

Innovative Approaches to Climate Change

A State-Federal Workshop

February 7 & 8, 2005



Anne Baker
Deputy Secretary for External Affairs
California Environmental Protection Agency

Governor Schwarzenegger's Vision

"California will be the leader in efforts to reduce global warming. The Administration will implement California's landmark legislation to cut greenhouse gas emissions, and successfully fight any court challenges regarding our right to regulate these emissions."

- Environmental Action Plan
November 2003

Governor Schwarzenegger's Vision

"The Secretary of Cal/EPA will recommend a Statewide reduction target for greenhouse gas emissions and explore how various sectors can best meet that target."

- Environmental Action Plan
November 2003

Impact Debate Continues

Probable Impacts to California

- Reduction in Snow Pack
- Harm to Public Health, Environment & Economy
- Adverse Impacts on Air Quality
- Greater Risk to Vulnerable Populations
- Erosion of Valuable Coastlines
- Intrusion of Seawater into California Delta
- Degradation of Growing Conditions

California Matters

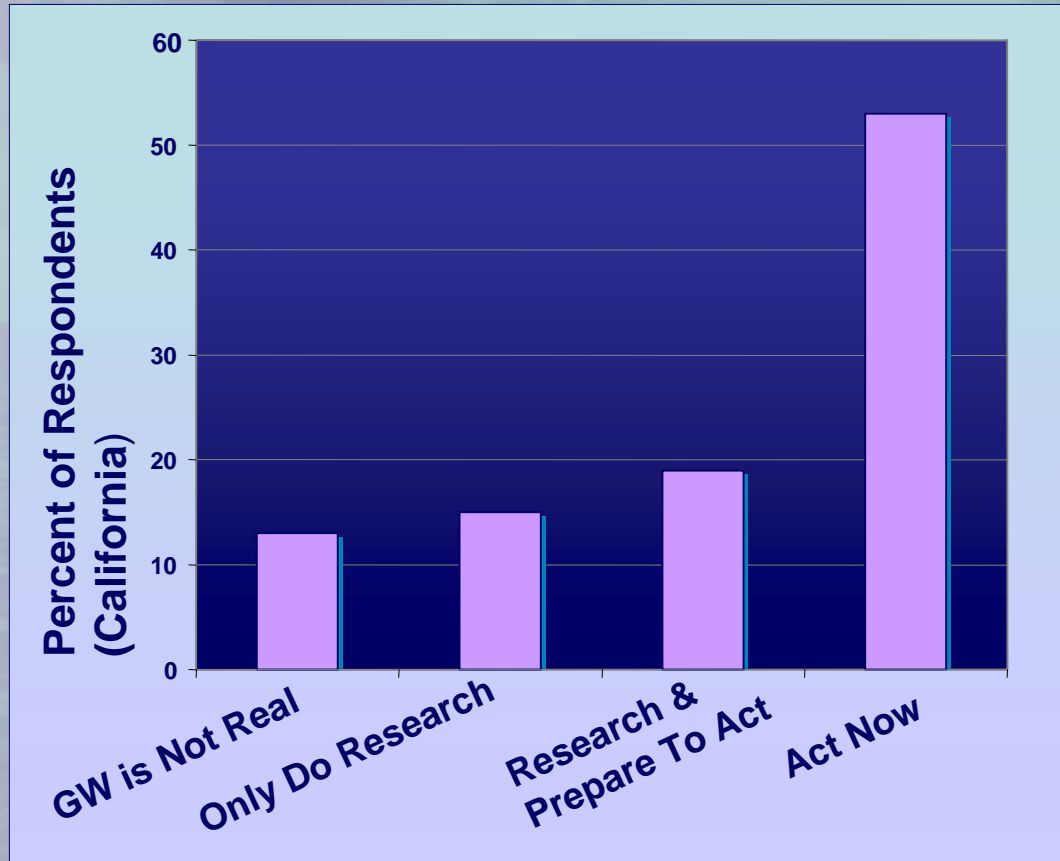
World's Largest GHG Emitters

	2000 Emissions (Mt CO2)	Per Capita Emissions
1. USA.....	5,661.....	19
2. China.....	2,795.....	02
3. Russia.....	1,437.....	10
4. Japan.....	1,186.....	09
5. India.....	1,073.....	01
6. Germany.....	787.....	10
7. UK.....	569.....	09
8. Canada.....	437.....	13
9. California.....	430.....	12
10. Italy.....	429.....	07
11. South Korea.....	428.....	09
12. Mexico.....	425.....	04



Sources: Oak Ridge National Lab & The Tellus Institute

Californians Support Action



81%
Support Pavley Bill

95%
New Technologies
Are Solution

91%
Invest in More
Wind & Solar

Greenberg/Quinlan/Rosner Poll of California Voters, April-May 2004

California's Motor Vehicle GHG Regulations

- Many Feasible Technologies
- Vehicle Availability Retained
- Significant Greenhouse Gas Reductions
- Positive Effect on Smog Forming Pollutants
- Economical to Consumer
- Good for California Economy

AB 1493 Requirements

- Adopt Regulations by January 1, 2005
- Report to Legislature & Governor by January 1, 2005
- Regulations May Not Take Effect Prior to January 1, 2006 (*legislative review*)
- Regulations Apply to 2009+ Model Years

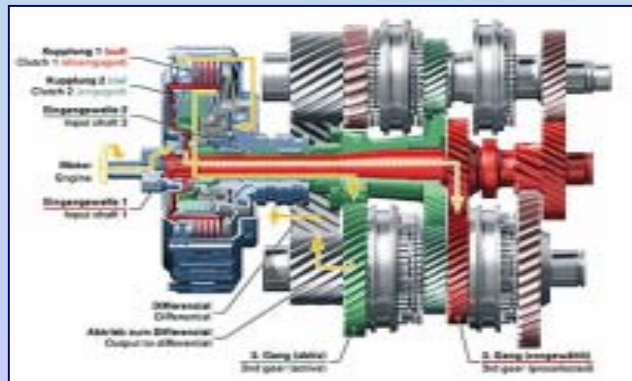
Near-Term Technologies



Cylinder Deactivation



2005 Chrysler 300C Hemi

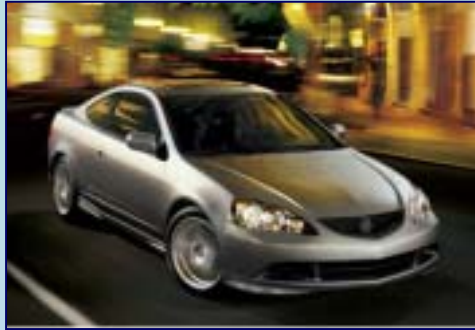


**Automated Manual
Transmission - Audi TT**



Audi TT - 3.2 V6

Near-Term Technologies



Acura RSX



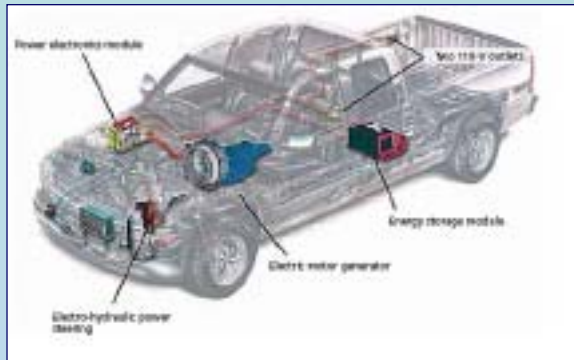
Honda Accord

Variable Valve Timing & Lift



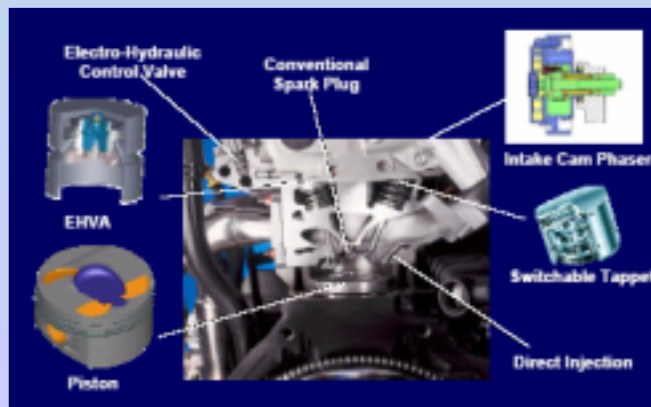
Toyota Matrix

Mid-Term Technologies

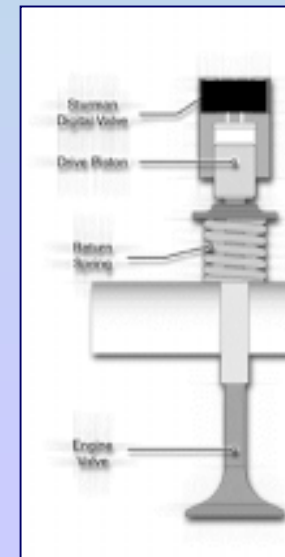


2005 Chevrolet Silverado

Integrated Starter/Generator



**AVL Homogeneous Combustion
Compression Ignition**



**Sturman
Camless
Valve
Actuation**

Two Emission Categories (As in Other CA Standards)

- PC/LDT1
 - Passenger Cars, Small Trucks & SUVs
- LDT2
 - Large Trucks & SUVs
- Regulation Allows Credit Averaging, Banking & Trading

Regulated Pollutants & Sources

- Standard Applies To:
 - Combined GHG Emissions (CO₂, CH₄, N₂O, HFCs)
 - All Vehicular GHG Sources (Tailpipe, Air Conditioner)
- Standard Expressed as “CO₂-Equivalent”
 - Emissions Weighted According to “Global Warming Potential”

Standards Designed So All Models Can Comply

- Standards Set for Manufacturer with Heaviest Fleet
 - Ensures All Manufacturers Can Comply without Altering Fleet Mix
- Largest SUVs Able to Comply
- Consumer Choice Maintained
 - No Change in Vehicle Attributes

Fleet Average Emission Standards

TIER	YEAR	CO2-Equivalent Emission Standards (g/mi)	
		PC/LCT1	LDT2
Near- Term	2009	323	439
	2010	301	420
	2011	267	390
	2012	233	361
	2013	227	355
Mid- Term	2014	222	350
	2015	213	341
	2016	205	332

~22% Reduction (2012)

~30% Reduction (2016)

Estimated Average Price Increase of New Vehicles

	Retail Vehicle Price Increase	
	Passenger Cars Light Trucks/SUVs	Large Trucks/SUVs
Near Term 2012	\$367	\$277
Mid Term 2016	\$1064	\$1029

Net Savings for Vehicle Purchaser

	Near Term (2012)	Mid Term (2016)
Monthly Payment Increase	\$7	\$20
Monthly Operating Cost Savings	\$18	\$23
Monthly Net Savings	\$11	\$3

Positive Economic Impacts

- Increase in Jobs, Income, & Number of Businesses
- Net Savings to Consumers, State & Local Government
- No Adverse Impact on California Competitiveness w/ Other States
- Positive Effect on Minority & Low Income Communities

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