

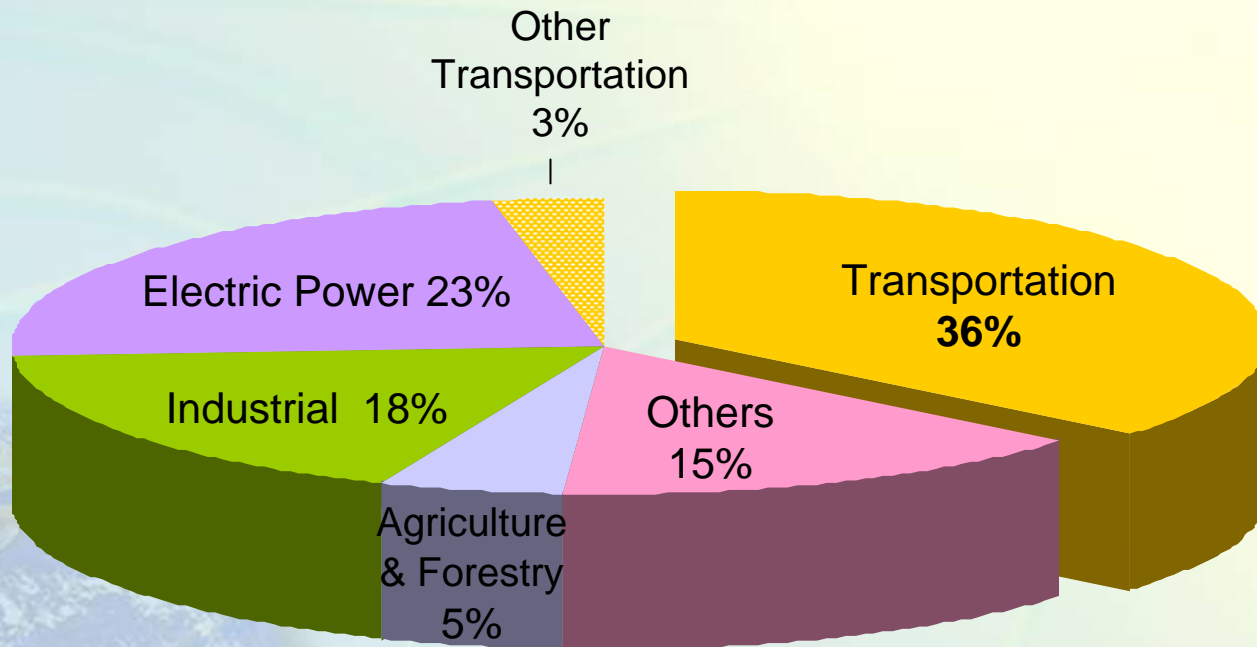
Greenhouse Gas Emissions and Local Governments

L.A. County Sustainability Summit

Jeff Weir

- **California Air Resources Board**
 - **May 28, 2008**

Forecasted GHG Emissions 2020

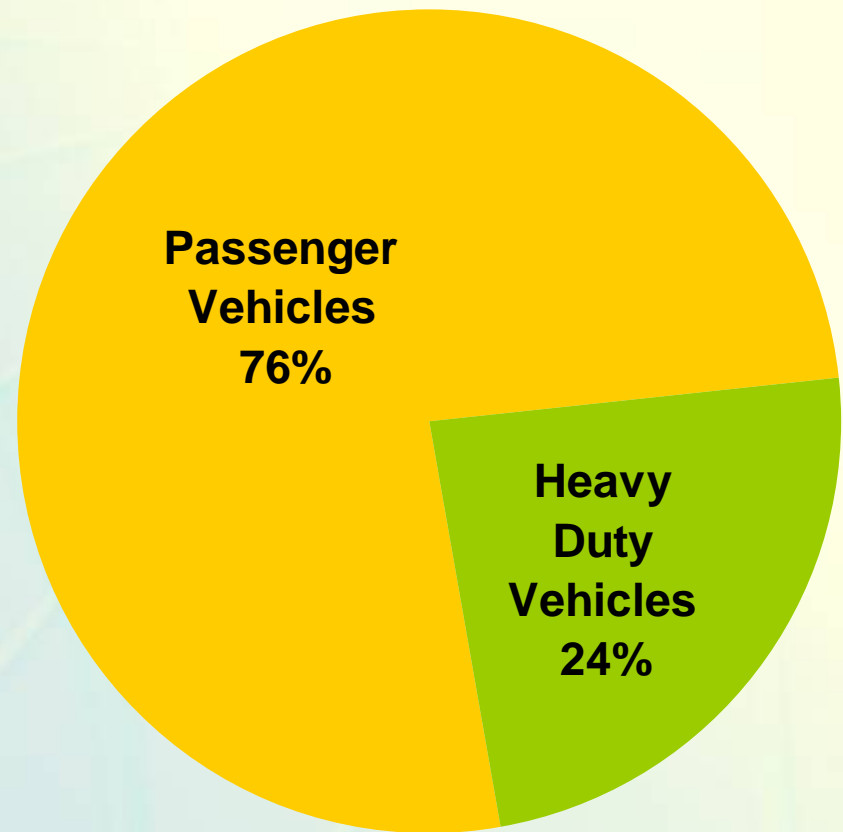


*Preliminary ARB GHG Projections for 2020; Other Transportation: trains, planes, ships

On-Road Transportation Sources 2020

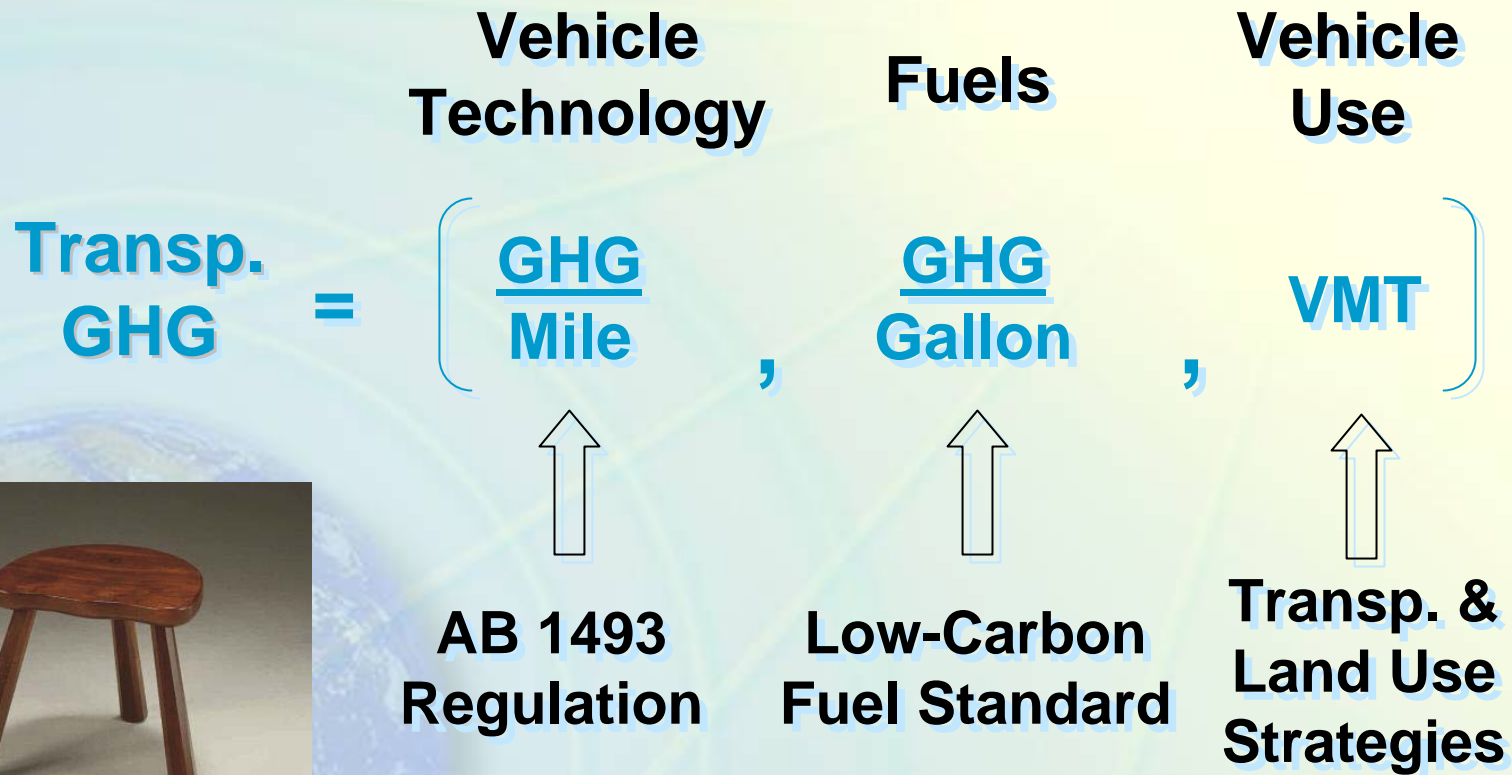
Passenger Vehicles
~ **160 MMTCO₂E**

Heavy-Duty Vehicles
~ **50 MMTCO₂E**

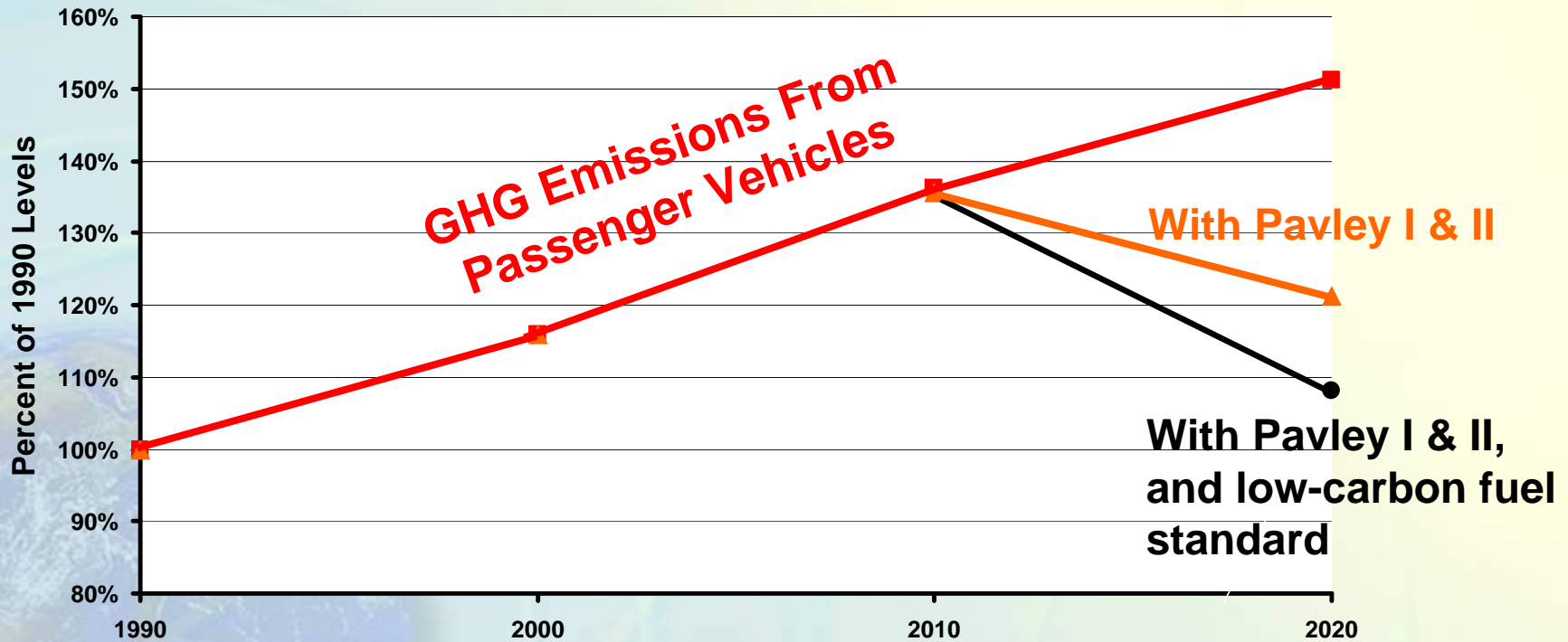


*Preliminary ARB GHG Projections for 2020

Transportation GHG

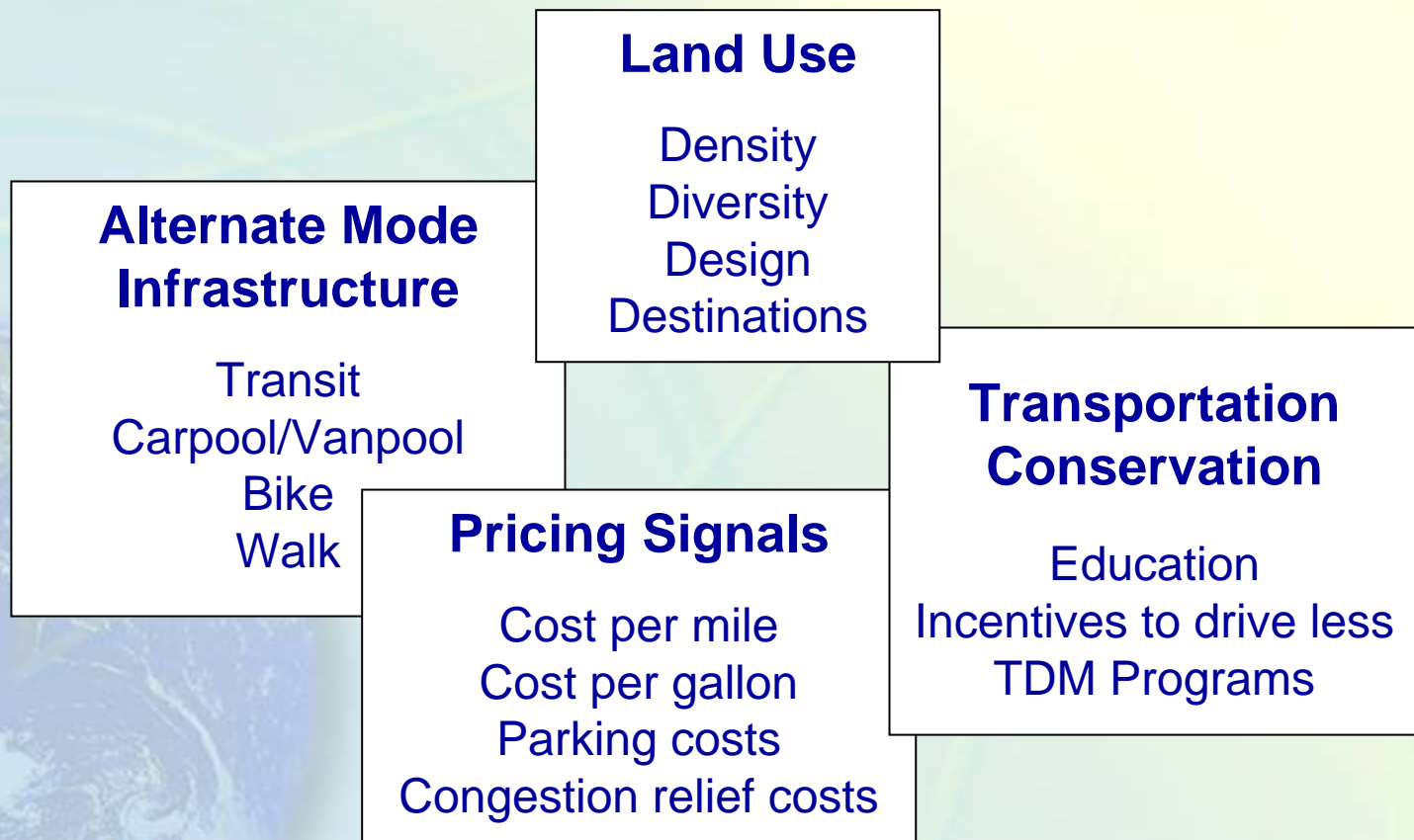


Reaching 2020 Goals



Drivers of VMT Reduction

Integrated Strategies



Potential VMT Impacts of Land Use Strategies

<i>Community type</i>	<i>Household VMT/year</i>
Auto-oriented Suburban	28,000 +
Smarter Growth Suburban	17,000 – 23,000
Urban	10,000 – 16,000

Source: ARB-sponsored research, 1995.

Many studies over last decade have shown similar results.

Land Use: A Long-Term Strategy That Must Begin Now

- Land use strategies mostly impact new growth; benefits accumulate
- Population: +13% by 2020; +40% by 2040
- Multiple benefits:
 - Options to increasingly expensive car travel
 - More access to jobs, services, affordable housing
 - Less land used; more open space
 - More physical activity; improved health
 - Improved water/air quality

Long-Term Benefits

Sacramento Region -- 2050

Parameter	Base Case 2050	Adopted Plan 2050	Difference
VMT per household per day	47.2	34.9	12.3 fewer miles per household per day, a 25% reduction
People Living in Areas with Good Mix of Jobs and Housing	26%	53%	27% increase
Growth Near Transit	5% New Jobs 2% New Housing	41% New Jobs 38% New Housing	36% more new jobs and homes near transit
Additional Urbanized Land	666 square miles	304 square miles	362 fewer square miles urbanized
Daily Vehicle Minutes of Travel (per household/day)	81 minutes	67 minutes	14 fewer minutes per day
Per Capita CO2 and PM Emissions from vehicles	Set at 100%	85% of Base Case	15% less than the Base Case per capita

Source: SACOG, Regional Blueprint Program, 2005

Long-Term Benefits

Sacramento Region – 2050 Blueprint (Comparison to Base Case)

- More low-carbon travel
25% reduction in per household VMT
- Better jobs/housing mix
27% increase in jobs/housing balance
- Half the land used
362 fewer square miles urbanized
- Reduced Congestion
17% less delay

Outcome of ARB Haagen-Smit Symposium

Haagen-Smit Framework for Action

- Set performance-based targets
- Use Blueprint framework with local accountability
- Establish enabling structure to support local actions

Haagen-Smit: Enabling Structure for Local Actions

- Apply CEQA to GHG emissions
- Secure new funding. Use current funding wisely.
- Promote large-scale project demonstrations
- Rethink zoning
- Adopt proven measures
- Improve measurement tools
- Exert State leadership
- Engage the public

Green Buildings and Transportation: When Is a Worksite Really Green?

Not until it has a green commute:

- Average U.S. worksite
 - Transportation energy use is 30% greater than the building's operating energy use.
- Code-compliant building
 - Uses 45% less energy than average building. But without a green commute, the combined transportation and operating energy use is only about 20% less.

Commute Carbon Footprint Per 1,000 Employees

Percent of Employees Who Drive to Work	81% national average	60%	40%
Total commute miles driven per year	4.57 million	3.38 million	2.26 million
Total commute CO2 emissions (metric tons) per year	2,072 metric tons	1,535 metric tons	1,023 metric tons

Comparing Building and Transportation Energy Use

	Operating Energy Use	Transportation Energy Use	Total
Average office building (U.S.)	93 kBtu/ft ² -yr	121 kBtu/ft ² -yr	214 kBtu/ft ² -yr
Code-compliant office building (U.S.)	51 kBtu/ft ² -yr	121 kBtu/ft ² -yr	172 kBtu/ft ² -yr
Cal/EPA building (in Sacramento)	37 kBtu/ft ² -yr	40 kBtu/ft ² -yr	77 kBtu/ft ² -yr

Actions Can Begin Now

- Blueprint processes
- Local climate action plans
- CEQA mitigation

Contacts and More Information

- ARB Climate Change Web Site
 - <http://www.arb.ca.gov/cc/cc.htm>
 - Stay informed - sign up for list serve
- California Climate Change Portal
 - <http://www.climatechange.ca.gov>