

Preemption in California

How Can We Get to Zero Net Energy?

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California State Policy Goals

Sector	Type	Now	2020	2025	2030	2050
Residential	New Construction ZNE		100%			
	Existing Homes (reduction relative to 2005 stds)		40%			
Commercial	New Construction ZNE				100%	
	Existing ZNE				50%	
State Buildings	New Construction & Major Retrofit ZNE		50%	100%		
	Existing (by square footage) ZNE			50%		
SB 350	Increase energy efficiency in existing buildings				50%	
AB 758	Existing Buildings Energy Efficiency Action Plan	New and enhanced codes & standards, code simplification, increased compliance, asset ratings, purchase agreements, etc.				
AB 32	GHG Levels		1990 Levels		40% Below 1990	80% Below 1990
Water Eff	Reduce Water Use		25%			

Supporting Agencies:



Note: Residential and commercial goals initially established in California's *Long Term Energy Efficiency Strategic Plan*, developed by the CPUC. The State buildings goal was established by Governor Brown's Executive Order B-18-12.

A wide-angle photograph of Earth from space, showing the curvature of the planet and the thin blue atmosphere. The sun is visible in the upper center, creating a bright lens flare and illuminating the clouds. The landmasses are visible in shades of brown and green, with a large body of water in the center.

Zero Net Energy

“It’s an audacious goal. We’re going to give it our best shot. ”

Cathy Fogel, CPUC



Standards in California

	CA 1st Effective Date	DOE 1st Effective Date		
Refrigerators & Freezers	1977	1990		
Heat Pumps	1977	1990		
Central Air Conditioners	1977	1993		
Air Conditioners	1977	1990		
Hot Water Heaters	1978	1990		
Plumbing (Showerheads)	1978	1994		
Furnaces	1978	1990		
Boilers	1978	1992		
Clothes Dryers	1979	1988		
Pool Equipment	1982	1990		
Ballasts for Lighting	1983	1990		
Commercial Clothes Washers			2001	2005
Traffic Signals			2003	2006
Torchiere Lighting Fixtures			2003	2006
Illuminated Exit Signs			2003	2006
Dist., Transformers (Low Voltage Dry-Type)			2003	2007
Commercial Refrigerated Equipment			2003	2010
General Service Lamps			2006	2012
Metal Halide Lamp Fixtures			2006	2009
Vending Machines			2006	2012
Unit Heaters			2006	2008
Pre-Rinse Spray Valves*			2006	
External Power Supplies			2006	2008
Automatic Commercial Ice Makers			2007	2010
Walk-In Coolers & Freezers *				2009
Battery Chargers**				2013
Wine Chillers**			2003	2018
Pool Pumps**			2006	2022



*CA standard adopted but preempted before it became effective; **DOE is working on standard and effective date are tentative.

Sources: CEC. <http://www.energy.ca.gov/appliances/documents/CAEnergyEfficiencyStandards.pdf>. ASAP: <http://www.appliance-standards.org/products>

Increasing Federal Preemption

The Appliance and Equipment Standards program has grown to cover products representing about:

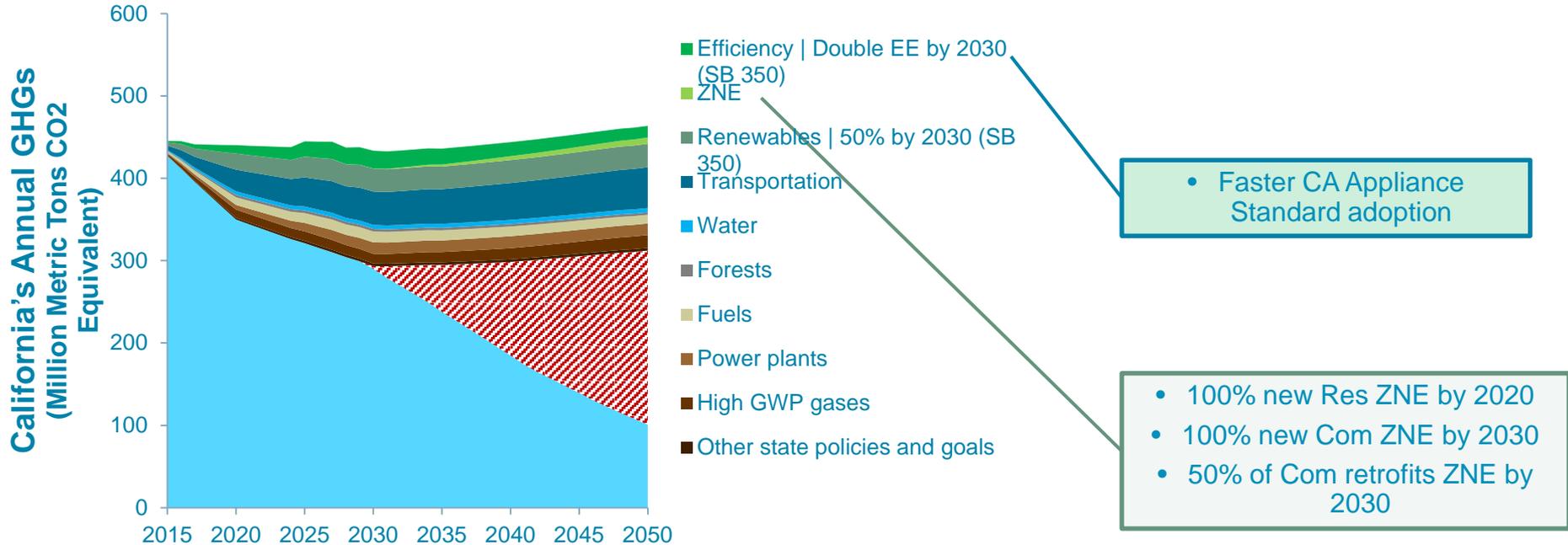
- **90%** of home energy use,
- **60%** of commercial building energy use, and
- **30%** of industrial energy use.

More than 65 different product categories are covered.





Meeting California's GHG Goals



Note: "ZNE" includes only energy savings and is subtracted from EE to avoid double counting.

The Path to Zero Net Energy

19 min
2.6 miles

15 min
every 10 min

10 min
every 10 min



Google

Potential Paths Forward



**Building Code Prescriptive Pathways
& Incentive Programs**



DOE Standard Reach Standards



Regional Standards

Thank You

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