

# Fighting Climate Change

Investing in Building Electrification



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STATE SENATE DISTRICT 13

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# Key Focus Areas

**CLIMATE**



**PUBLIC SAFETY**



**ELECTIONS**



**EDUCATION**



**ECONOMIC OPPORTUNITY**



**HOUSING**



**TRANSIT**



**HEALTH**



# The Big Picture for Climate Action

## 100% Clean Electricity

Energy storage  
Dispatchable clean energy  
Better integration of distributed energy resources  
Resiliency

## 100% Clean Transportation

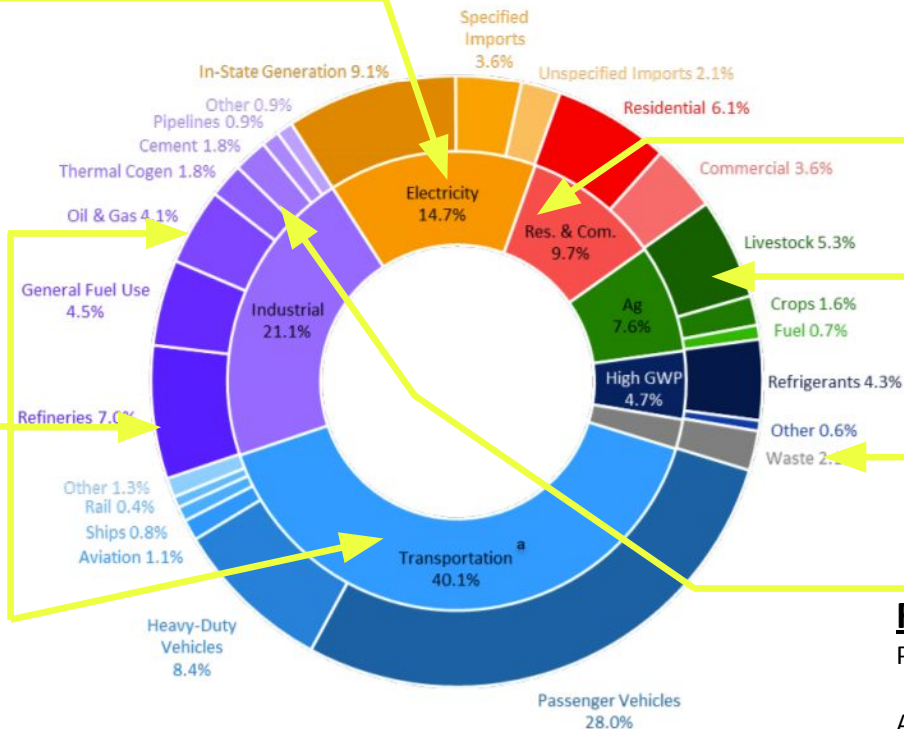
EV adoption  
Charging infrastructure  
Purer, low carbon fuels  
Cleaner air!

## 100% Clean Homes & Buildings

All-electric new construction  
Electric-ready when remodeling  
Electric appliances on replacement

## Reduce Methane Emissions

Pipelines: in-state leaks + huge (uncounted) out-of-state emissions  
Agriculture: livestock  
Waste: landfills, water treatment



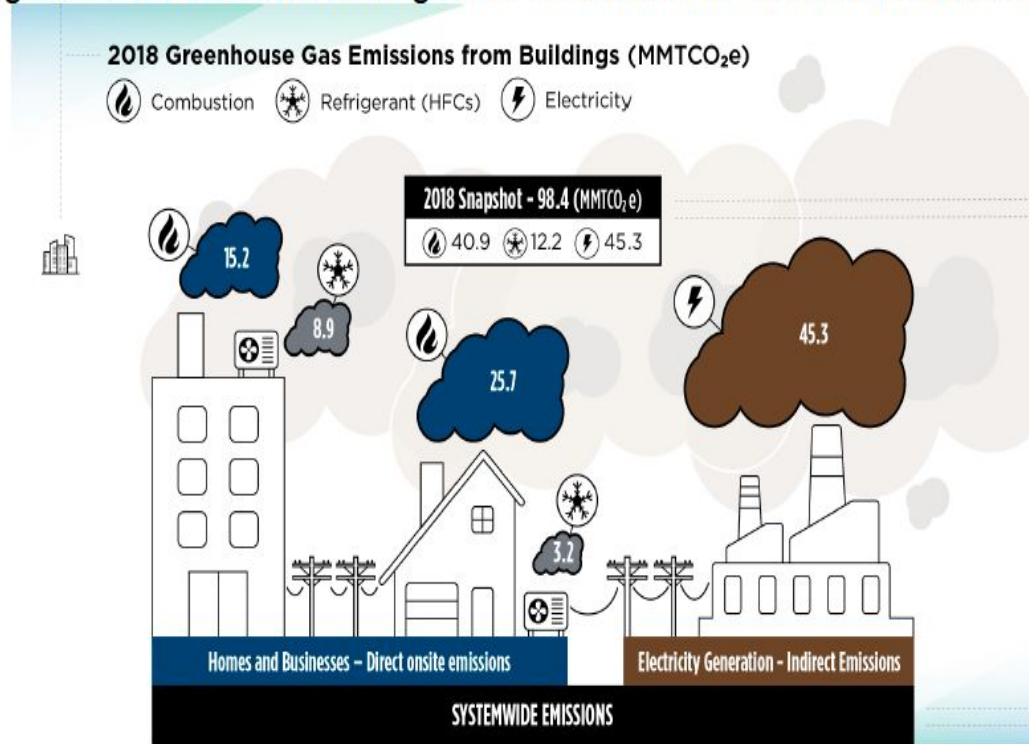
## California GHG Inventory

# Building Decarb

## Challenges

- Slow adoption rate
  - Appliances turn over less frequently than cars
- 14 M existing homes
- 7.5 B square feet of existing commercial
- Building codes and reach codes - early stages
- Expensive

Figure ES-1: Sources of Building GHG Emissions and Potential 2030 Emissions







Source: California Energy Commission  
CA Building Decarbonization Assessment Final Report



# Building Gas Bans & Electrification Reach Codes

Adopted in the  
California Bay Area

## Approach to limiting gas use:

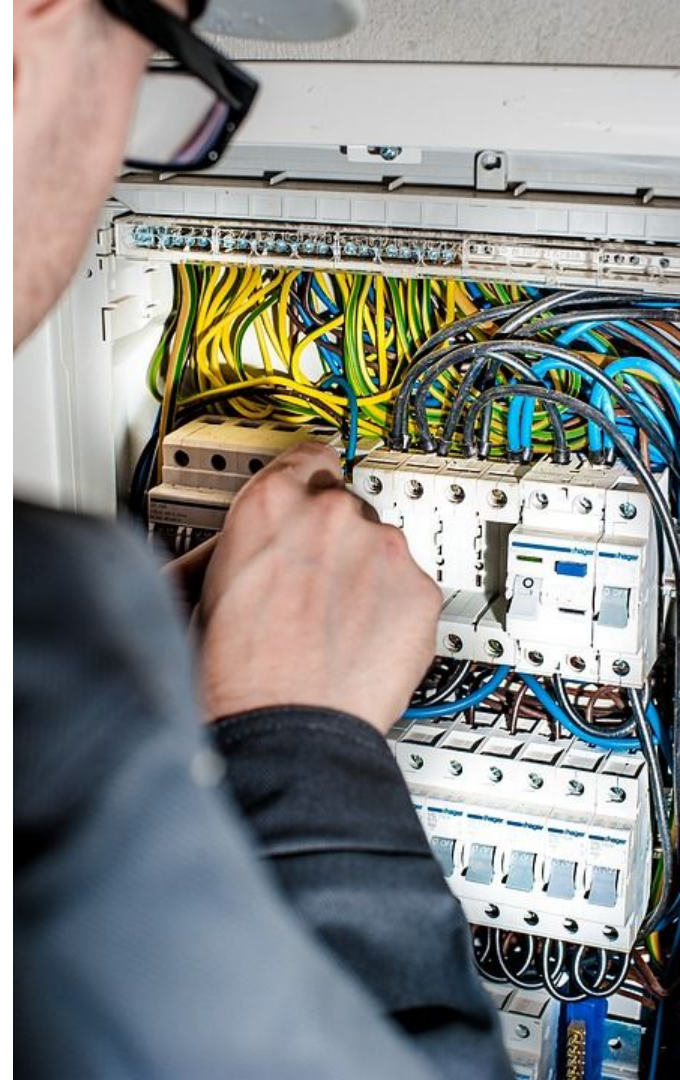
-  **Gas ban**  
Modifies building code to prohibit gas infrastructure
-  **Electric-required reach code**  
Requires all-electric systems, exceeding minimum state energy standards
-  **Electric-preferred reach code**  
Requires buildings with gas systems to achieve higher energy standards
-  **Multi-approach**  
Adopted both reach code types or a gas ban and reach code



# Solutions

## Mandates

- Building codes and reach codes for new construction
- Appliance bans / replace-on-burn-out ordinances
  - Force conversion as people buy new
  - BAAQMD is considering a ban on gas appliances
- Building Performance Standard
  - push owners of large buildings replace



## Solutions - Incentives

- Appliance rebates
- Direct install programs
  - Subsidized retrofits with economies of scale
  - Sacramento Municipal Utility District (SMUD)
    - Programs to upgrade all low-income buildings by 2030
- TECH Programs
  - Program for refurbishment
  - Training for workers to learn how to install
- BUILD Programs
  - Initiative for new construction



Split system heat pump HVAC system: outdoor & indoor units



# Solutions

## Low-cost financing

- SB 1112 - Tariff On-Bill Investment Programs
- Some retrofits are cost-effective
  - Saves money on energy bills
  - Upgrades through utility investment to clean choices
- Building owners will shoulder much of the upgrade costs
  - Leverage state funds to subsidize financing costs





# Solutions

## Market development support

- SB 68
  - Requires best practices related to building decarb challenges
- Build market awareness in the public
- Improved training & product availability for installers
- Streamlined permitting
- BUILD and TECH Programs expand the trained workforce and community education on building decarb





# Tariff On-bill Financing for Building Decarbonation

- Allows ratepayers to make upgrades in their homes through utility investment to clean choices
- Utility financing
  - Proven model that is currently used to accelerate adoption of energy and water efficiency measures



## State of California Net Zero

- SB 1203 will set a target for all state agencies to achieve zero net greenhouse gas
- Requires state agencies to publish inventories of their current emissions, establish interim targets, and create a plan for achieving these targets
- Leverages the state's procurement power to jumpstart clean tech solutions





# State - Budget

## Governor's Proposal

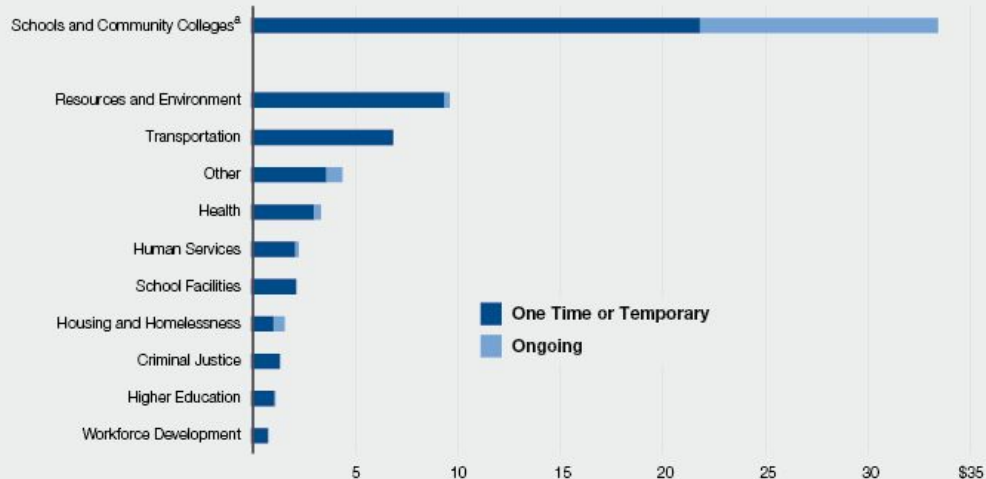
- \$650 M for direct install for low income
- \$300 M for appliance rebates
- Additional \$1 B for ???

### Major Discretionary Spending Choices in 2022-23 May Revision

\$33 Billion Surplus Within School and Community College Budget;

\$34 Billion in Overall General Fund Surplus Spending Proposals

(In Billions)



<sup>a</sup> Includes General Fund and local property tax revenue.

## State - Other Efforts

- CARB's 5 year Scoping Plan
  - New Construction
    - Residential - all electric by 2026
    - Commercial - all electric by 2029
  - Existing building stock
    - 80% appliances sales are electric by 2030
    - 100% residential appliances sales are electric by 2035
    - 100% commercial appliances sales are electric by 2045
- Go Green
  - CA Alternative Energy and Advanced Transportation Financing Authority (CAEATFA)'s low cost financing program for electrification and decarb upgrades

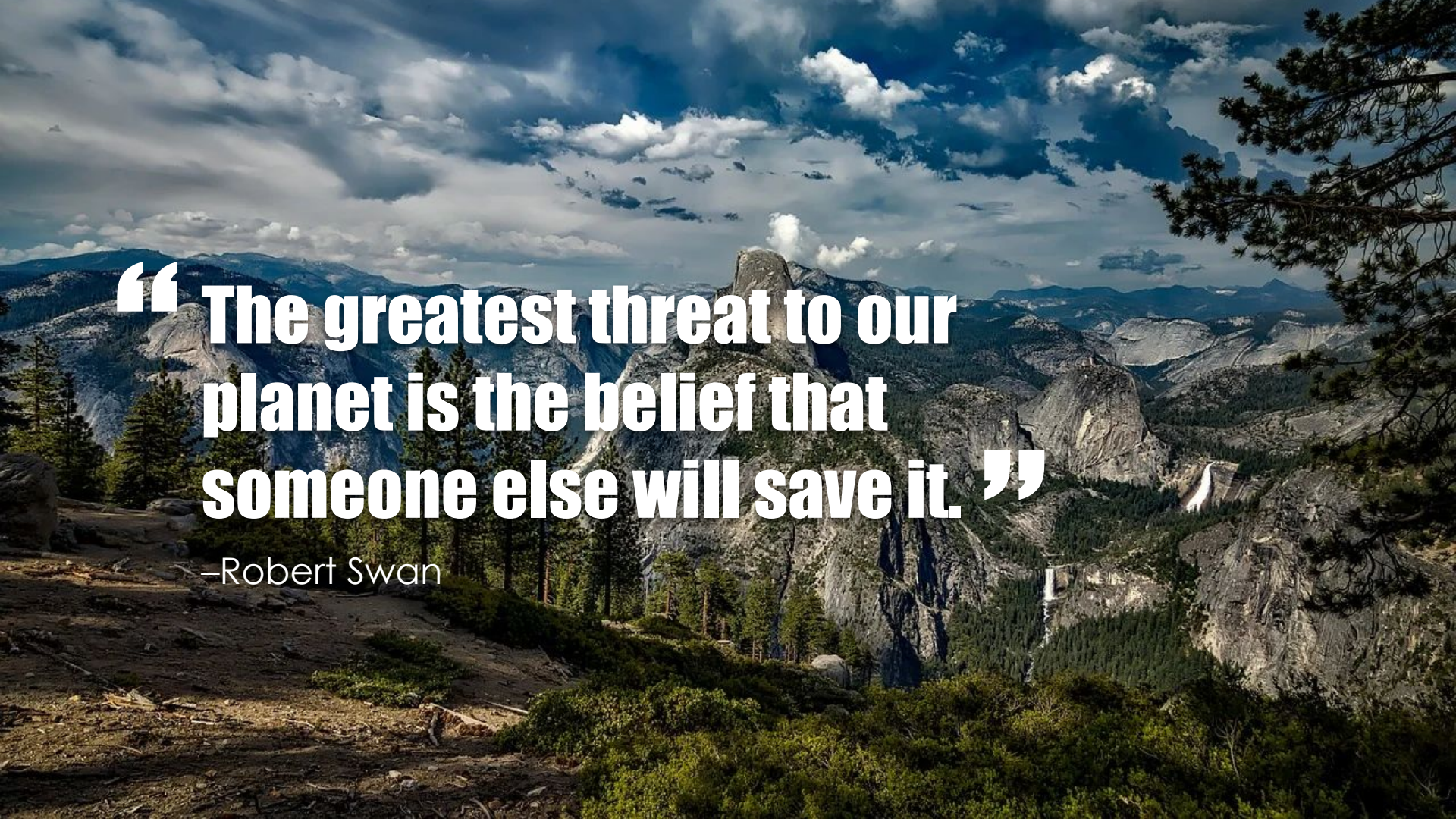


# Greening the Buildings

- Cement and concrete bills to lower industrial emissions
  - SB 596 and SB 778
- Mass timber
  - San Mateo County Civic Building
    - First civic building in the nation
  - Affordable housing
    - First Community Housing (San Jose)
  - Google and Sobrato





A scenic view of a mountain landscape, likely Yosemite National Park, featuring granite cliffs, a forest of evergreen trees, and a cloudy sky. The quote is overlaid in large, bold, white text.

**“The greatest threat to our planet is the belief that someone else will save it.”**

—Robert Swan

# Thank you!

Senator Josh Becker

[sd13.senate.ca.gov](http://sd13.senate.ca.gov)

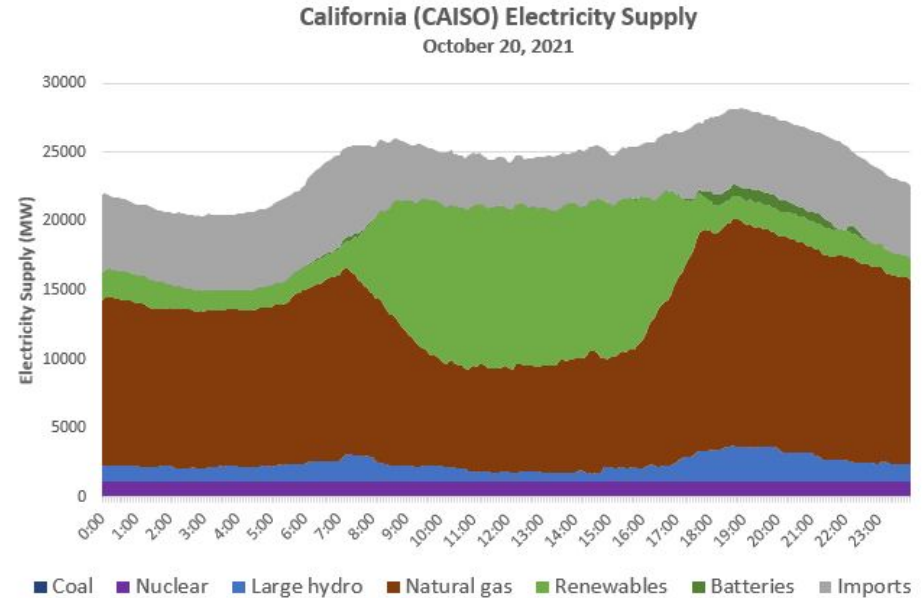
# Appendix





## 24/7 Clean Energy Reporting

- Still highly dependent on fossil gas at night
- California must get to 100% clean energy even when the sun isn't shining and the wind isn't blowing
- SB 1158 makes improvements to the rules that govern how utilities report their energy sources so that we can ensure rapid progress toward a 24/7 clean energy





# Transmission Acceleration

- Transmission lines are the 'electricity superhighways' of the grid
- Cannot meet the goals of SB 100
  - To reach 100% renewable or zero carbon electricity by 2045
- SB 887 will accelerate the construction and permitting of that needed transmission







## Infrastructure Authority

- California needs to build a massive amount of new clean energy generation and storage to get it to the cities
- A centralized authority would cut some of the risk and delays that add costs
- Streamline permitting



## Surcharge on Fossil Fuel Financers

- Impose an additional tax on the California profits of financial institutions that provide more than \$1B annually in financing (globally) to fossil fuel companies in order to help fund the state's efforts to improve resiliency to the climate impacts caused by that financing





## Buy Clean California Concrete

- Adds concrete to the Buy Clean program to leverage the state's purchasing power in deploying low carbon technologies and best practices across the cement-concrete supply chain
- Leverages the state's purchasing power to encourage transition

