

UCDAVIS

URBAN LAND USE AND TRANSPORTATION CENTER

of the Institute of Transportation Studies

California's GHG Legislation: Regional Planning and New Transport Services

Caroline Rodier, Chair AP020

TRB Mid-Year Meeting

Stanford, July 19, 2013

California's Climate Change Legislation

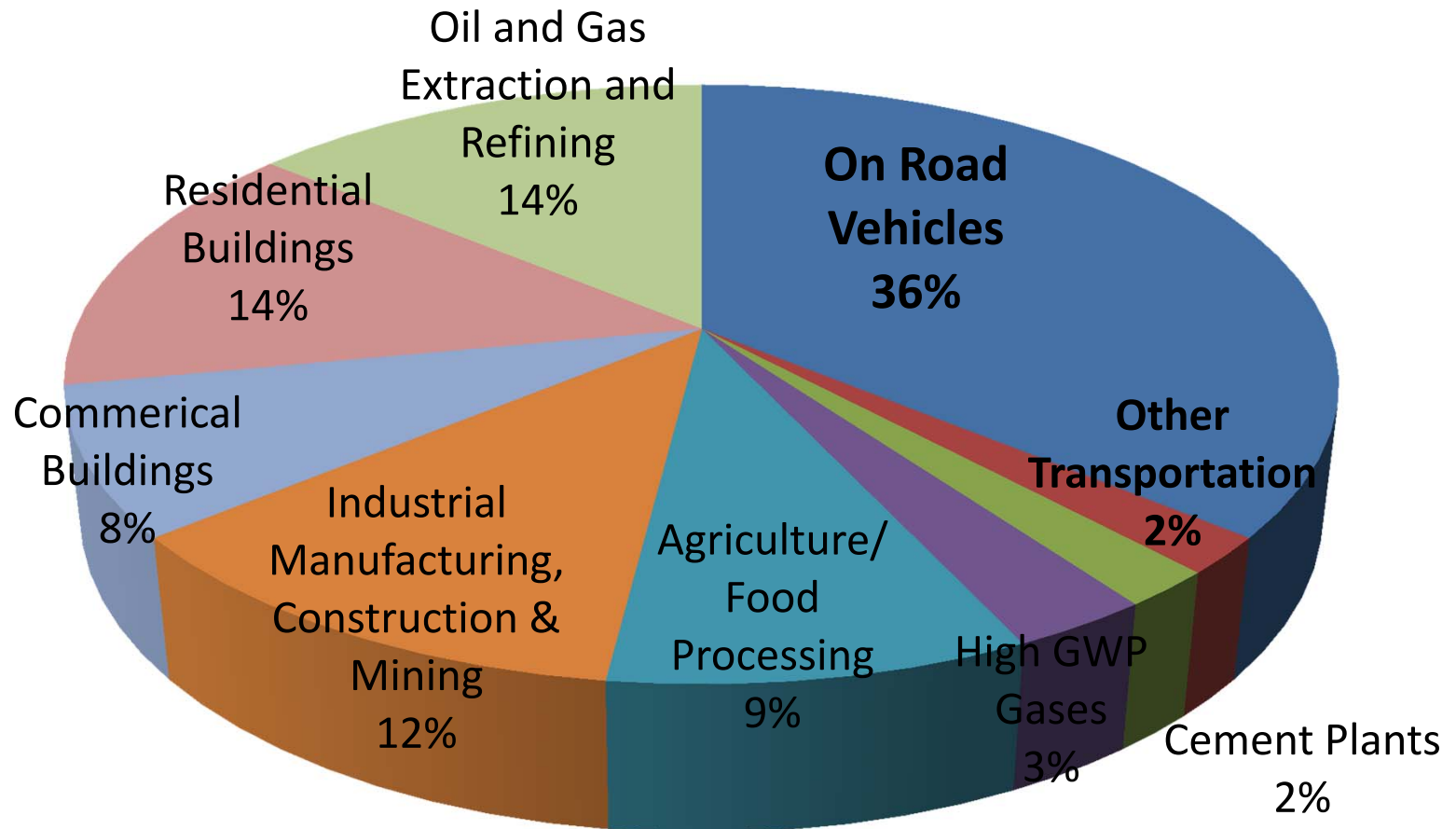
- Dramatic reductions in greenhouse gas emissions (GHGs)
- Global Warming Solutions Act (AB 32, 2006)
 - 1990 GHGs by 2020
- Executive Order (S-3-05, 2005)
 - 80% of 1990 GHG's by 2050

UCDAVIS

URBAN LAND USE AND TRANSPORTATION CENTER

of the Institute of Transportation Studies

California's GHGs (ARB, 2008)



The “Three-Legged Stool”

Attaining GHG targets for on-road vehicle travel requires an approach that includes three interventions, also known as the

“Three-Legged Stool”



1. Increase vehicle fuel economy
2. Decrease carbon content of fuel
3. **Decrease in growth in vehicle miles travel (VMT)**

VMT= distance traveled by autos and trucks on roads

Sustainable Communities and Climate Protection Act—2008 (SB 375)

- Legislative answer to the “3rd leg of the stool,” requires regional land use and transportation plans reduce per capita VMT growth largely through

- 1. Transit capacity expansion**
- 2. High density compact growth**
- 3. Auto pricing policies**



Relative Contribution to GHG Goals

- CARB recently estimated that SB375 will contribute to 6% of the GHG reductions required to meet AB 32 goals
 - However, some expect that SB 375 policies will provide a host of co-benefits that meet broader social goals of health, equity, and economic growth

UCDAVIS

URBAN LAND USE AND TRANSPORTATION CENTER

of the Institute of Transportation Studies

Multi-scale Performance Base Planning

- Regional governments (or MPOs) lead the coordination, development, and evaluation of state, regional, and local governments' policies.
- Regional GHG targets for SB 375 policies set by the California Air Board (ARB) with MPOs.
- MPOs must develop a Sustainable Communities Strategy (SCS) as part of their regional transportation plan that demonstrates how the region will meet their GHG target.

Implementation: Legislative Requirements and Incentives

- Local governments retain authority
 - final word on implementation of land use plans
- Relies on bottom-up public participation processes and incentives
 - streamlined environmental review for project consistent with SCS
 - transportation funding

UCDAVIS

URBAN LAND USE AND TRANSPORTATION CENTER

of the Institute of Transportation Studies

SB 375 and New Transport Services

- Little research explores the potential synergisms of new transport services (e.g., dynamic ridesharing) with land use, transit, and auto pricing policies.

UCDAVIS

URBAN LAND USE AND TRANSPORTATION CENTER

of the Institute of Transportation Studies

ABMs and Market Potential

- GHG legislation spurred adoption of advanced travel models (or ABMs)
 - track individuals'/households' activities and travel
 - identify trip start/stop times, locations, purpose, and mode by segment that compose tours for daily activities
- Number of individuals who could use new services
- Magnitude of avoided vehicle trips and VMT/GHG
- MTI funded study with California ABM