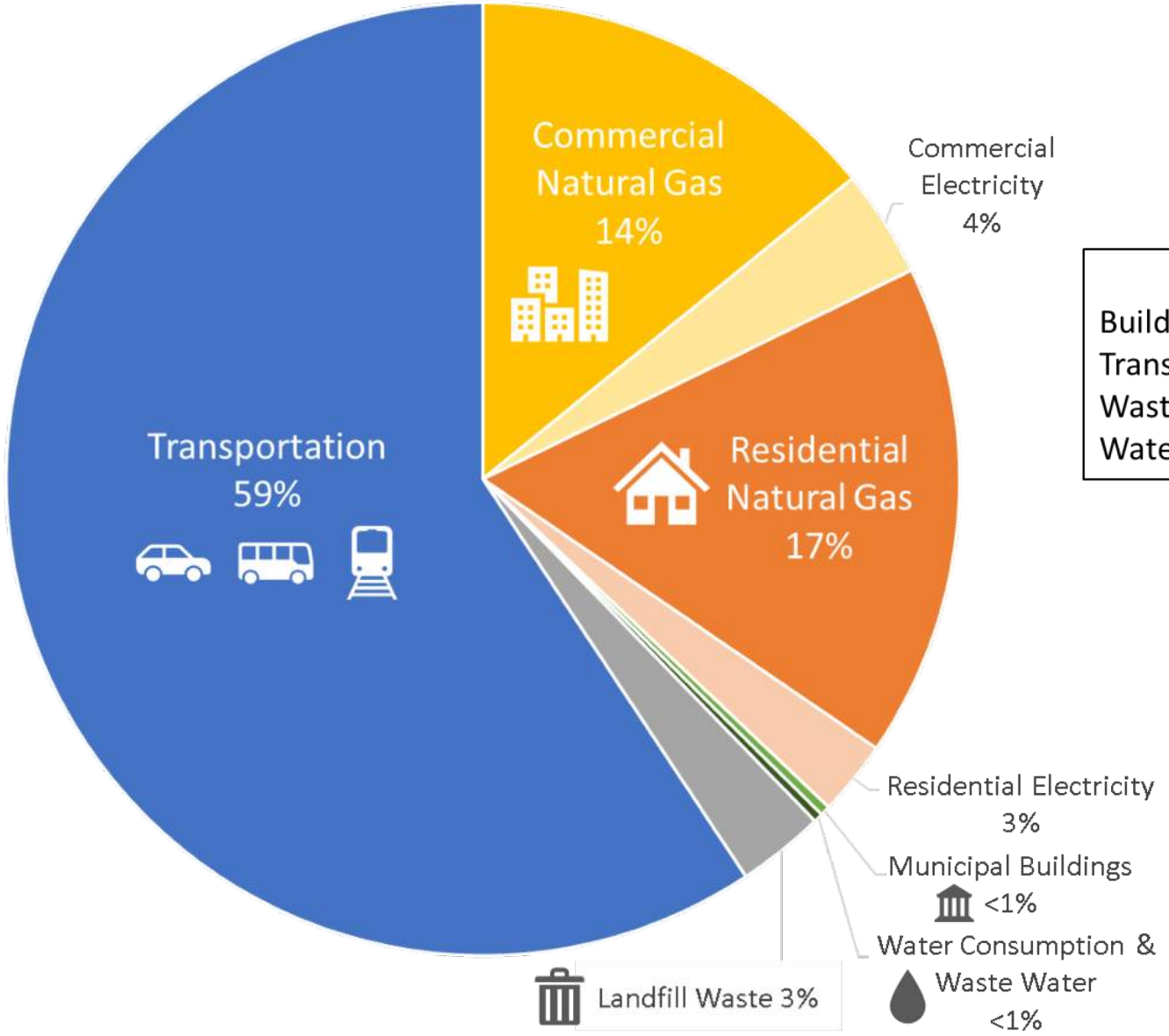
November 12, 2020

Climate Action Goals

- Climate Action Plan (2009)
- Climate Emergency Declaration (2018)
- Fossil Fuel Free City (2018)
  - Net Zero Carbon Emissions

Photo from www.theclimatemobilization.org

2018 Greenhouse Gas Emissions Inventory

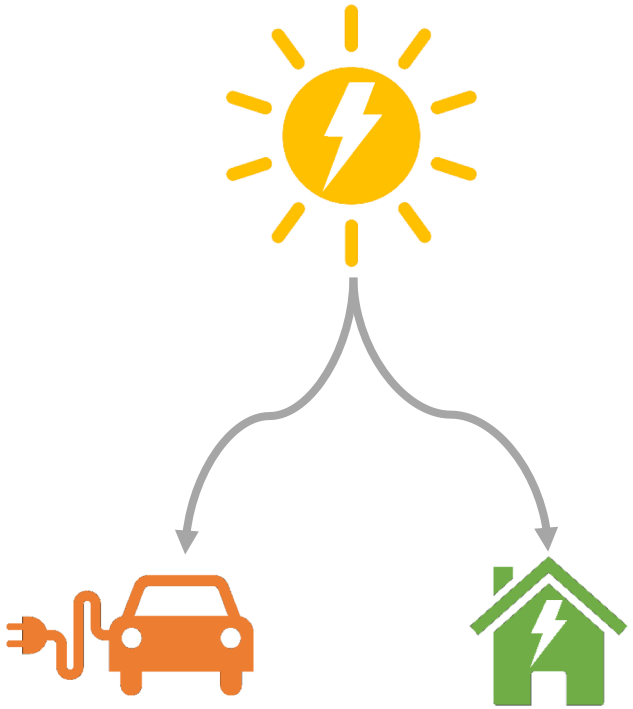


Summary:
Buildings: 37%
Transportation: 59%
Waste: 3%
Water: <1%

Path to a Clean Energy Future

1. **Reduce energy use**

2. **Promote cleaner electricity**



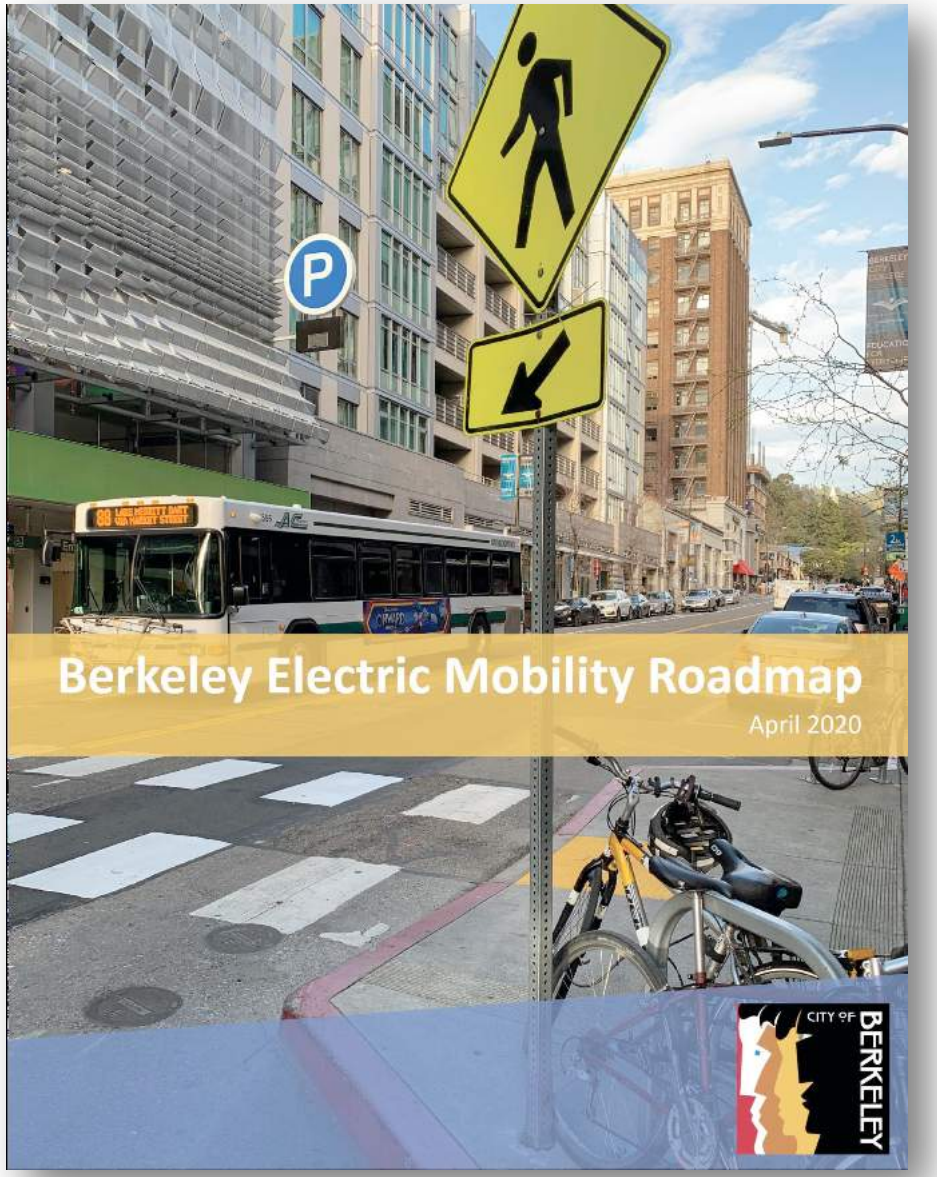
3. **Electrify transportation & buildings**
   - Electric mobility
   - Building electrification

Electric Mobility Roadmap

All-Electric New Construction

Electrification of Existing Buildings

Berkeley Electric Mobility Roadmap



Vision

Create a fossil fuel-free transportation system that supports the City's ongoing efforts to increase walking, biking, and public transportation use in Berkeley and ensures equitable access to the benefits of clean transportation

Electric Mobility Roadmap

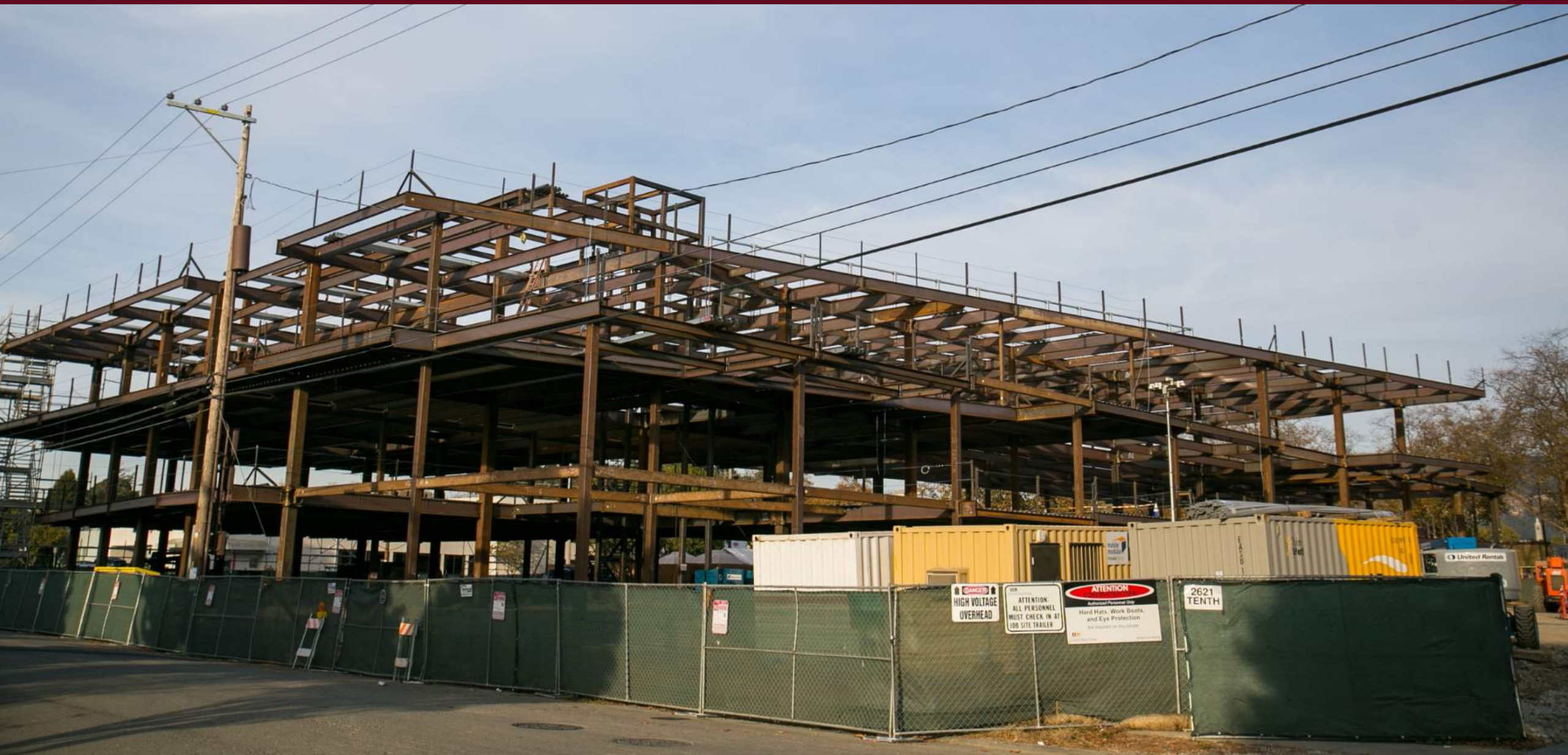
All-Electric New Construction

Electrification of Existing Buildings

Natural Gas Prohibition (BMC Chapter 12.80)

- No natural gas infrastructure in newly constructed buildings
  - Limited exceptions & public interest exemption
- Implemented through Condition of Approval
- Land Use Permit applications submitted (as of January 1, 2020)

Reach Code (BMC Chapter 19.36)



Building Electrification: New Construction

Occupancy Type	Natural Gas Prohibition	Reach Code (local amendments to the Energy Code)		Electric Vehicle (EV) Charging Requirements (local amendments to CALGreen)
	Covers newly constructed buildings with **Land Use Permit** applications submitted on or after January 1, 2020	Covers newly constructed buildings with **Building Permit** applications submitted on or after January 1, 2020		
		All-Electric Building Requirements	Mixed Fuel Building Requirements	
Single family, detached Accessory Dwelling Unit (ADU), two-family dwellings, and townhomes	Natural gas prohibited[1]	All-electric, solar PV[3]	10 Total EDR compliance margin[4], solar PV[3], electric ready[5]	One EV Charger Ready[6] space per dwelling unit with on-site parking
Low-rise multifamily (3 stories or less)	Natural gas prohibited[1]	All-electric, solar PV[3]	10 Total EDR compliance margin[4], solar PV[3], electric ready[5]	20% EV Charger Ready[6], 80% "EV Spaces Raceway Equipped"[7]
High-rise multifamily (4 stories or more)	Natural gas prohibited[1]	All-electric, solar PV	10% compliance margin[4], solar PV, electric ready[5]	20% EV Charger Ready[6], 80% "EV Spaces Raceway Equipped"[7]
Hotel/Motel	Natural gas prohibited[1]	All-electric, solar PV	10% compliance margin[4], solar PV, electric ready[5]	10% EVCS installed, 40% "EV Spaces Raceway Equipped"[7]
Other Nonresidential[2]	Natural gas prohibited[1]	All-electric, solar PV	10% compliance margin[4], solar PV, electric ready[5]	10% EVCS installed[8], 40% "EV Spaces Raceway Equipped"[7]

Electric Mobility Roadmap

All-Electric New Construction

Electrification of Existing Buildings

Building Energy Savings Ordinance (BESO)

Align BESO with **Emissions Reduction** & Resilience Goals

Streamline requirements for small and medium sized buildings

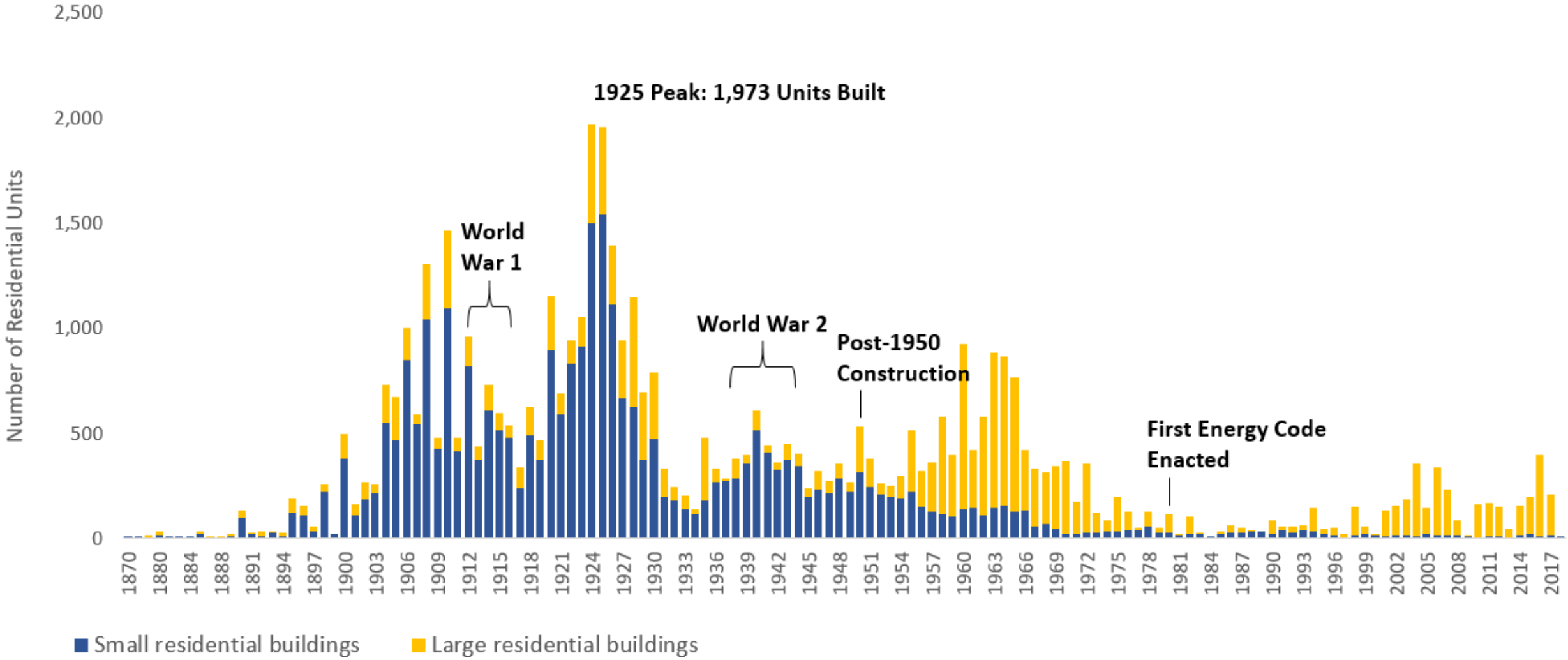
Increase upgrades and utilization of **rebate/incentive** programs

Increase **transparency** and **information sharing** in the building sale process

Building Electrification Initiative

Building Electrification Initiative

Residential Units, Year Built



Building Electrification Initiative

Displacement Risk in Berkeley

Low Income (LI) is defined as <80% of area median income (AMI) = < $60,500*

Medium-High Income (MHI) is defined as >80% of AMI = >$60,500

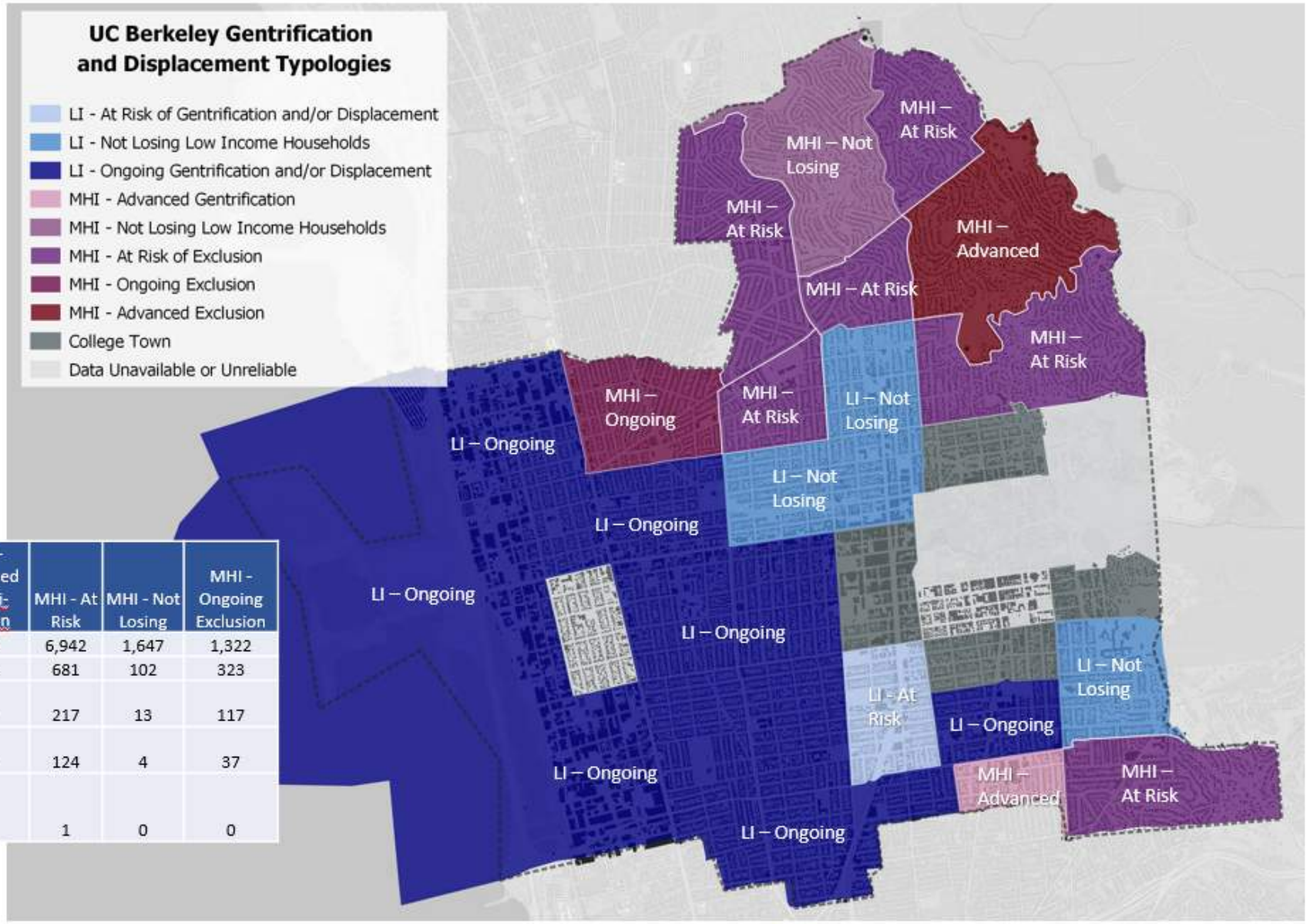
Observations:

- Ongoing displacement in Western half of Berkeley.
- Parts of Berkeley around college campus are not yet losing low income households, or are at risk of losing them.

Distribution by Typology

	College town	LI - At Risk	LI - Not Losing	LI - Ongoing	MHI - Advanced Exclusion	MHI - Advanced Gentri-fication	MHI - At Risk	MHI - Not Losing	MHI - Ongoing Exclusion
1 - Single-Family	434	391	1,629	7,006	1,566	251	6,942	1,647	1,322
2 - Duplex	278	180	753	2,179	166	119	681	102	323
3 - 3-4 family homes	305	146	529	1,647	41	55	217	13	117
4 - 5+ unit multi-family, low rise	541	112	457	960	20	57	124	4	37
5 - 5+ unit multi-family, mid-high rise	85	4	42	30	0	2	1	0	0

*Based on Census Bureau, American Community Survey 5-year estimate for 2017



Berkeley Existing Building Electrification Strategy

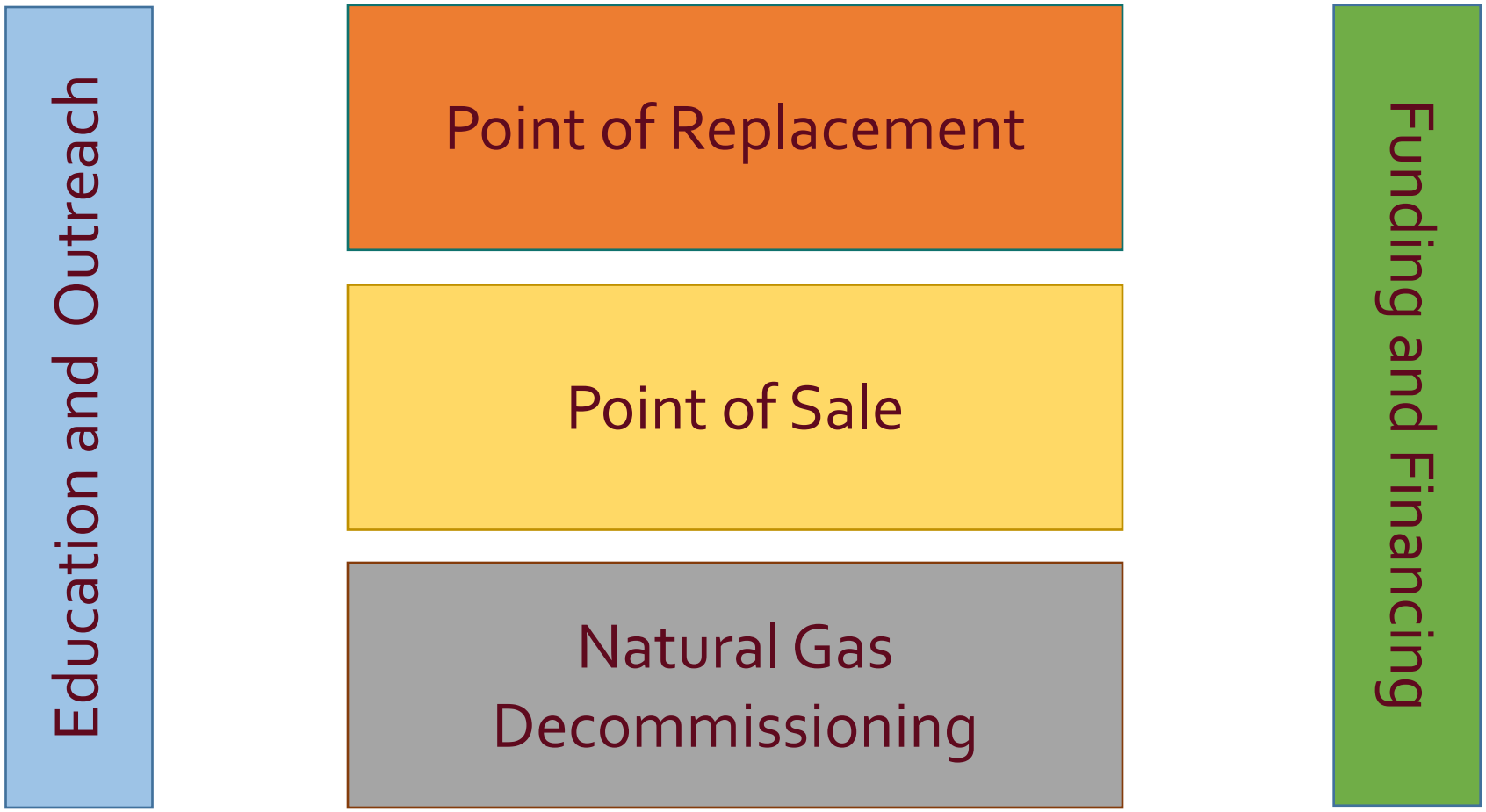
- Carbon-free energy future
- Improved home health, comfort, and resilience
- Flexible grid capable of addressing next-gen supply issues
- More affordable housing stock
- More diverse and stable workforce
- No more gas leaks or explosions
- Model for others to follow

Berkeley Existing Building Electrification Strategy

Equity Goals

- Equitable access to health and comfort improvements
- Minimized installation burden
- Equitable access to economic benefits
- Prevent displacement due to increased home value/taxes
- Protecting communities from future increased gas prices

Berkeley Existing Building Electrification Strategy



Electrification & Natural Gas Decommissioning

Thank You!

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californiaseec.org/2020-forum/

Statewide Energy Efficiency Collaborative

11/17 – BPC Spotlight Event 2: What Do We "SEEC" Next? An Interactive Forum Closing

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Statewide Energy Efficiency Collaborative

11/17 – BPC Spotlight Event 2: What Do We "SEEC" Next? An Interactive Forum Closing

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