

Sector-Based Workshop

Land Use and Local Initiatives

**Jeff Weir
Annmarie Mora
California Air Resources Board**

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Overview

- **Transportation**
 - Characteristics
 - Reduction strategies
 - ‘Action’ & ‘Enabling’ Measures
- **Municipal Operations**
 - Characteristics
 - Reduction strategies
 - ‘Action’ & ‘Enabling’ Measures
 - Green buildings

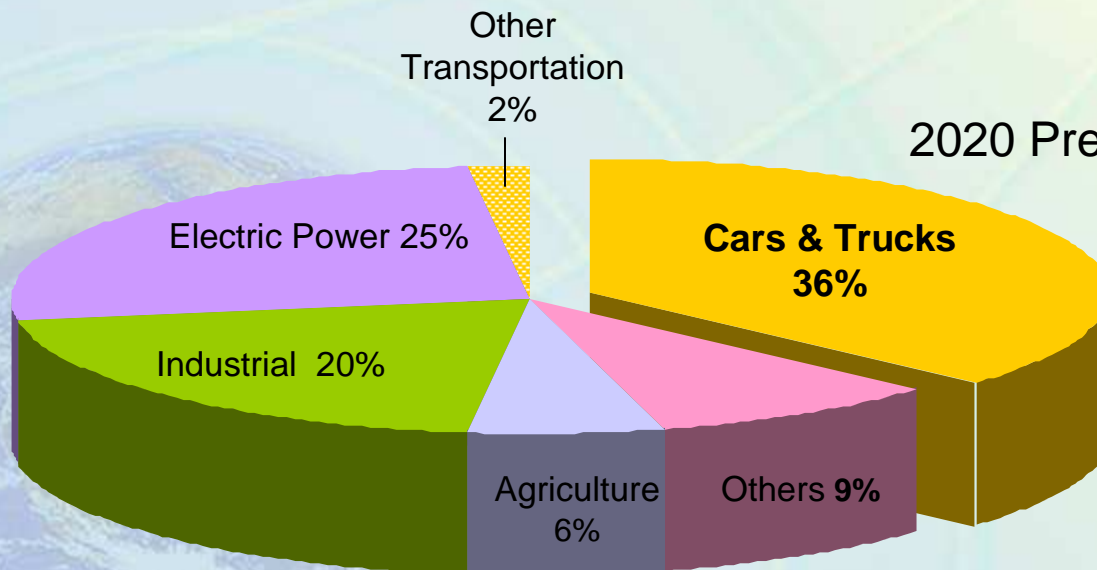
Transportation Emissions

Passenger cars and heavy-duty trucks:

1990 Baseline Emissions:
138 MMTCO₂E

2004 Baseline Emissions:
172 MMTCO₂E

2020 Preliminary Forecasted Emissions:
216 MMTCO₂E



*ARB GHG Inventory, 2004 Baseline Data

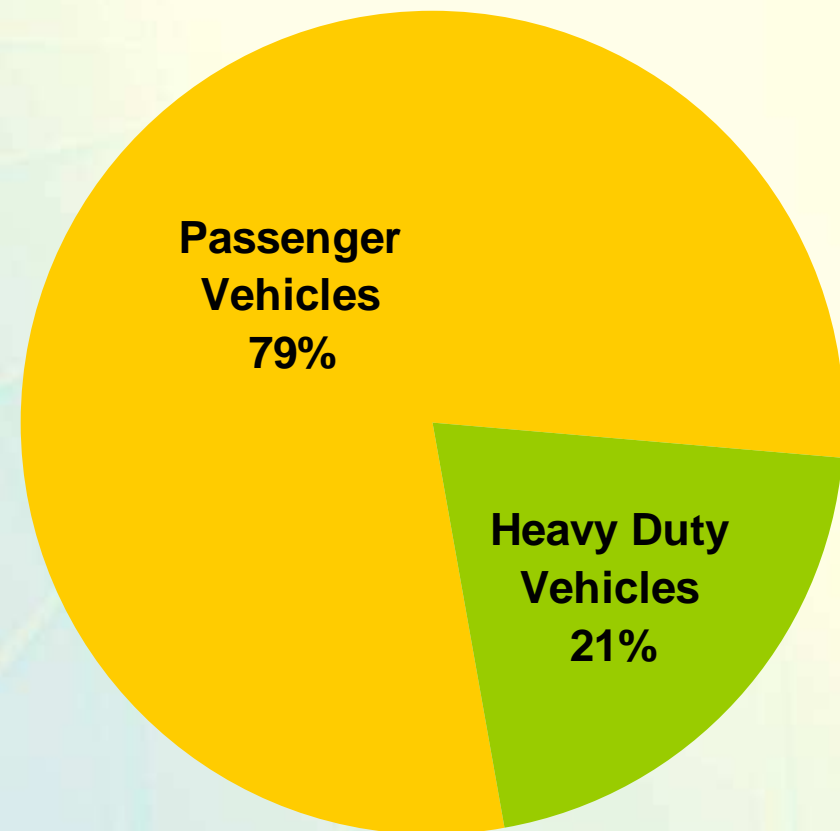
On-Road Transportation Sources

Passenger Vehicles

136 MMTCO₂E

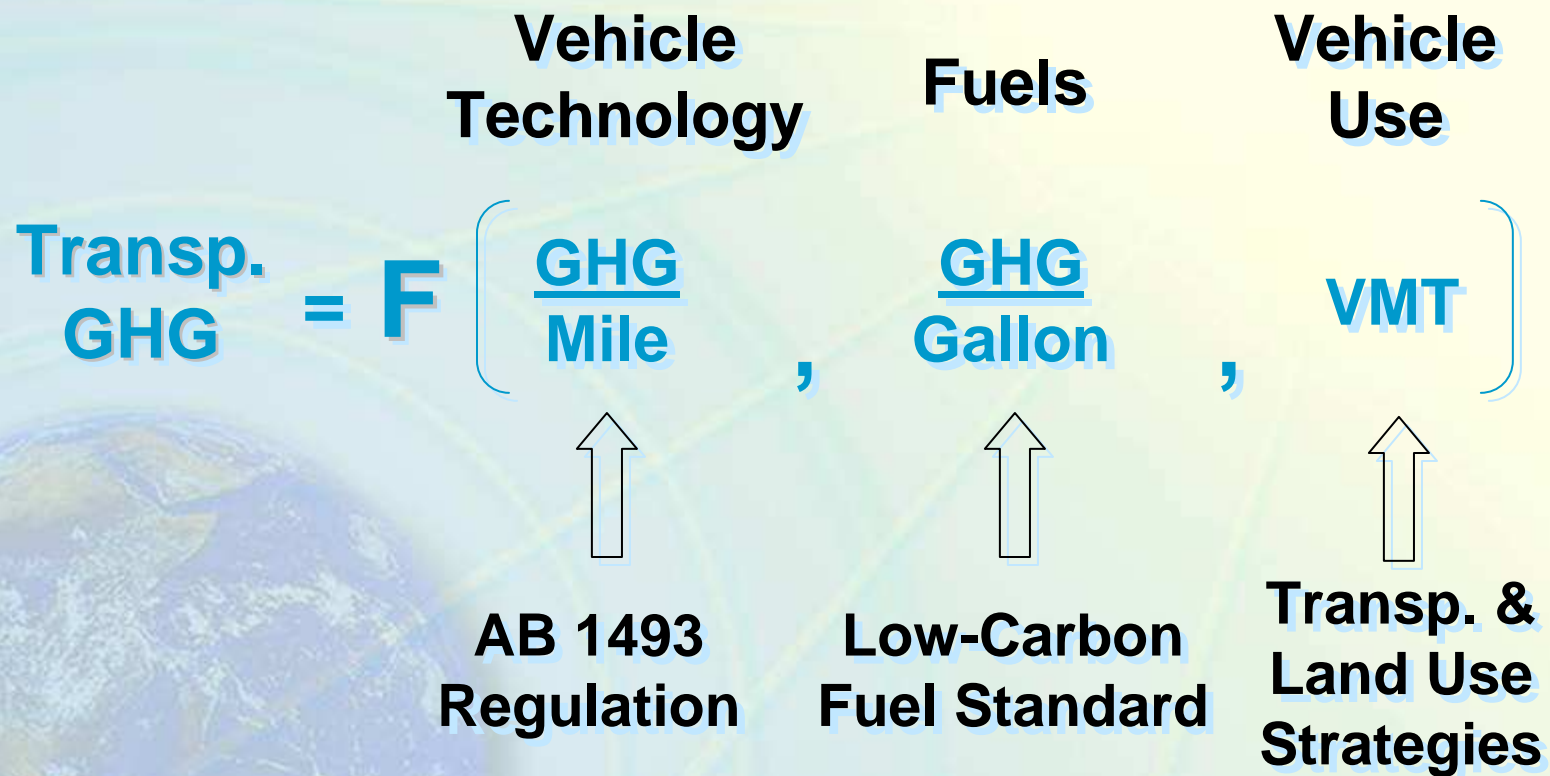
Heavy Duty Vehicles

36 MMTCO₂E



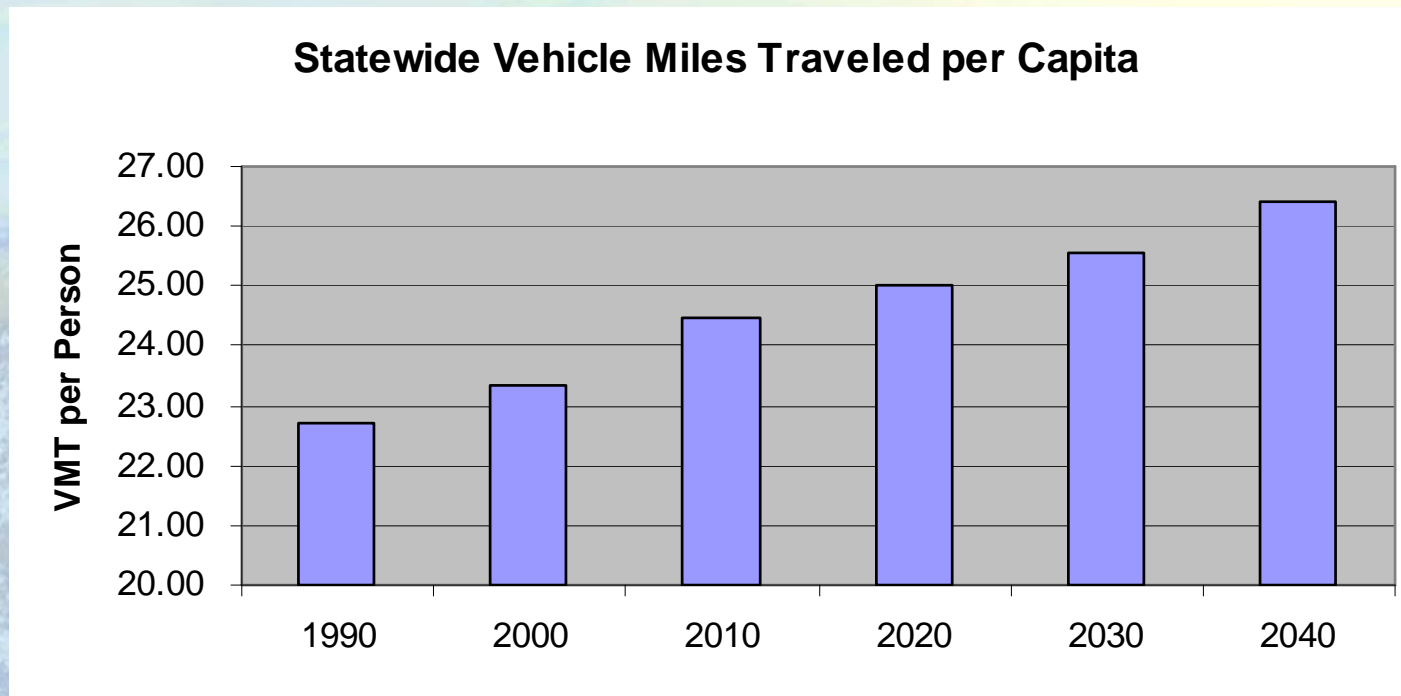
ARB GHG Inventory, 2004 Baseline Data

Transportation GHG

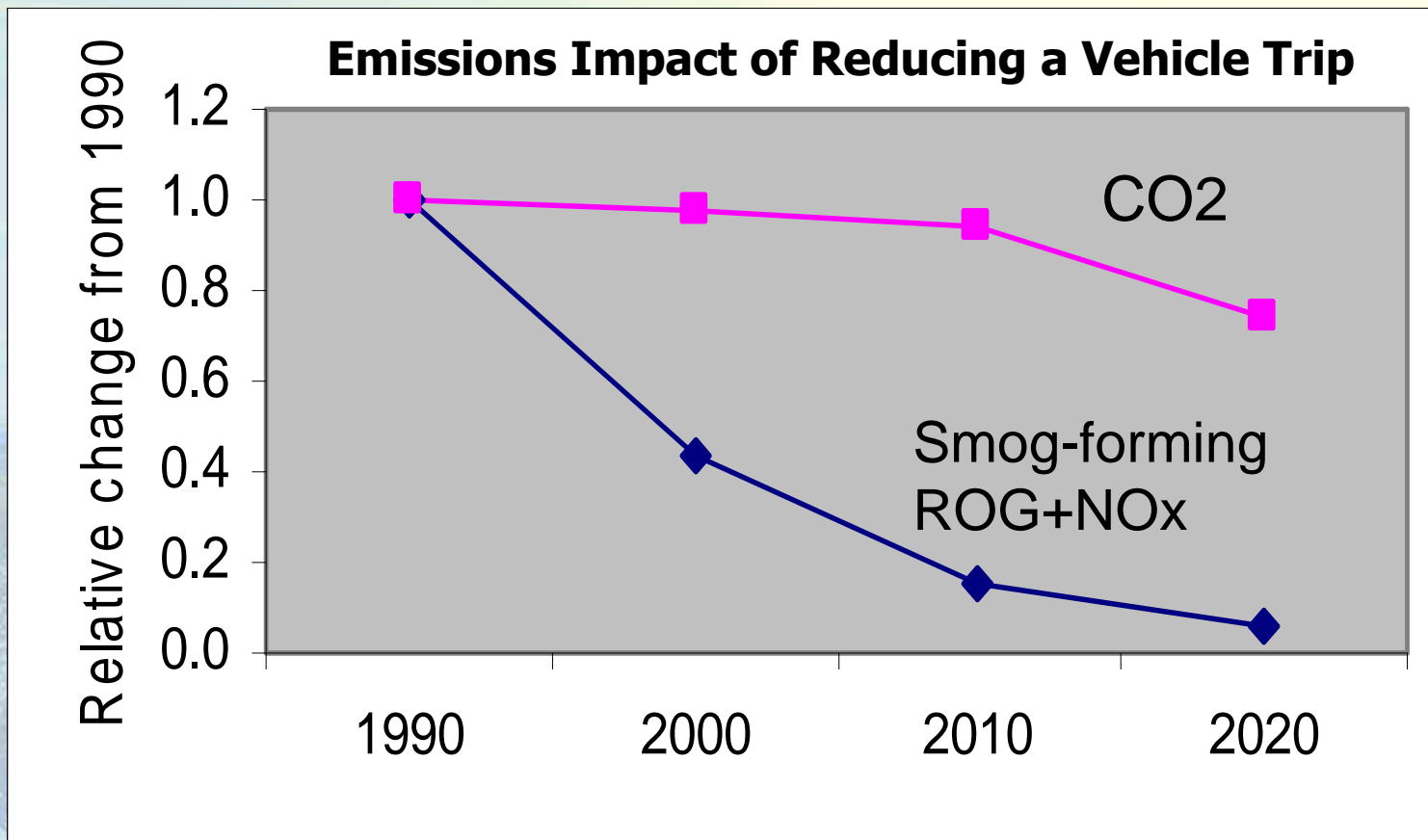


Vehicle Miles Traveled (VMT): Trends

- Billions in transportation investment
- Existing land use patterns and driving behavior
- Vehicle miles traveled per capita projected to continue growing

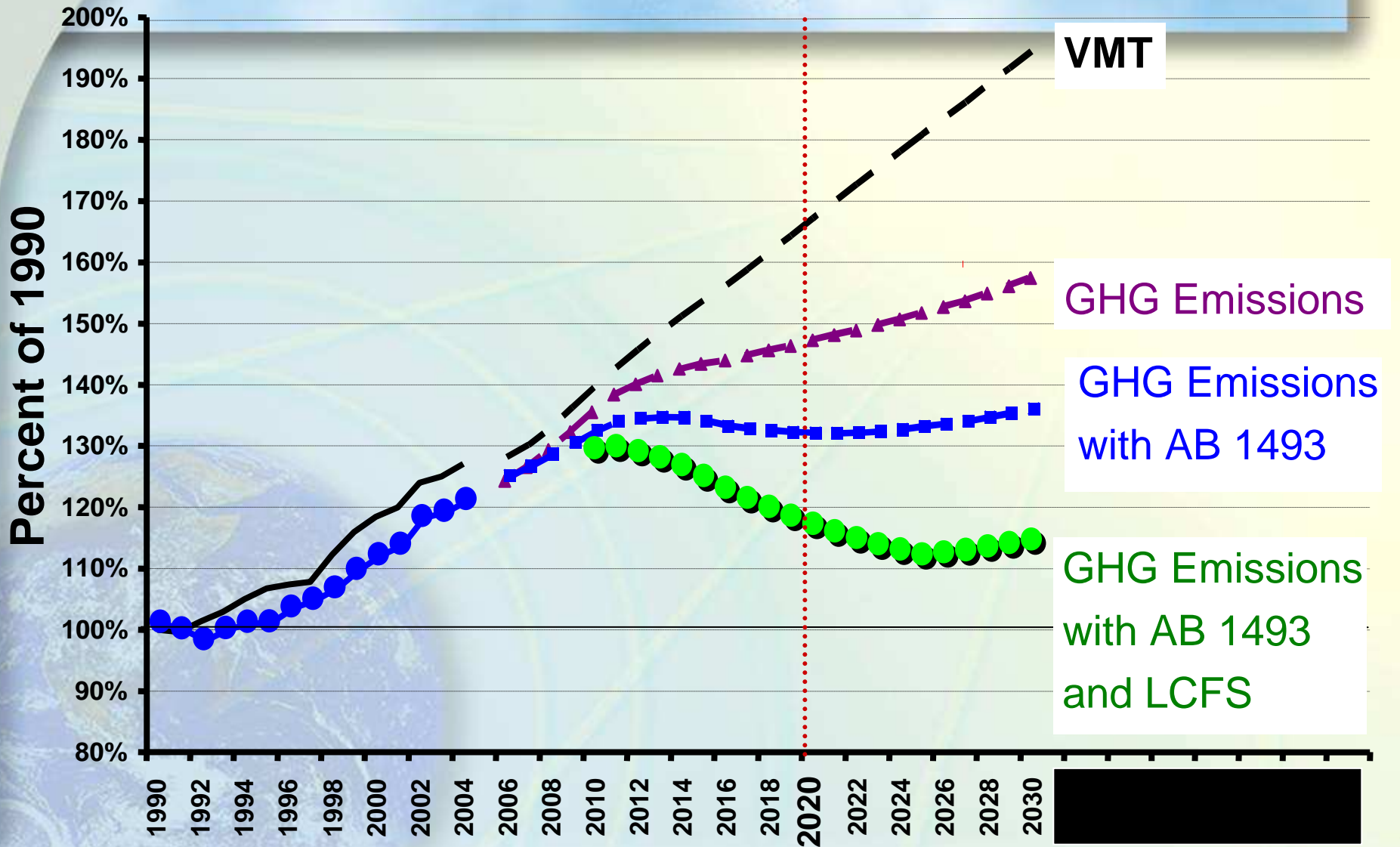


VMT Reduction: It Matters for Climate Change



Source: EMFAC

Historical and Projected Vehicle Miles Traveled (VMT) GHG Emissions



Drivers of VMT Reduction

Integrated Strategies

Alternate Mode Infrastructure

Transit
Carpool/Vanpool
Bike
Walk

Land Use

Density
Diversity
Design
Destinations

Pricing Signals

Cost per mile
Cost per gallon
Parking costs

Transportation Conservation

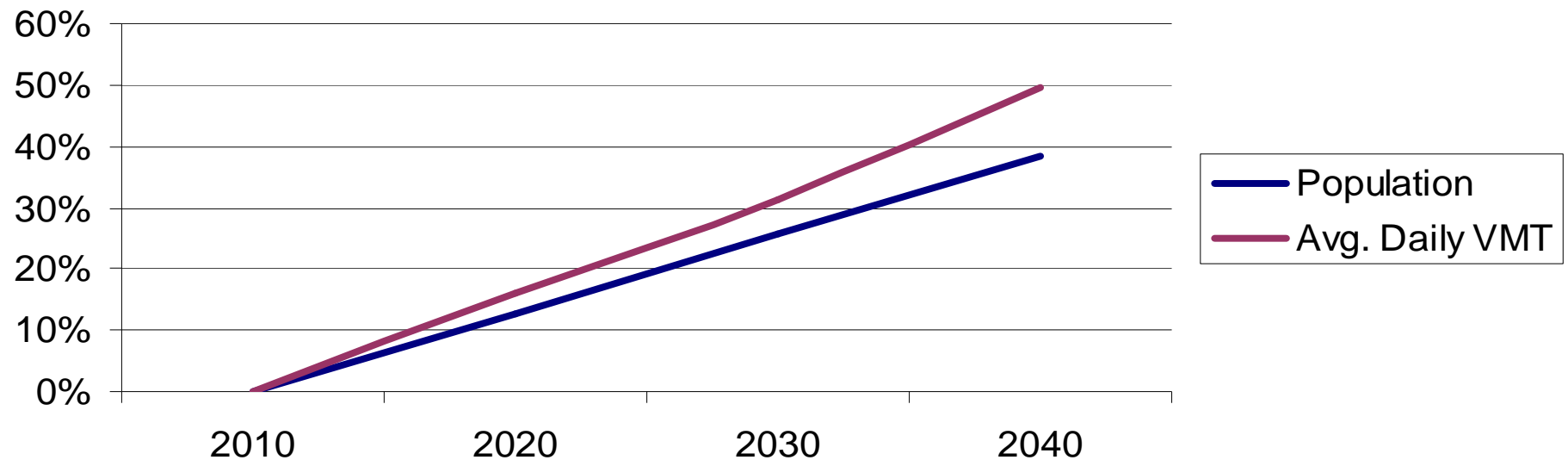
Education
Incentives to drive less
TDM Programs

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

Land Use: An Important Long-Term Strategy

**Statewide Projected Population and VMT Growth
2010-2040**



Population: By 2020 (+13%). By 2040 (+39%).

Land use strategies mostly impact new growth.

Regional Impacts Modeled

Sacramento Region -- 2050

Parameter	Base Case 2050	Adopted Plan 2050	Difference
VMT per household per day (excludes commercial vehicles)	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

VMT Reduction and Efficient VMT

- Per capita VMT Reduction
 - A good surrogate for reducing GHGs
 - Effective performance measure for planning
- Efficient VMT
 - Speed affects GHG emissions
 - Reduce extreme congestion through intelligent transportation systems, other approaches
 - Research emphasizes need to limit adding lane miles

Existing Approaches

- Consensus: **Fundamental Change Needed**
- Current actions:
 - Blueprint Planning Process
 - Integrated Land Use and Transportation Planning
 - Attorney General's CEQA Actions
 - OPR and CEQA Guidelines (SB 97)
 - Proposed Legislation (SB 375)
 - General Plans Incorporating Climate Change

What We've Heard

- California Transportation Commission (CTC) Regional Transportation Planning (RTP) Guidelines Work Group
- Metropolitan Planning Organizations (MPOs) / Regional Transportation Planning Agencies (RTPAs)
- Energy Commission Integrated Energy Policy Report (IEPR)

CTC RTP Guidelines Work Group

- Regional GHG reduction strategy
- VMT per capita and measurable performance measures
 - Transportation investment
 - Land use strategies
 - Pricing signals
- Move toward better modeling

MPOs / RTPAs

- Ready to help
- Good planning vital
 - Bay Area Smart Growth
 - Sacramento Region Blueprint
 - San Diego Regional Planning
 - Southern California Compass (2% Strategy)
 - SJV Valley Blueprint Planning Process
- Land use (locals), Pricing (legislature)

Energy Commission's IEPR Report

- Mitigating Energy Needs with Smarter Growth -- Recommendations
 - Statewide growth plan
 - GHG levels to guide local planning
 - Local plans to reduce GHGs
 - State technical and financial assistance
 - Legislation recommendations

Land Use Subgroup of CAT (LUSCAT)

- State interagency team:

CEC

HCD

ARB

Cal/EPA

IWMB

PUC

Caltrans

OPR

Water Board

- Coordinate the State's Climate Change land use strategies
 - **2008 CAT Report**
 - **Stakeholder Input**
 - *Advisory Group*
 - **Tool and Resources**

LUSCAT Stakeholders' Initial Input

- Housing Element and Housing Finance
- CEQA and General Plan Guideline Update
- State Agency Climate Change Guidelines
- Energy Aware Planning Guide Update
- Regional Transportation Plan Guideline Update
- Regional Blueprint Planning
- GHG criteria for Grant Programs

Potential Emission Reduction Measures

Action Measures

Enhance and expand transit

Infill development;
TOD; Smart growth

Enabling Policies

Align federal/state/local funding mechanisms

CEQA relief; incentives for Blueprint and Blueprint implementation

Perspective on Approaches

Incentives

Voluntary Actions
Tax breaks

CEQA relief
**Transit, bike, walk
infrastructure**

Urban limit lines
CEQA thresholds

**Mandatory regional
and local targets**

Requirements



Municipal Operations

Municipal Operations GHG Sources

- Government Building and Facility Energy Use
- Government Fleet Vehicles
- Water Treatment and Landfill Operations
- Urban Forestry
- Port/Airport Operations
- Other Operations

GHG Emission Reduction Opportunities

- Energy Conservation and Efficiency
- Waste Reduction
- Clean Energy Use
- Storing and Offsetting Carbon Emissions
- Promoting Community and Individual Action

Current Activities

- ICLEI – Local Governments for Sustainability
- US Conference of Mayors – Climate Protection Agreement
- Institute for Local Government - California Climate Action Network
- LUSCAT
- CCAR Local Government Protocol

Current Emission Reduction Measures for Municipal Operations

Action Measures

Increase agency and commercial buildings built to LEED Silver Certified standards

Decrease waste from agency operations

Community education

Enabling Policies & Tools

- Green Building ordinance
- Funding incentives
- Permitting relief
- Design assistance

- Incentivizing recycling facilities
- Waste audit and reduction plans
- Climate-friendly purchasing

- School curriculum
- Energy efficiency consultations
- Local Green Award program

Potential Scoping Plan Measures

Early Action Measure: Toolkit for Local Government and Businesses (measurement tools, best practices, verification)

Scoping Plan:

- Comprehensive Climate Action Plans
- Green Building Standards
- Cool Communities
- Climate Neutral Policies
- Climate-friendly operations
- Climate-friendly transportation
- Community education and outreach

Climate Action Plans

- Components of a climate action plan
 - Conduct a baseline emissions inventory and forecast
 - Adopt an emissions reduction target for the forecast year
 - Develop a local action plan
 - Implement policies and measures
 - Monitor and verify emission reductions

Green Buildings

- Leadership in Energy and Environmental Design (LEED) Green Building Rating System provides standards for environmentally sustainable construction
- Cost-effective
 - No significant difference in average construction cost
 - Reduces operating costs (30-40% in energy savings)



**Cal/EPA Headquarters
Sacramento, CA**
Energy savings add up to
~ \$1.5 million a year
(LEED EB platinum certified)



**West Valley Branch
Library, San Jose**

Potential Emissions Reduction Measures for Municipal Operations

Action Measures

Increase Climate Action Plans (CAPs) developed by local agencies statewide

Increase *implementation* of CAP projects, programs, and policies statewide

Enabling Policies and Tools

- Target Development
- Funding Mechanism
- CCAR Protocol
- Community Footprint Calculator

- Funding Mechanism
- CCAR Protocol
- CEQA Relief
- Community Education Initiative

Perspective on Approaches

Incentives

Voluntary Actions

Tax breaks

Funds for CAPs

Urban limit lines

CEQA thresholds

CEQA relief

Transit, bike, walk
infrastructure

CAPs for Funds

Mandatory regional
and local targets

Requirements

Next Steps

- Workshops in February 2008
- Join local action listserve:
lclaction@listserv.arb.ca.gov

Contact Information

Anthony Eggert
Senior Policy Advisor
Officer of the Chairman

(916) 445-5154
aeggert@arb.ca.gov

Annmarie Mora, Manager
Research Planning and
Climate Change Outreach
Section

(916) 323-1517
amora@arb.ca.gov

Jeff Weir
Planning & Technical
Support Division

(916) 445-0098
jweir@arb.ca.gov