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
**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

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**California GHG Inventory**

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**The Big Picture for Climate Action**
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
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
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
Governor’s Proposal

- $650 M for direct install for low income
- $300 M for appliance rebates
- Additional $1 B for ???
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
The greatest threat to our planet is the belief that someone else will save it.

–Robert Swan
Thank you!

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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