



# California Green Innovation Index

Presentation by:  
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## About Next 10

- Founded in 2003
- Independent, Nonpartisan, Nonprofit
- Focus: Budget, Infrastructure, Green Economy
- Commissions expert research to educate, engage, empower



## About the California Green Innovation Index

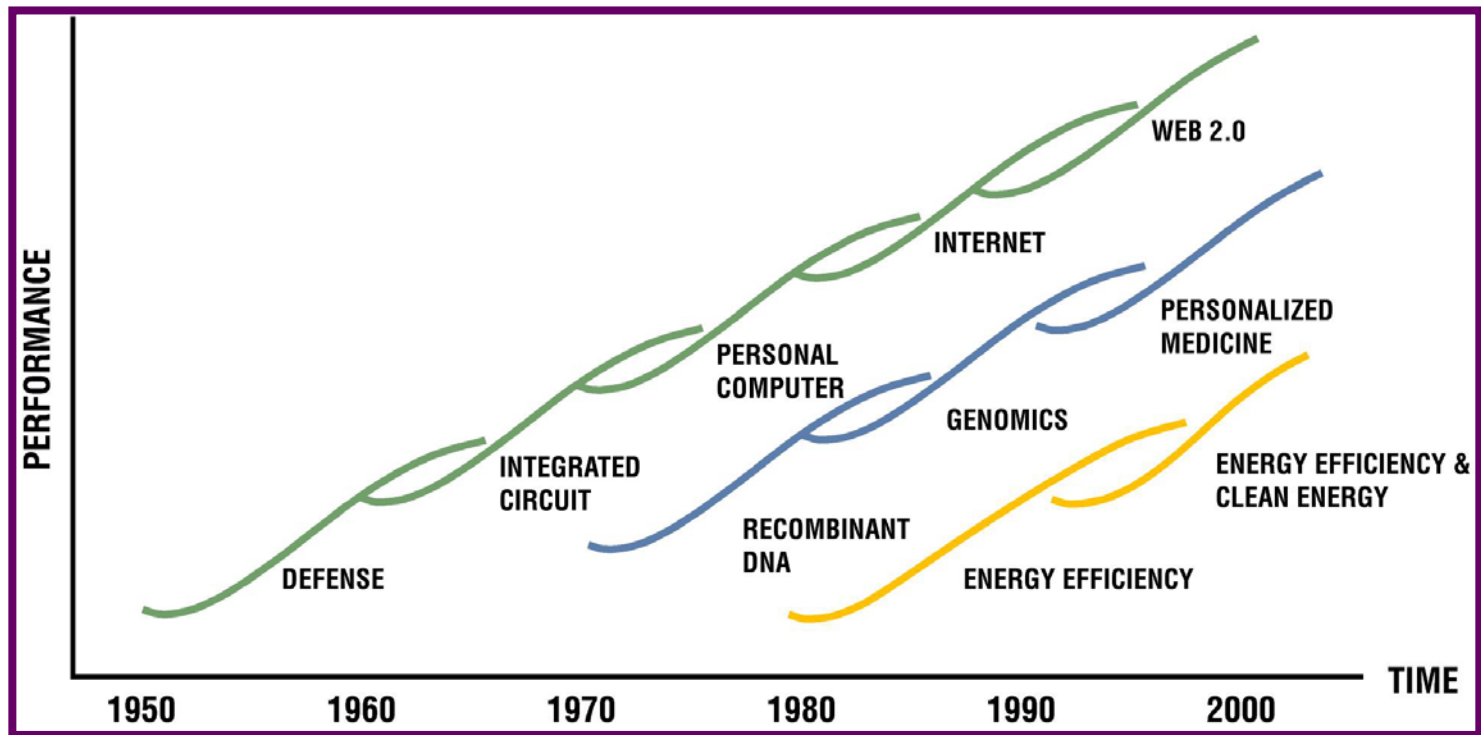
- Analyzes key economic and environmental indicators
- Green innovation has helped us reduce GHG emissions and grow the state's economy
- Tracks performance as we work toward AB 32 goals
  - Innovation is the driver of California's economic and environmental progress
  - The first wave of green innovation
  - Tracking signs of the next wave of green innovation
  - The challenge and prospects for the future

# Index Senior Advisors

Ralph	Cavanagh	Natural Resources Defense Council
Michael	Hanemann	CA Climate Change Center, UC Berkeley
Hal	Harvey	The William & Flora Hewlett Foundation
Elliot	Hoffman	New Voice of Business
Van	Jones	Ella Baker Center
Dan	Kammen	Renewable & App. Energy Lab, UC Berkeley
Bruce	Klafter	Applied Materials
Joel	Makower	Executive Editor, GreenBiz.com
Walter	McGuire	McGuire & Co., Inc./ Flex Your Power
Joe	Nation	Former State Assemblyman, District 6
Manuel	Pastor	Professor of US Studies & Ethnicity, USC
Fran	Pavley	Assemblymember (2000-2006), Author AB 32
Wendy	Pulling	Pacific Gas & Electric Company
Carol	Whiteside	Great Valley Center
Tim	Woodward	Nth Power



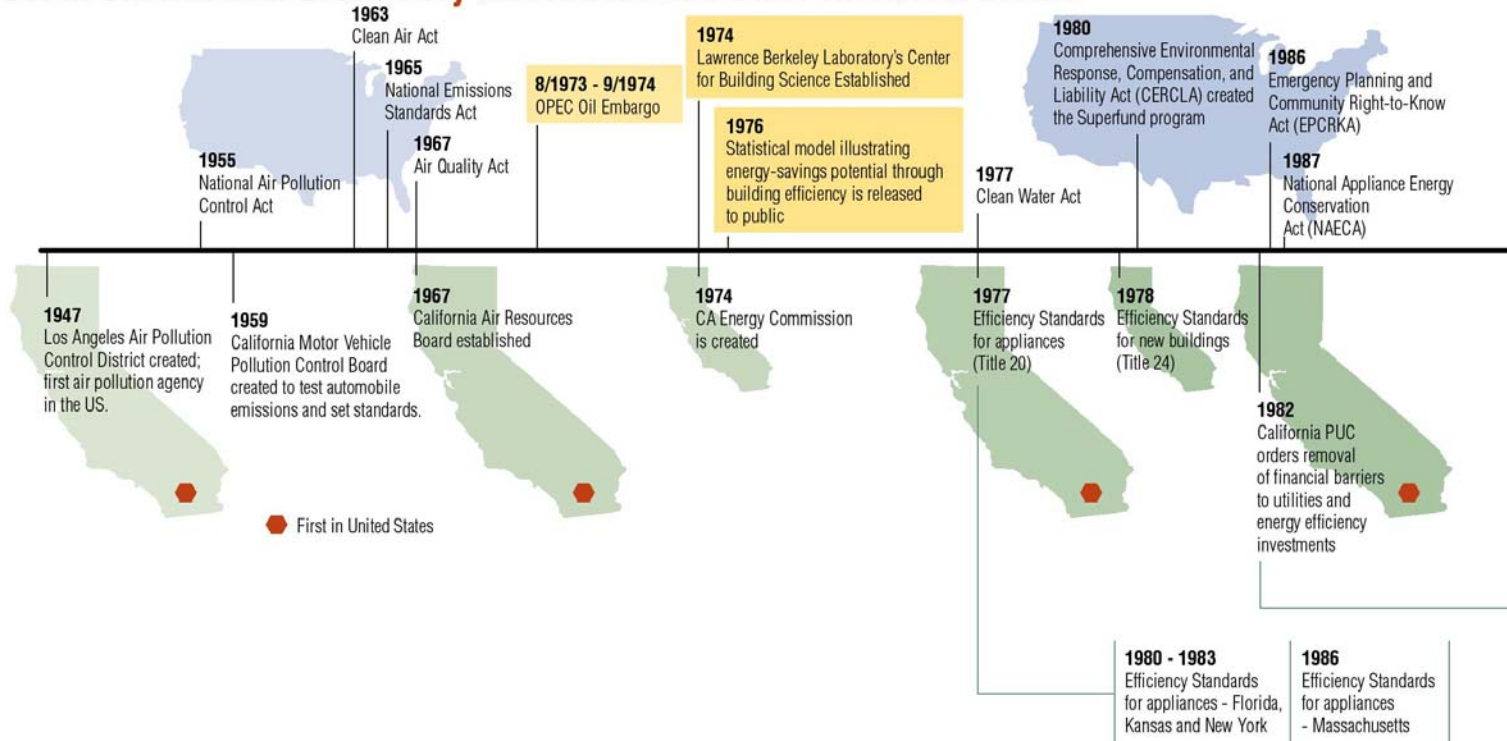
# WAVES OF INNOVATION





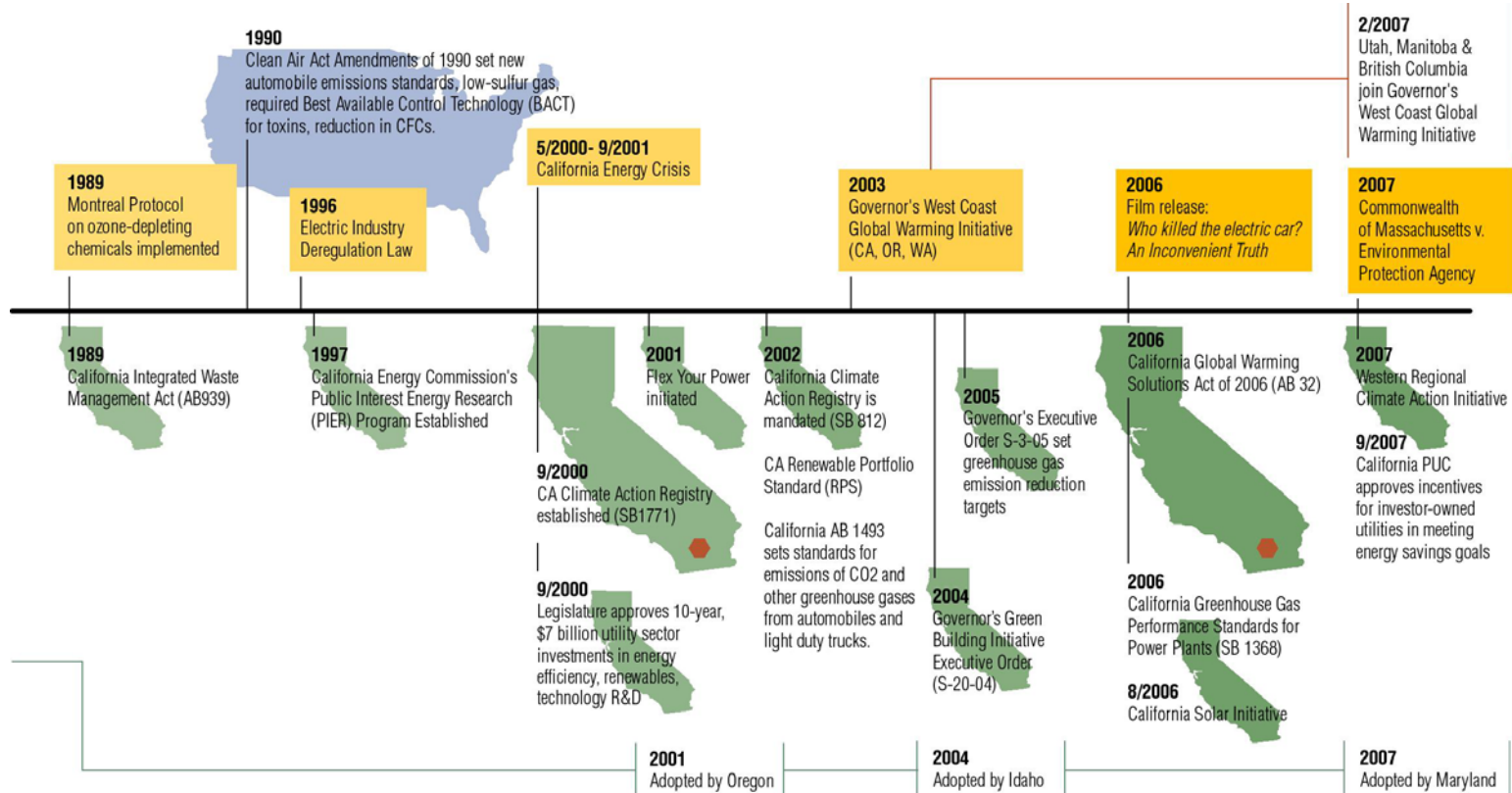
# POLICY INNOVATIONS: 1947-1987

## California Policy Innovations Over Time (Regulatory, Investment, Incentives) Set in Context with U.S. Policy Innovations and Other Historical Events



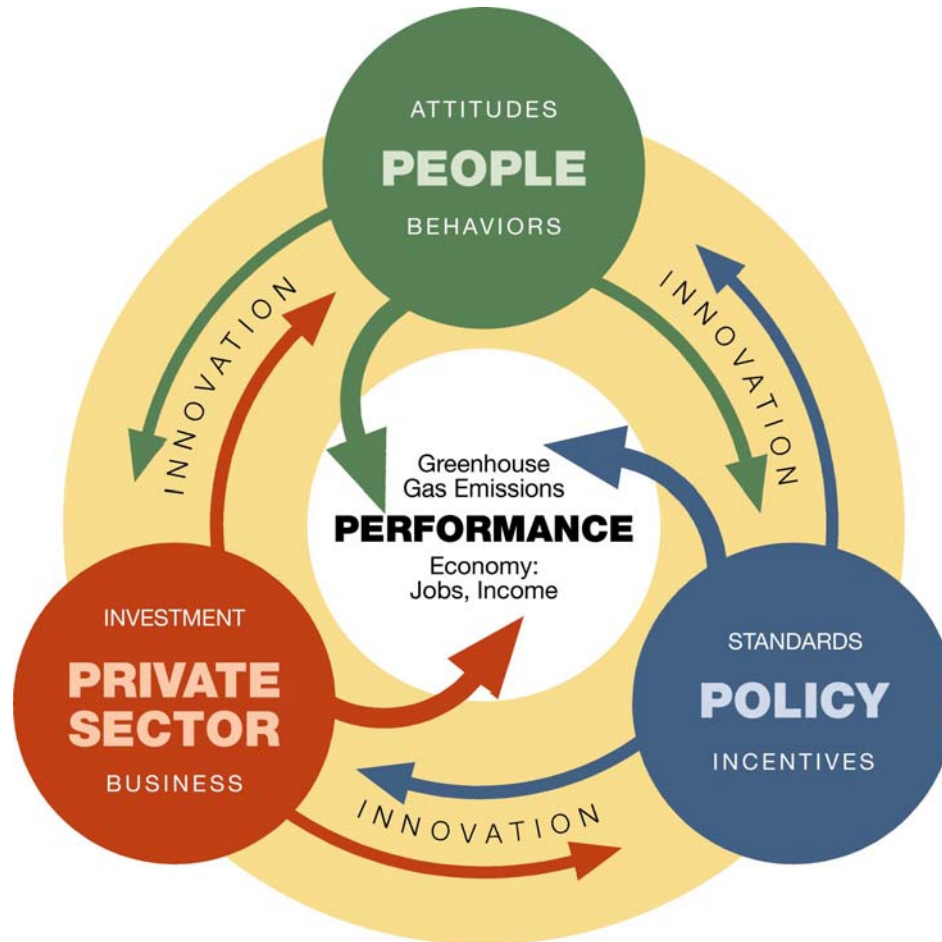


# POLICY INNOVATIONS: 1989-2007



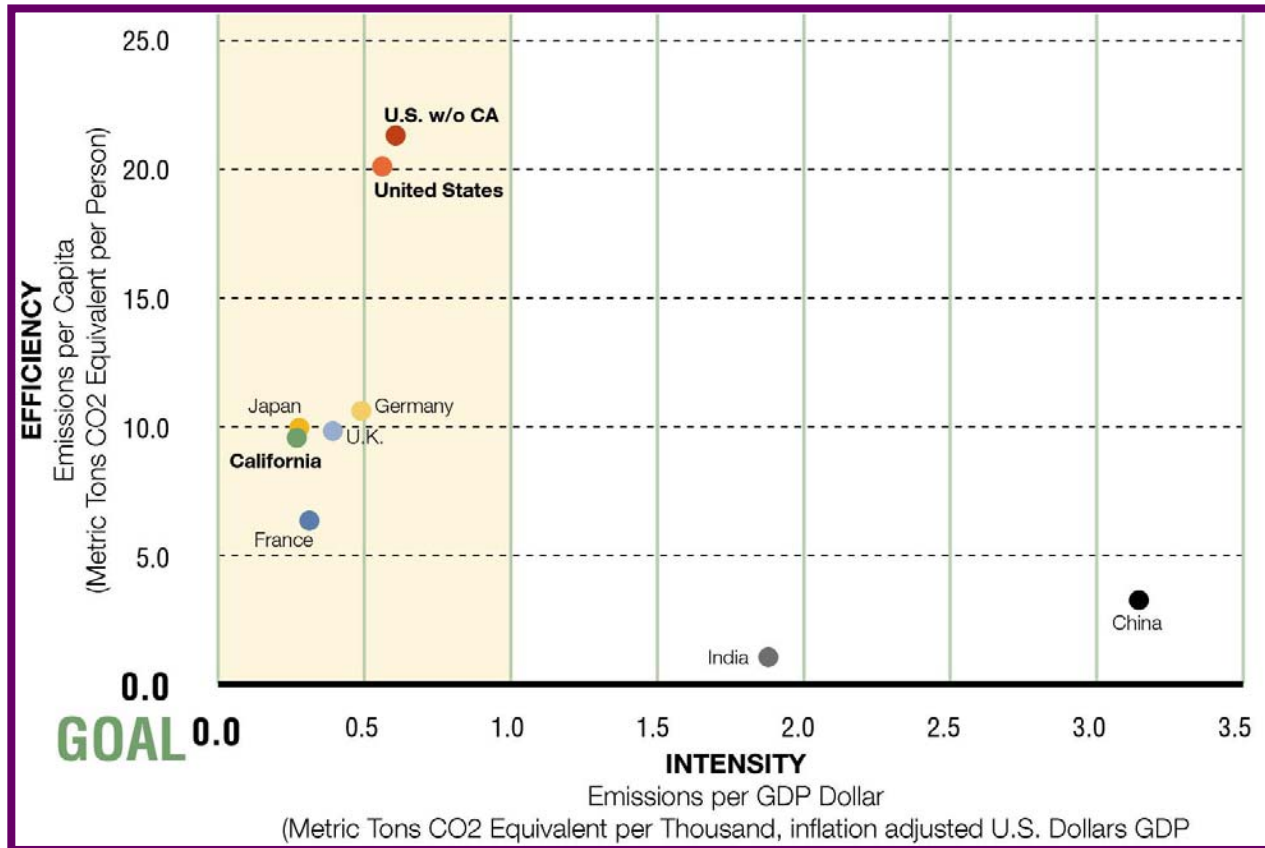


# DYNAMICS OF GREEN INNOVATION





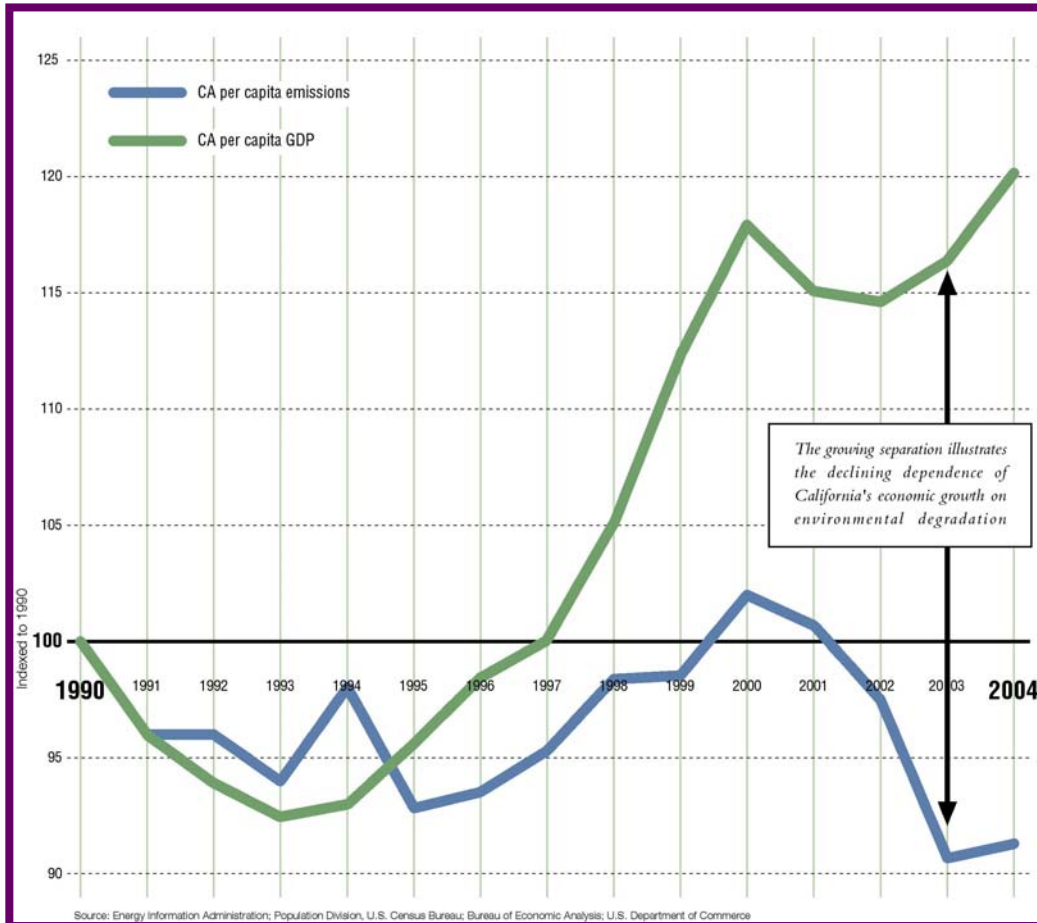
# GLOBAL FOSSIL FUEL COMBUSTION



CA is more energy efficient and its economy less carbon intensive than the US.



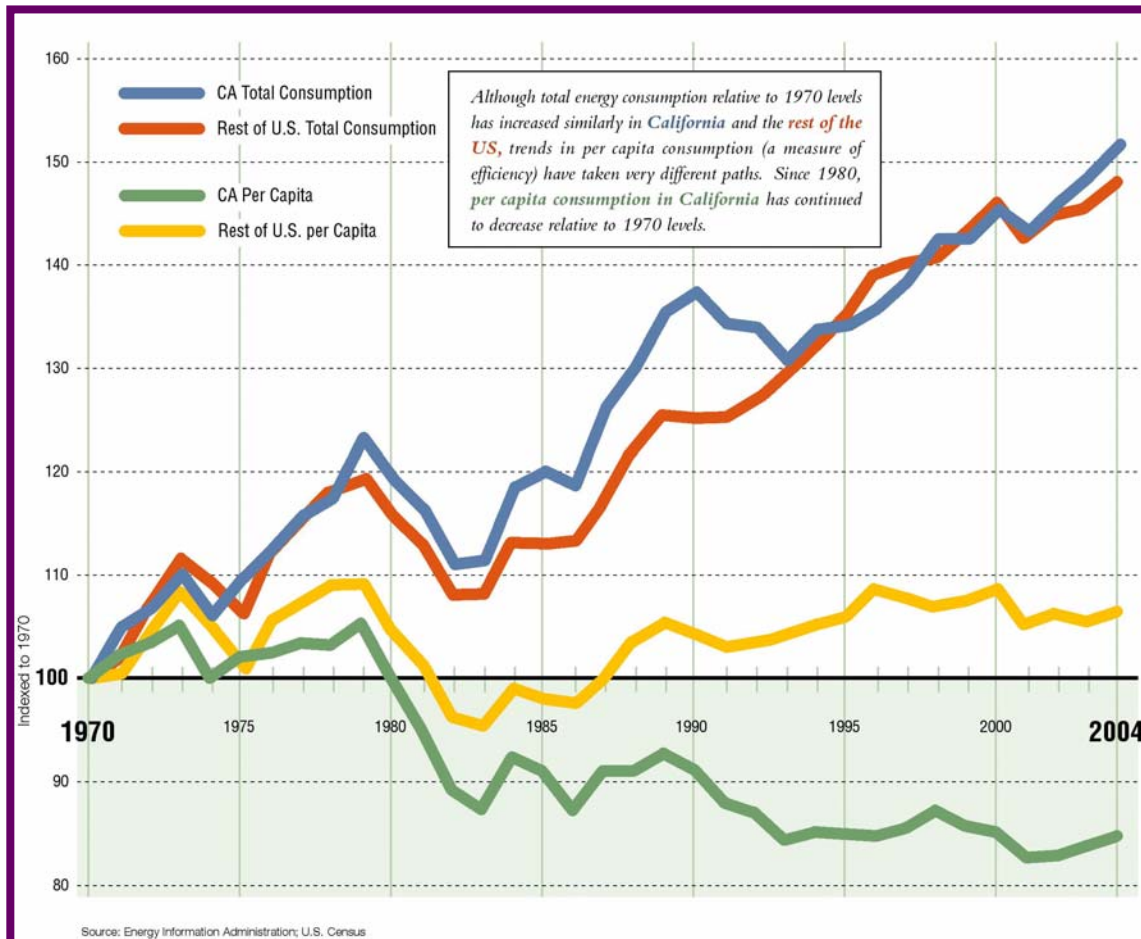
# EMISSIONS AND GDP



California's economic growth is increasingly less dependent on the production of greenhouse gases.



# TOTAL ENERGY CONSUMPTION



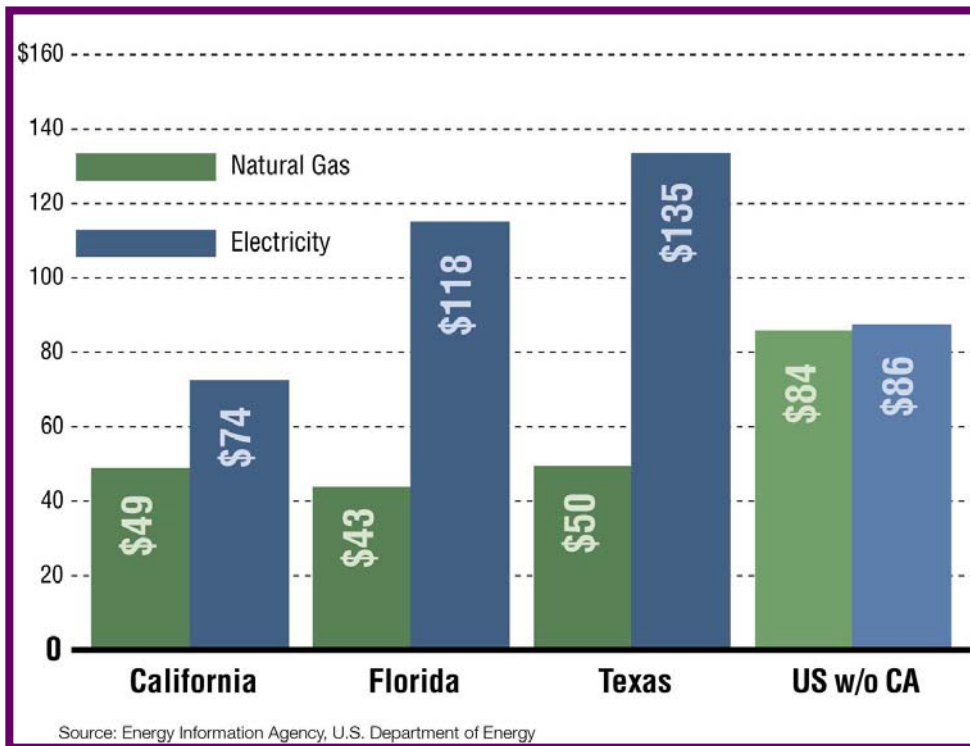
Like the US: total consumption continues to rise.

Unlike the US: CA is more energy efficient now than in 1970.



# RESIDENTIAL GAS & ELECTRIC BILLS

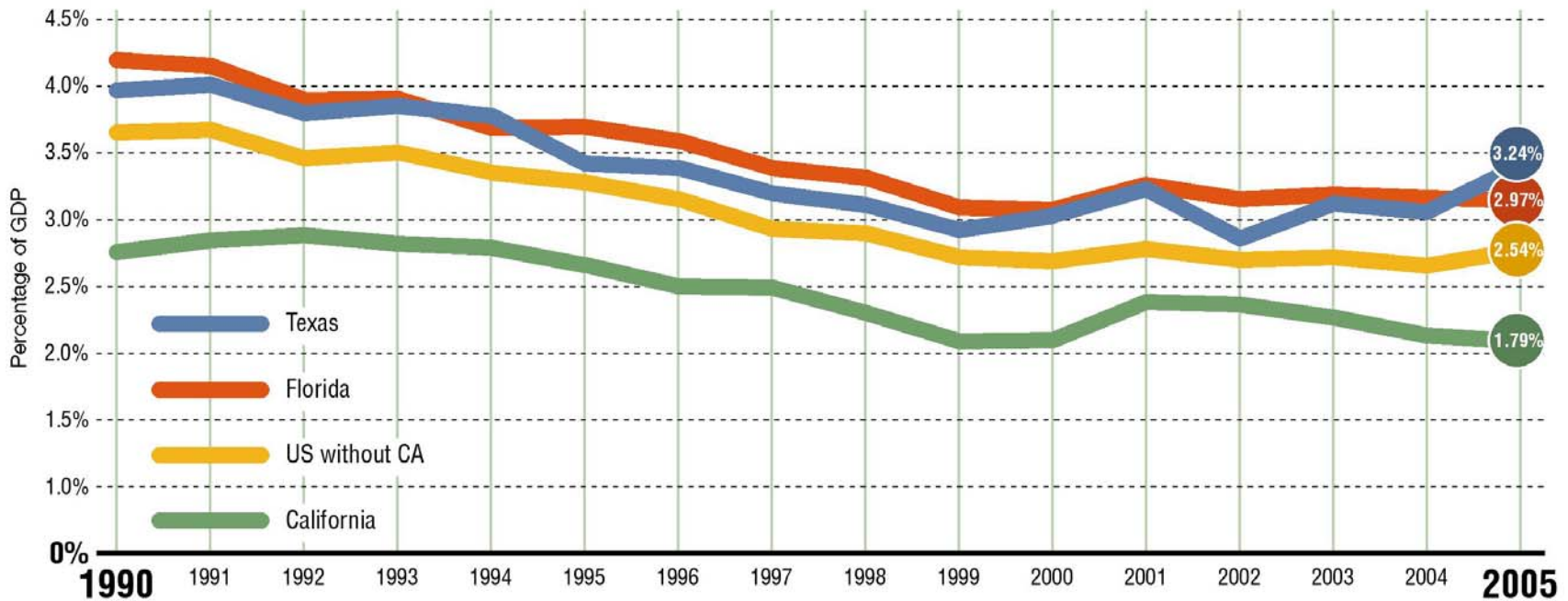
## *Monthly average, 2005*



California's energy efficiency translates into lower bills for consumers.



# STATEWIDE ELECTRICITY BILL



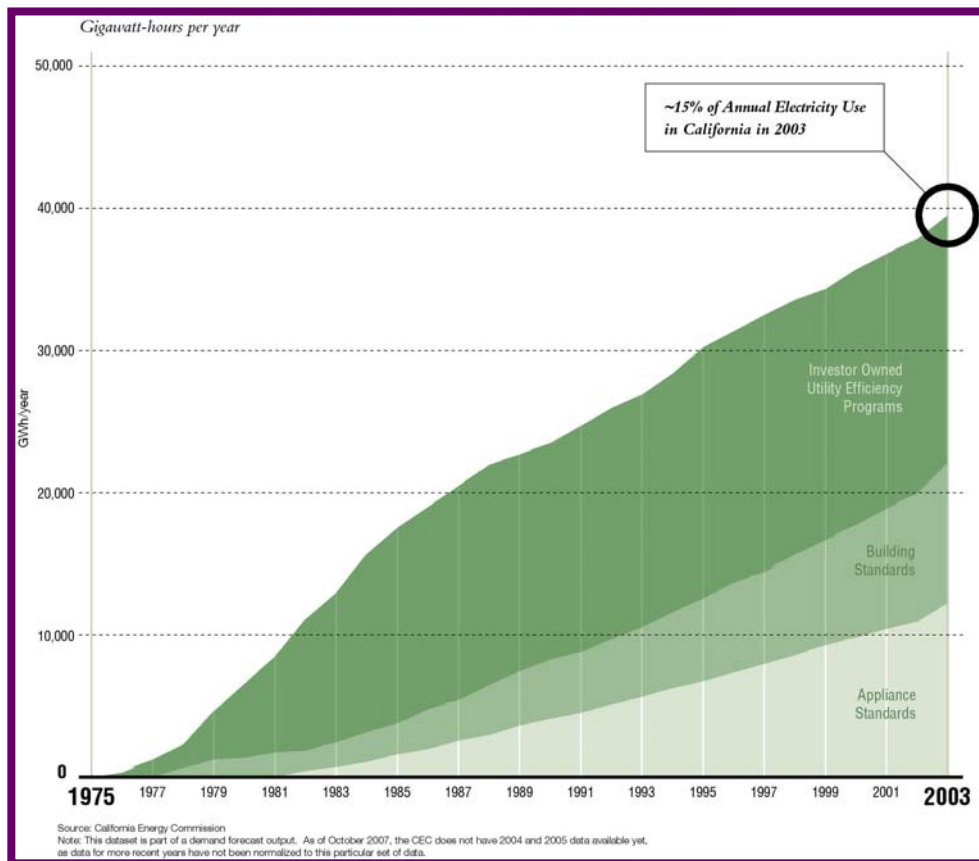
Source: Energy Information Agency, U.S. Department of Energy; Bureau of Economic Analysis, U.S. Department of Commerce

Expressed as a fraction of GDP, CA spends half as much on electricity as Texas.



# ANNUAL ENERGY SAVINGS

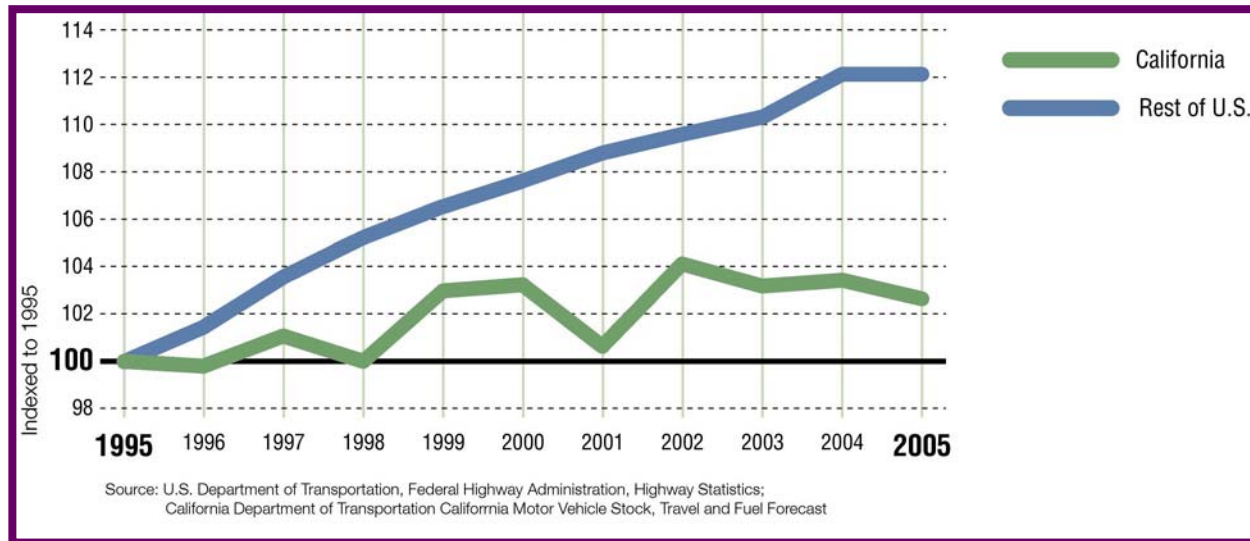
*From efficiency programs & standards*



In 2003, CA saved 40,000 GW-hours through utility efficiency programs which equated to 15% of total annual electricity use.



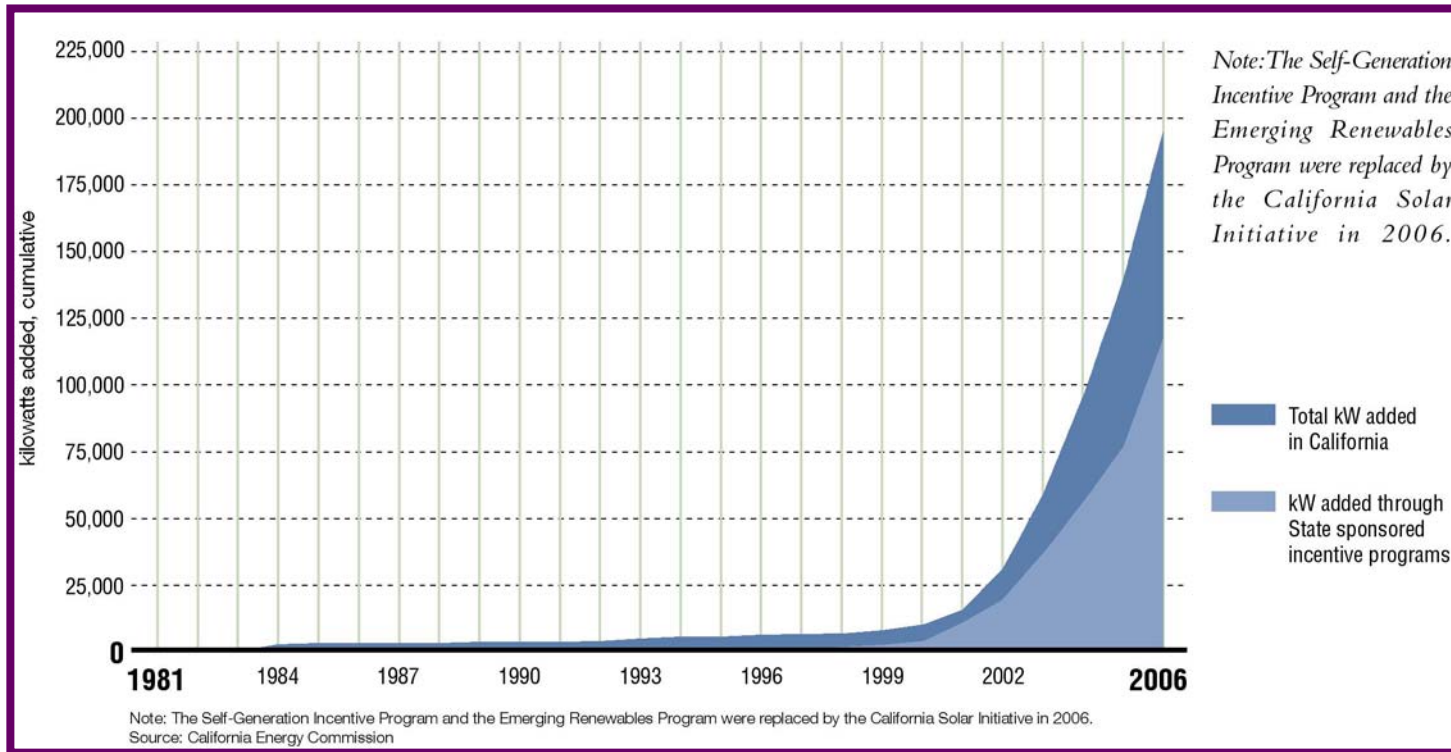
# VEHICLE-MILES TRAVELED PER CAPITA



Compared to the rest of the country, vehicle-miles traveled by Californians has increased only modestly.



# ENERGY FROM SOLAR INSTALLATIONS IN CA: *Grid-connected solar photovoltaics*



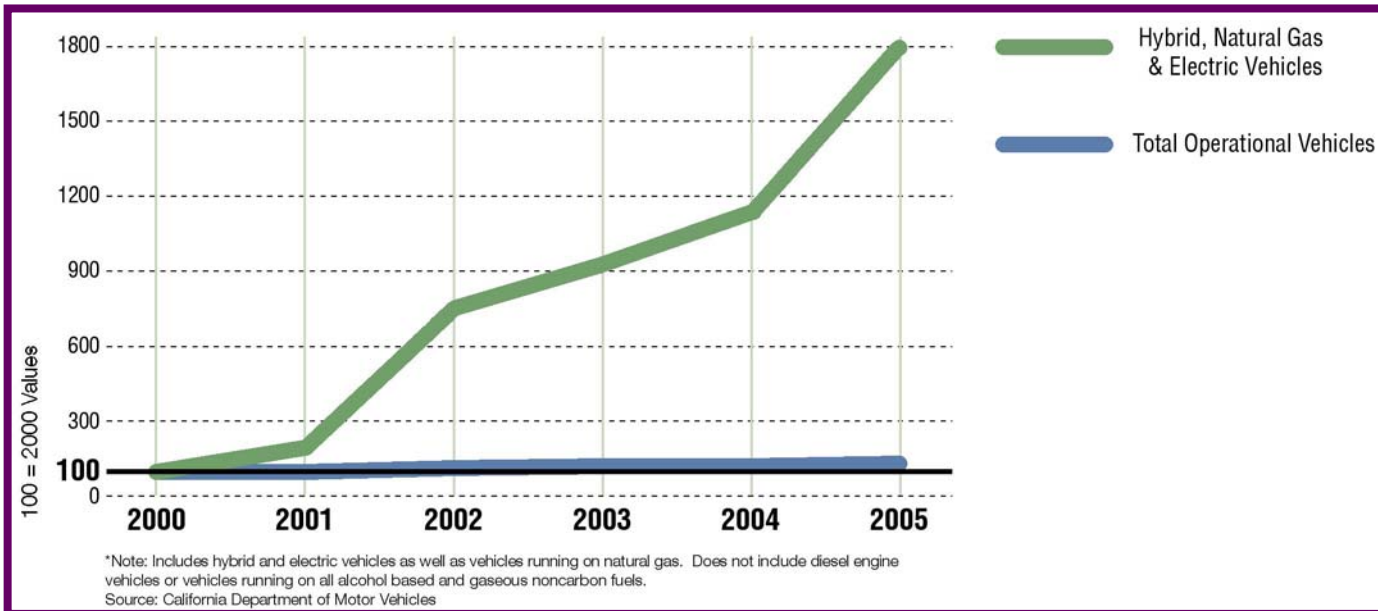
Since 2000 total kW added through solar grew 16 times.

State incentives making impact.



# ALTERNATIVE FUEL VEHICLES

## *Growth in operational vehicles registered*

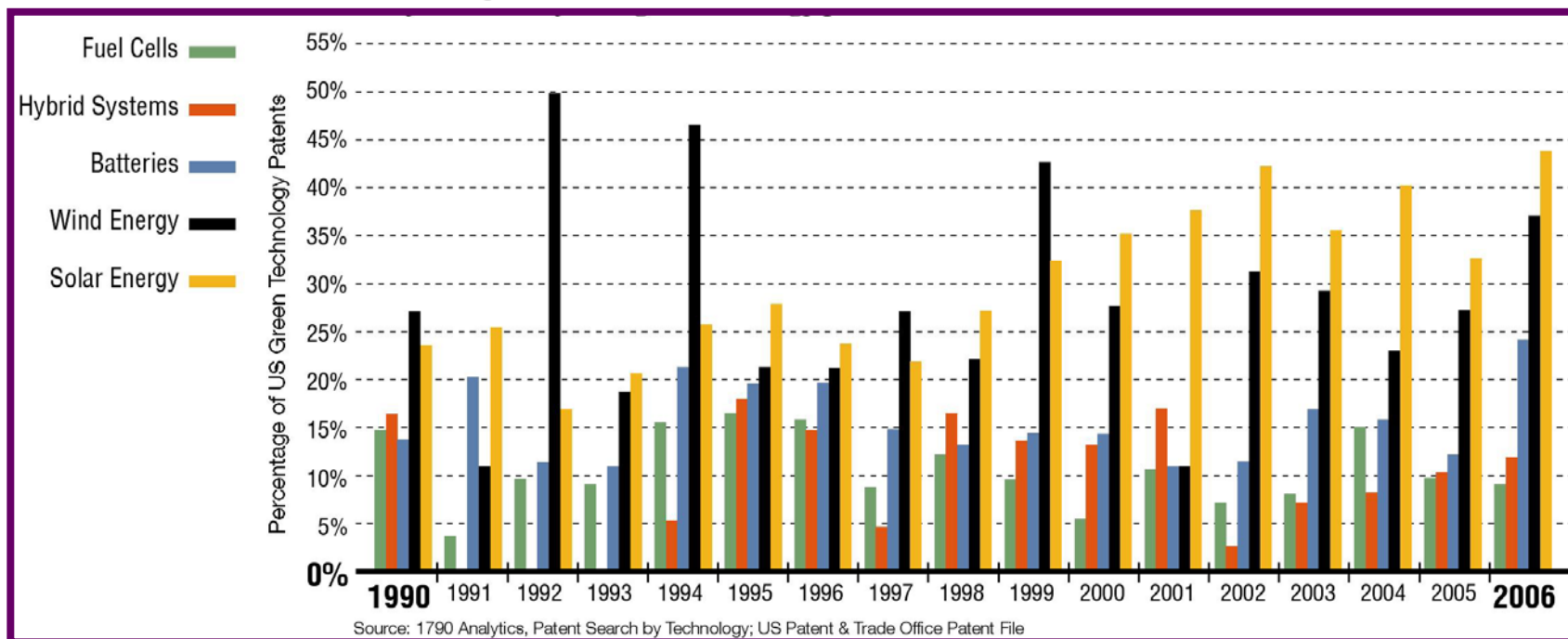


Registrations of alternative fuel vehicles are increasing 18x faster than total vehicle registrations.



# PATENTS BY GREEN TECHNOLOGY

## *CA share of US green tech patents*



CA contributes strongly to US patent registrations in green technology: 44% of solar and 37% in wind technologies.



# VC INVESTMENT IN ENERGY TECH

## *Investment in California companies*

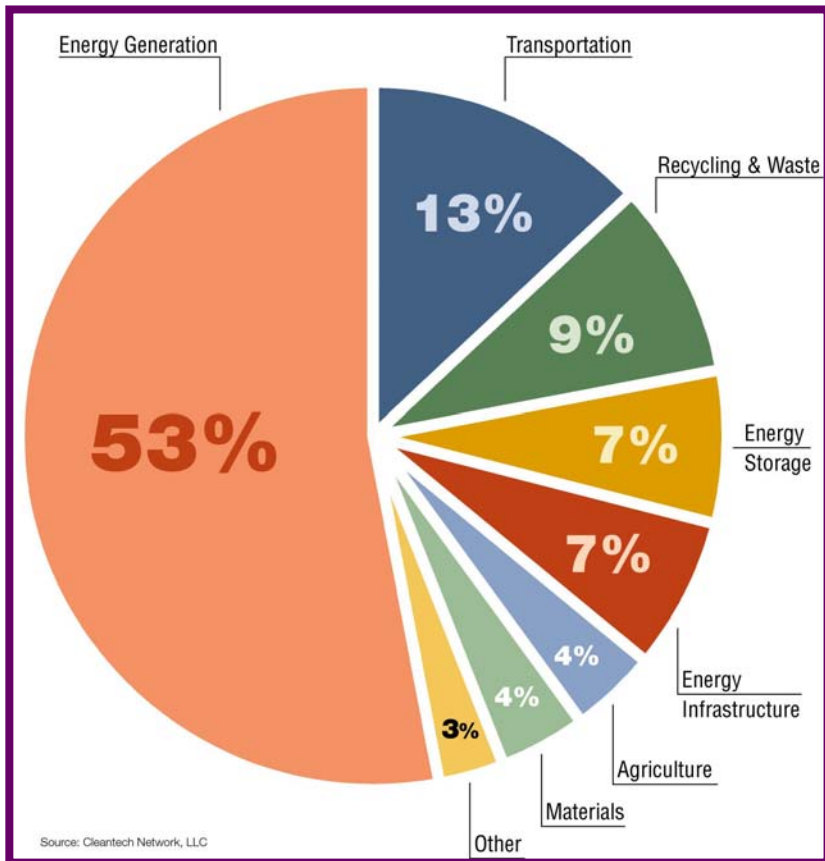


Attracting \$884 million in 2006, California is the top recipient state for energy Venture Capital.



# VC INVESTMENT IN CLEAN TECH IN CA

*By cleantech segment; Q1-Q2 2007*

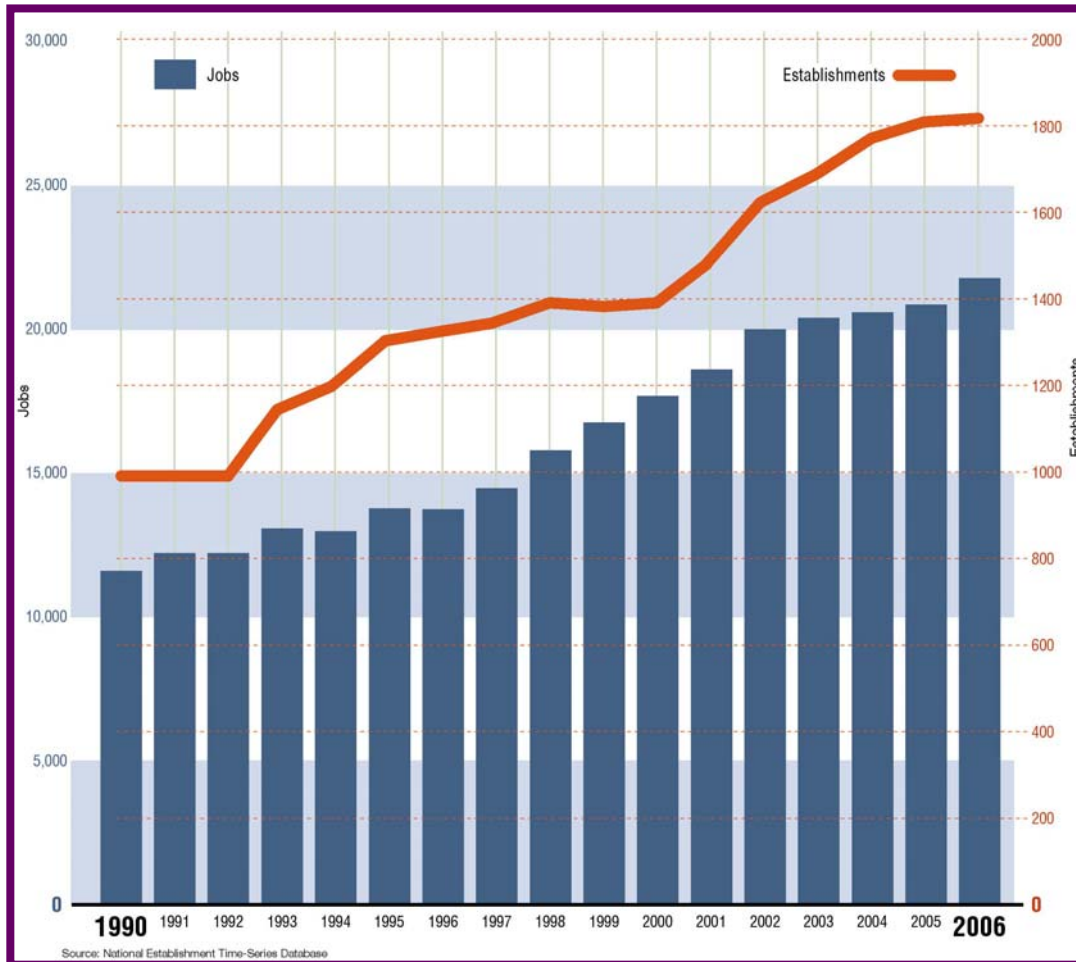


California attracted 49% of all cleantech VC investment in the U.S. during the first half of 2007.

53% was in Energy Generation.

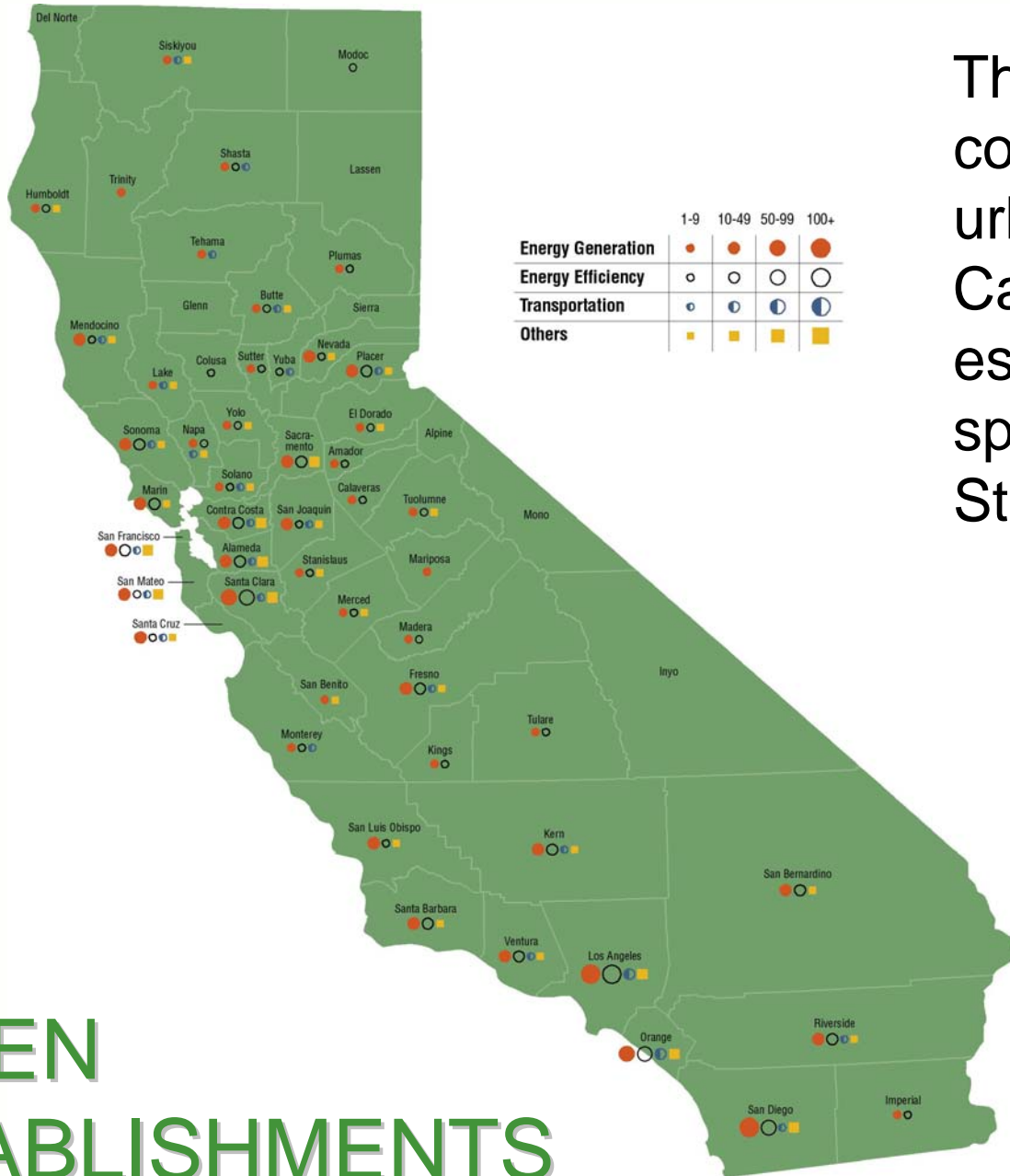


# GREEN JOBS & ESTABLISHMENTS: CA



California's green establishments have grown by 84% in number and have added more than 10,000 jobs since 1990.

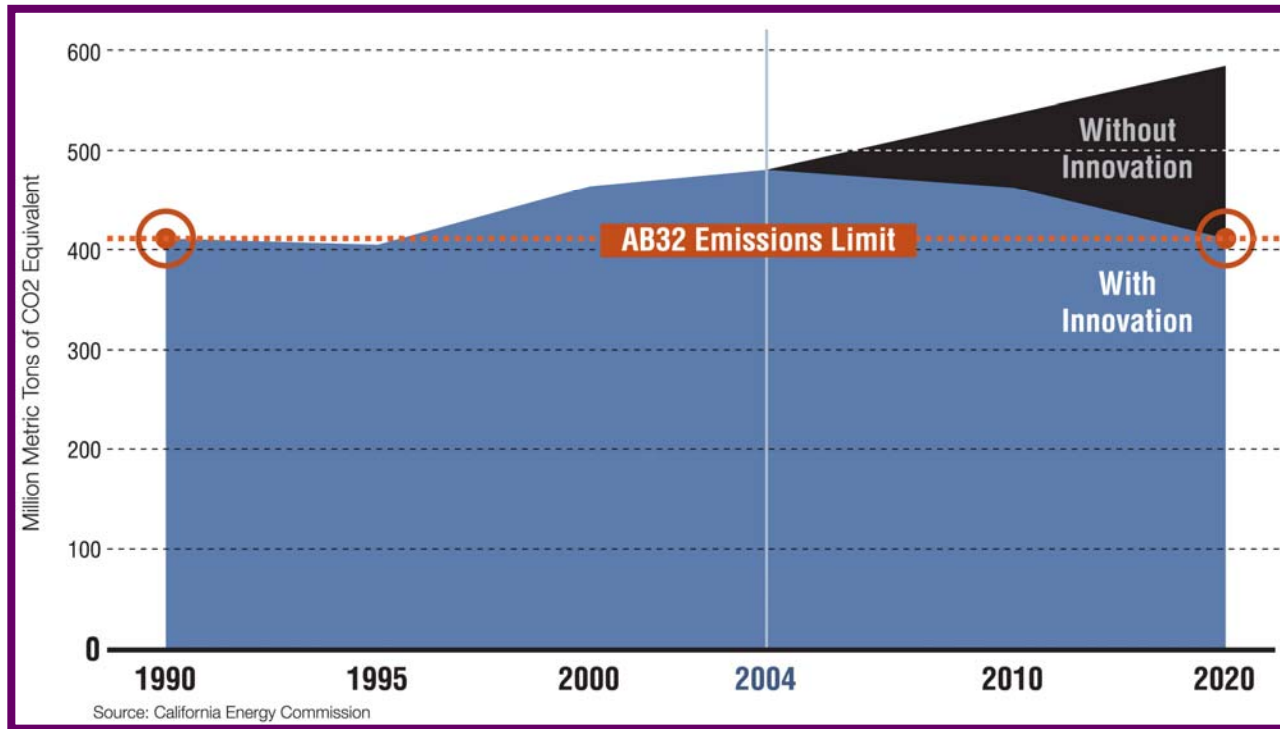
# GREEN ESTABLISHMENTS



Though more concentrated in urban areas, California's green establishments are spread across the State.



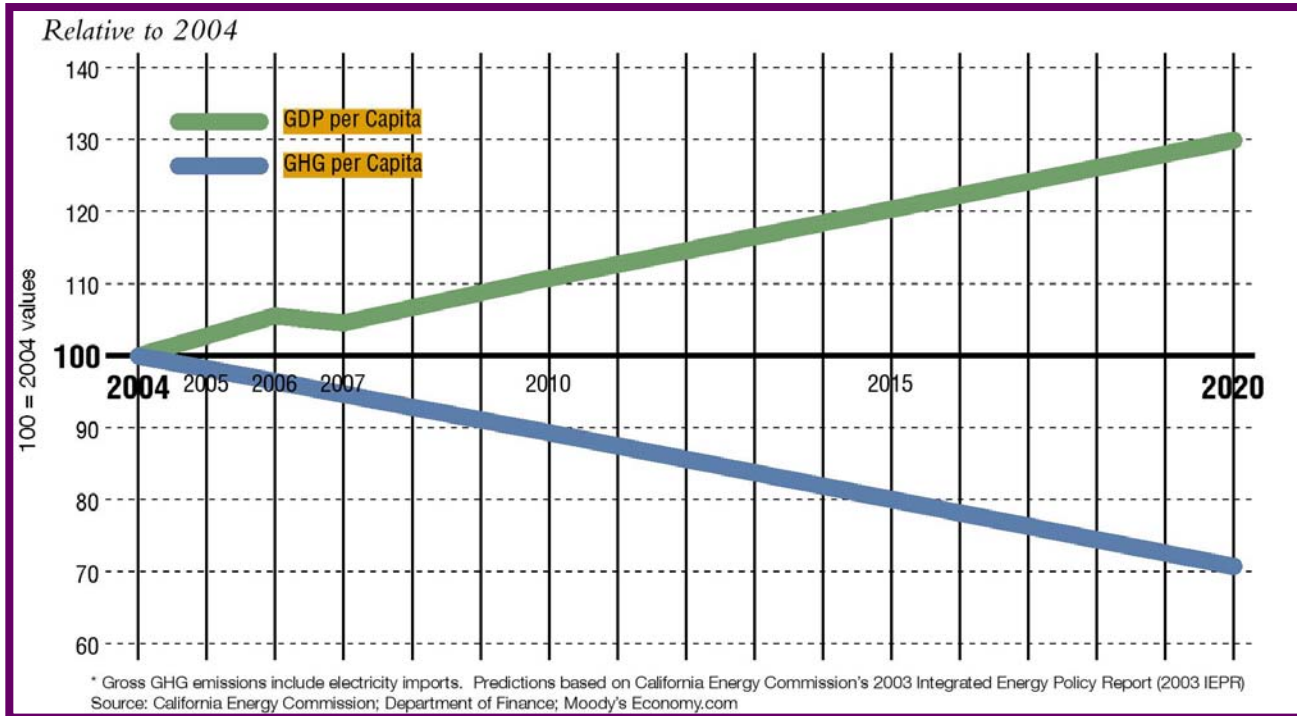
# HISTORY OF CA EMISSIONS & future AB 32 target



CA needs to rapidly increase its pace of change—from breakthroughs in energy efficiency to adoption of cleaner energy alternatives.



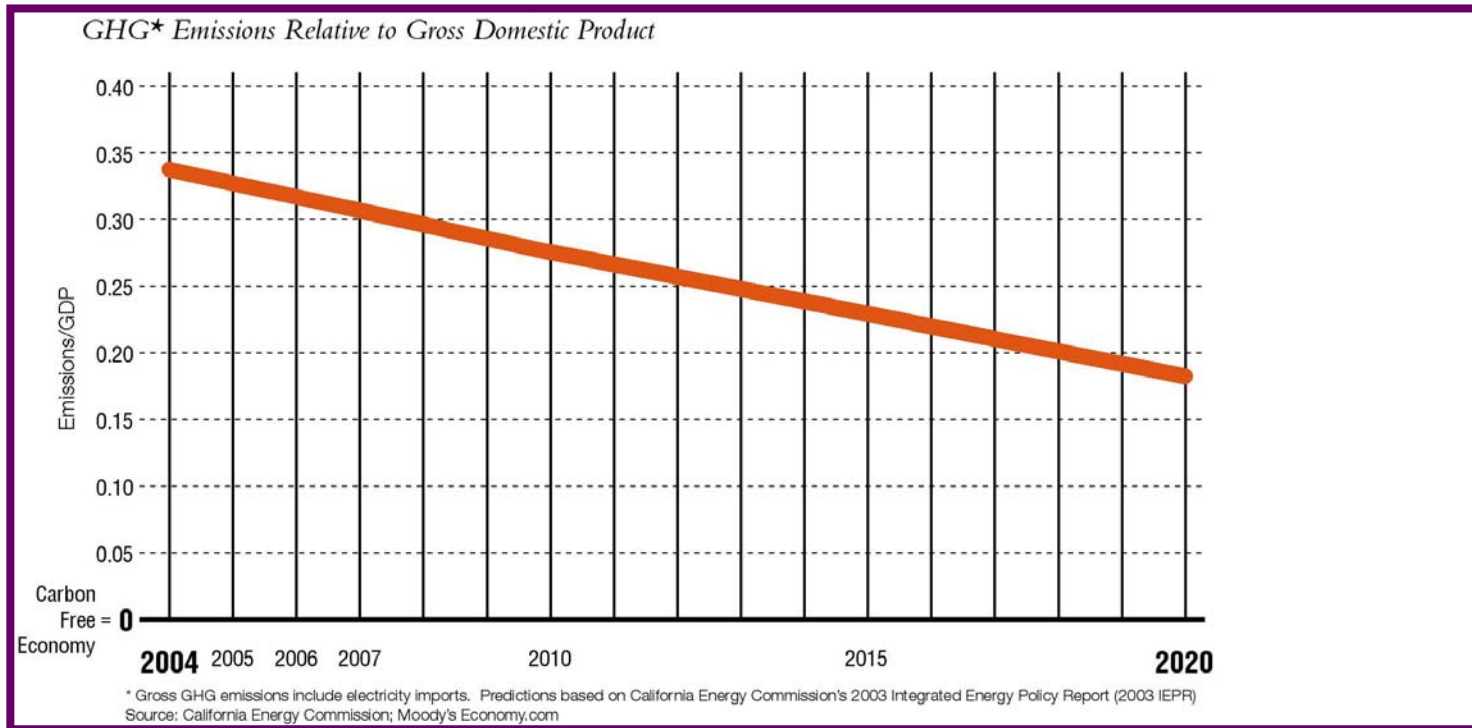
# CA GDP & GHG IN 2020



If CA achieves AB 32 targets, the economy will accelerate its separation of economic growth from GHG emissions.



# THE 2020 CARBON ECONOMY





# NEXT 10/FIELD POLL ON GW ATTITUDES

## **SURVEY RESULTS:**

**Californians Believe We Can Reduce Emissions  
and Grow the Economy at the Same Time**

**85%** agree that California can reduce greenhouse gases that contribute to global warming and expand jobs and economic prosperity at the same time. More than half (54%) agree “strongly” with this statement.

**77%** agree that firms and government researchers will develop new technologies to solve the problem of global warming; 39% agree “strongly” with this statement.



# NEXT 10/FIELD POLL ON GW ATTITUDES

## **SURVEY RESULTS:**

**Californians Believe Many Can  
Do A lot To Reduce Global Warming**

	Can Do A lot	Can Do Some
Major Corporations	<b>64%</b>	<b>21%</b>
Gas and Electric Utility Companies	<b>63%</b>	<b>25%</b>
General Public	<b>57%</b>	<b>29%</b>
U.S. Government	<b>56%</b>	<b>28%</b>
Clean Technology Companies	<b>52%</b>	<b>33%</b>
State and Local Government	<b>49%</b>	<b>32%</b>
Non-Profits Dedicated to Reducing Global Warming	<b>44%</b>	<b>36%</b>
Farmers and Agricultural Companies	<b>41%</b>	<b>37%</b>



[WWW.NEXT10.ORG](http://WWW.NEXT10.ORG)