

Fast Track Energy Efficiency Strategy

July 16, 2009

LIGHT
Your Way to Clean Air
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Lisa Van de Water
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Overview

- Fast Track Measures – *2007 Ozone Plan*
- “Perfect Storm”
- Electricity 101 - Air Quality Connection
- Electricity Production & Consumption
- Energy Strategy Components
- Review Schedule

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2007 Fast Track Emission Reduction Measures

- Green Contracting
- Green Fleets
- Truck Replacement/Retrofit/Repower
- Short Sea Shipping
- High-Speed Rail
- Alternative Energy
- Energy Conservation – Efficiency
- Heat Island Mitigation
- Episodic/Regional Controls
- Inland Ports



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“Perfect Storm”

- Need for non-regulatory emissions reductions
- AB 32 greenhouse gas reductions
- American Recovery & Reinvestment Act
 - Significant energy efficiency & renewable energy dollars
- Valley jobs

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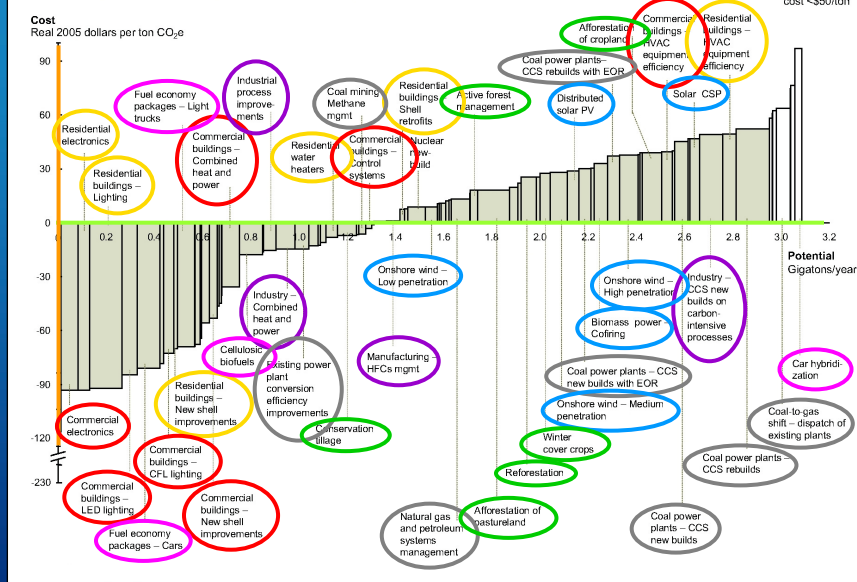
Global Warming Solutions Act of 2006 – AB 32

- ARB Scoping Plan
 - Local government reduce GHGs 15% below today by 2020
 - Energy efficiency is 1st in “loading order” to meet unmet resource needs (SB 1037, AB 2021)
 - Protocols for community emissions beyond municipal to be developed
- District – proactive in GHG reduction

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U.S. MID-RANGE ABATEMENT CURVE – 2030



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Electricity Use & Air Quality

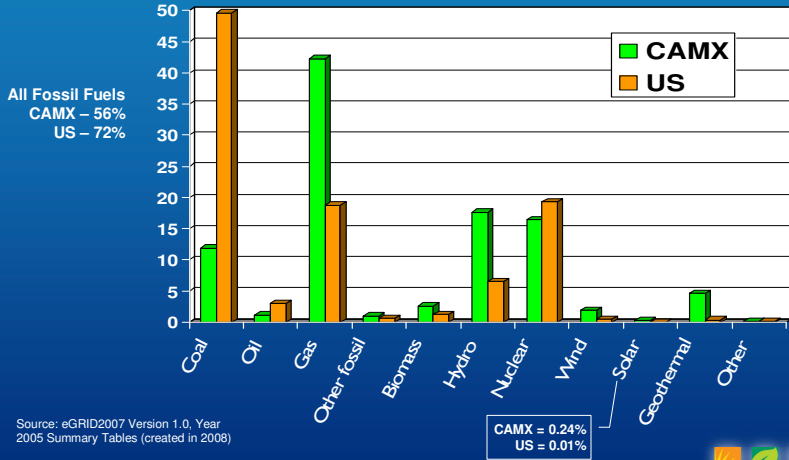
- Electricity saved is pollution forgone
- Base load is the cheapest & cleanest electricity
- Reducing peak load keeps the biggest polluters out of the mix
- Increase renewables for further emissions reductions

	lb/MWh
CO ₂	714
NO _x	0.6
SO _x	0.5

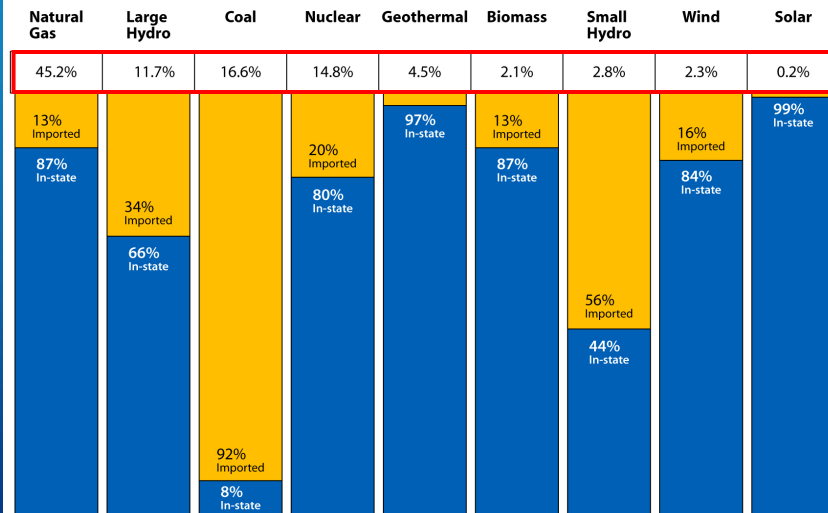
Source: eGRID2007 Version 1.0, Year 2005 Summary Tables (created in 2008)



Electricity Generation Resource Mix



California's Electricity Mix – 2007



Source: California Energy Commission, Gross System Power Report 2007



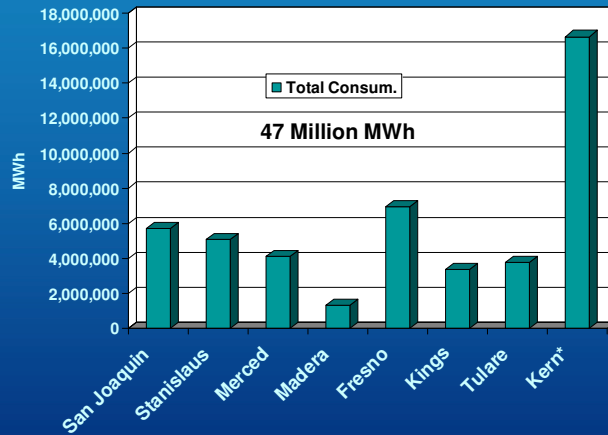
California Major Utilities' Resource Mix

Resource Type	Statewide	SCE	PG&E
Coal	15.7%	8.0%	3.0%
Large Hydro	19.0%	5.0%	19.0%
Natural Gas	41.5%	54.0%	42.0%
Nuclear	12.9%	17.0%	23.0%
Renewables	10.9%	16.0%	13.0%
Biomass	2.1%	2.0%	5.0%
Geothermal	4.7%	9.0%	2.0%
Small Hydro	2.1%	1.0%	4.0%
Solar	0.2%	1.0%	0.0%
Wind	1.8%	3.0%	2.0%

SOURCE: CEC Website Data - 2006
http://energymanac.ca.gov/electricity/electricity_resource_mix_pie_charts/index.html



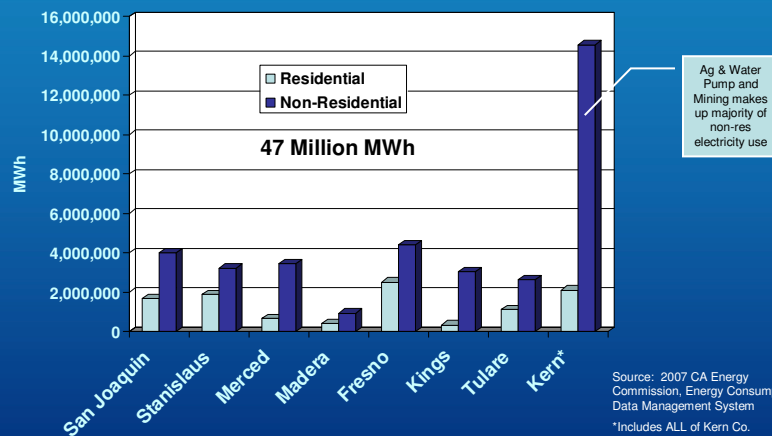
SJV Electricity Consumption - 2007



Source: 2007 CA Energy Commission, Energy Consumption Data Management System
*Includes ALL of Kern Co.



SJV Electricity Consumption - 2007



Source: 2007 CA Energy Commission, Energy Consumption Data Management System
*Includes ALL of Kern Co.



SJV Electricity

	Net Generation MWh (2005)		Consumption MWh (2007)	
San Joaquin	1,416,708	3%	5,697,418	12%
Stanislaus	660,675	2%	5,090,413	11%
Merced	(362,757)	-1%	4,103,000	9%
Madera	1,365,372	3%	1,351,477	3%
Fresno	7,377,418	18%	6,950,632	15%
Kings	244,678	1%	3,390,666	7%
Tulare	213,746	1%	3,780,552	8%
Kern	30,461,978	74%	16,647,559	35%
Total	41,377,817		47,011,717	

Source: eGRID2007
Version 1.0, Year
2005 Summary
Tables (created in
2008)

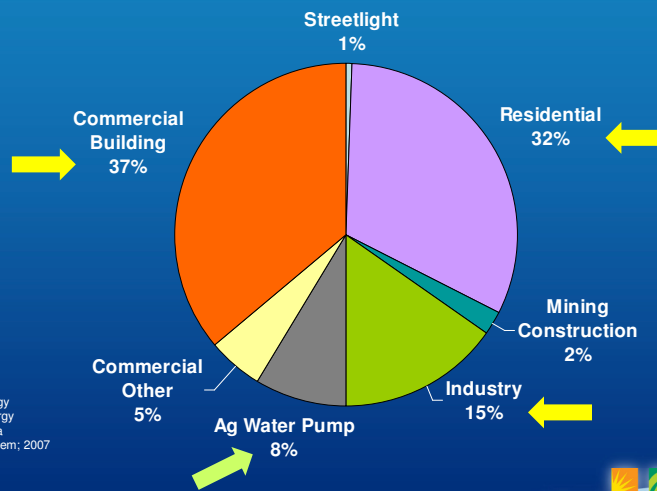
Source: 2007 CA
Energy
Commission,
Energy
Consumption Data
Management
System
*Includes ALL of
Kern Co.

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12%

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California Electricity Consumption

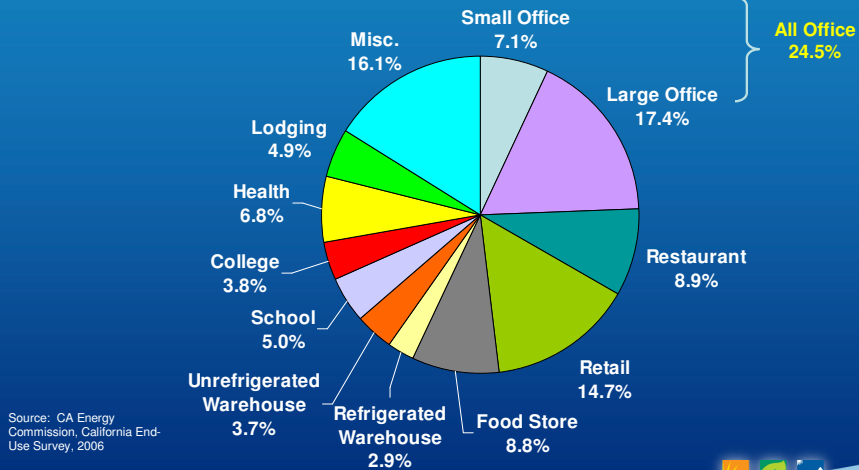


Source: CA Energy
Commission, Energy
Consumption Data
Management System; 2007
All Utility Entities

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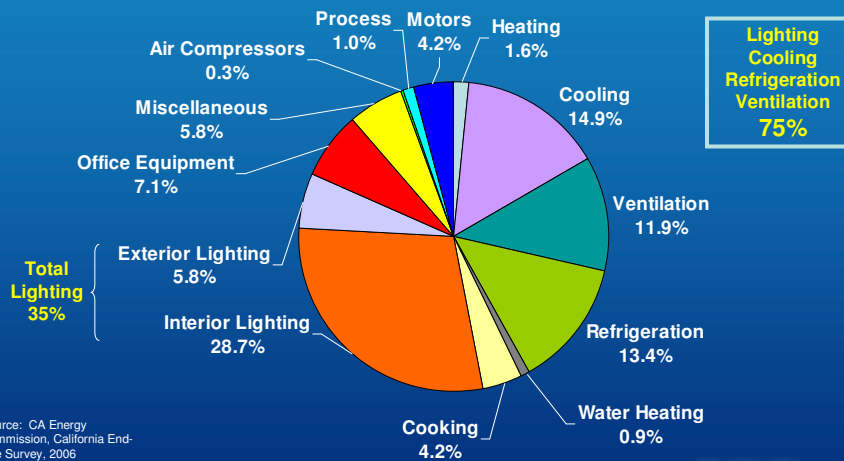
Commercial Electricity Use by Building Type



Source: CA Energy Commission, California End-Use Survey, 2006



Commercial Electricity Usage by End Use



Source: CA Energy Commission, California End-Use Survey, 2006



Energy Action Plan

- **2007 Ozone Plan - Fast Track to attainment**
 - **Non-regulatory emissions reductions**
- Outreach, Information & Education
- Tools for Residential, Commercial/Industrial, Local Government
 - Templates for successful energy efficiency & green fleets programs
- Grants Program
 - Expand existing opportunities
 - New grant opportunities

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Outreach, Education & Information

- Healthy Air Living
- Targeted Outreach
 - Local Government
 - Minority Small Business
 - Neighborhood Groups
 - Industrial Regulated Sources
 - Ag Regulated Sources
- Comprehensive Energy Website



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Tools & Products

- Residential Templates
 - Categories of homes
 - Efficient efficiency
- Commercial Templates
 - Energy audit
 - Simple work practices
 - Long-range strategies for sustainable efficiencies and renewables

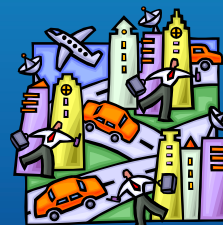


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More Tools & Products

- Industrial Templates
 - Processes & operations
 - Office efficiencies
- Municipal Templates
 - Energy policies
 - Implementation assistance
- Fleets
 - Fuel efficiency, fleet minimization
 - Alternative fuels
 - CNG/LNG
 - Electric with solar recharge



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In-House District EE Strategy

- Energy Conservation Committee
- Look for quick fixes with little or no cost
- PG&E energy audit
- Survey employees – health, comfort, productivity
- Develop a strategy for long-term solutions that may require budgetary considerations
- Evaluate possibilities for on-site alternative energy sources and “green” fleet options
- Monitor savings – costs & emissions
- Certification – ENERGY STAR®, LEED

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Grants & Incentives

- Expand ERIP to include energy efficiency
- Broad spectrum of assistance
- EE projects that improve air quality
 - Technical assistance for grant applications
 - Letters of support from AQ perspective
 - Grant administration with partners



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Partnerships

- Coordination is key
 - Message
 - Programs
- Next two years
 - SJVCEO
 - ARRA funds and projects
- Utility Partners – best way to reach multiple markets/customers so that efforts are not duplicated



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Review Schedule

- Fast Track Task Force – June 16
- Public Energy Forum – July 14
 - Present draft
 - Comment period
 - Revised draft
- Governing Board – September 17

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