

Reducing GHG Emissions in San Diego County

An Analysis of Policy Options

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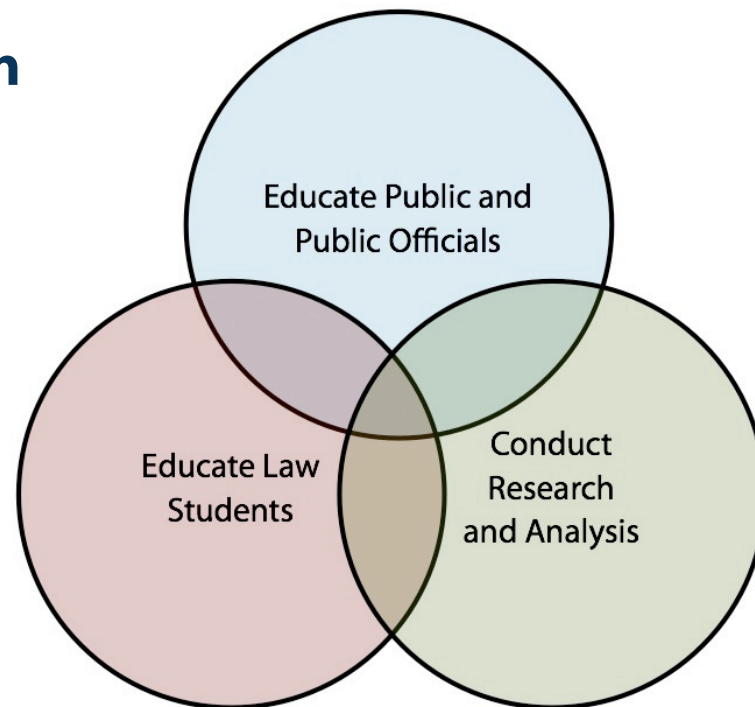


EPIC – Energy Policy Initiatives Center

Academic and Research Center

- University of San Diego School of Law

EPIC Mission



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GHG Policies in California

- **AB 32 – Global Warming Solutions Act of 2006**
 - **Goal: 1990 GHG level by 2020**

carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride as carbon dioxide equivalent (CO₂E)

- **Executive Order S-3-05**
 - **Goal: 80% below 1990 levels by 2050**

GHG Inventory Project Overview

Emissions Inventory Categories and Subcategories

AGRICULTURE

- Enteric Fermentation
- Manure

CIVIL AVIATION

- Interstate Flights
- Intrastate Flights

ELECTRICITY

- Residential
- Commercial
- Industrial
- Mining
- Agricultural
- Telephone, communications, utilities
- Street Lighting

DEVELOPMENT

- Loss of farmland
- Loss of native vegetation

INDUSTRIAL PROCESSES AND PRODUCTS

- HFC refrigerants
- Sulfur hexafluoride
- Other

NATURAL GAS END USES

- Residential
- Commercial
- Industrial
- Mining
- Agricultural

OFF-ROAD EQUIPMENT AND VEHICLES

- Construction and Mining Equipment
- Pleasure Craft
- Industrial Equipment
- Agriculture Equipment
- Other

ON-ROAD TRANSPORTATION

- Passenger Vehicles
- Light-Duty Trucks
- Heavy-Duty Trucks and Vehicles
- Motorcycle

OTHER FUELS/OTHER

- Manufacturing
- Transport
- Residential
- Commercial
- Non-Specified
- Agriculture
- Cogeneration Thermal Emissions

RAIL TRANSPORTATION

SEQUESTRATION FROM LAND COVER

- Forest growth
- Woodland growth
- Chaparral, scrub, and grasslands

WASTE

- Landfills
- Wastewater Treatment

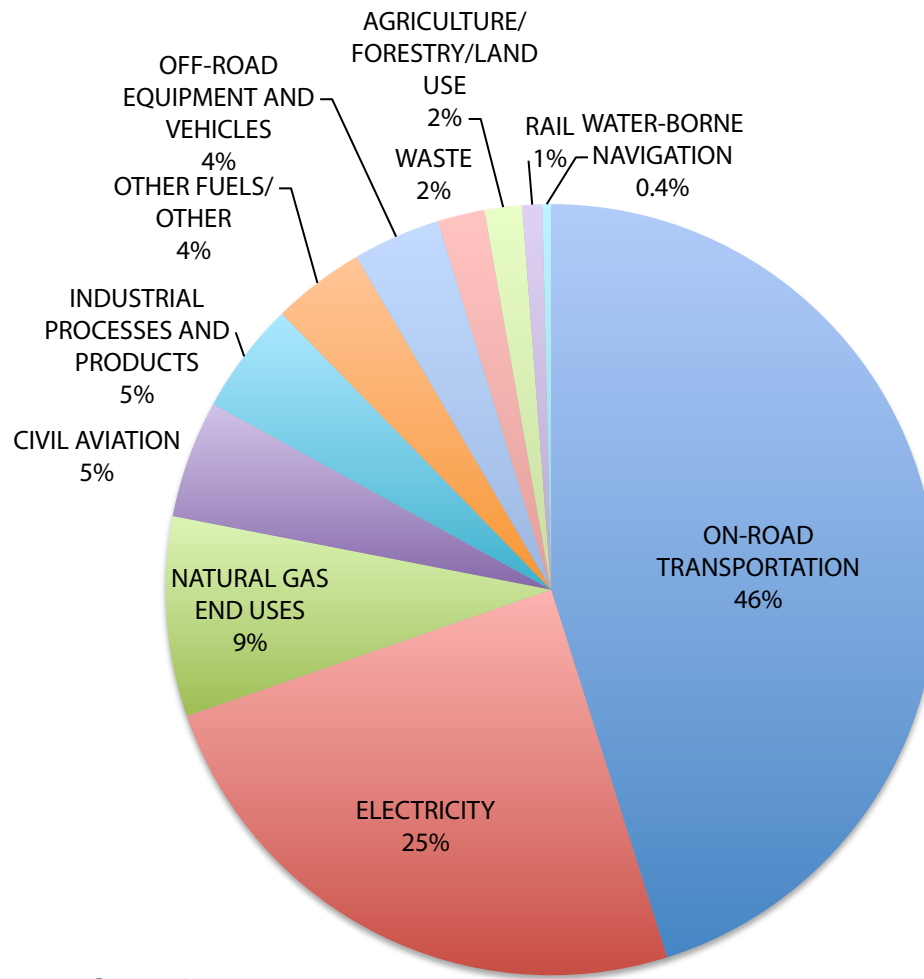
WATER-BORNE NAVIGATION

- Ocean Going Vessels (OGV)
- Harbor Craft

WILDFIRES

- Forest
- Woodlands
- Chaparral, scrub, and grasslands

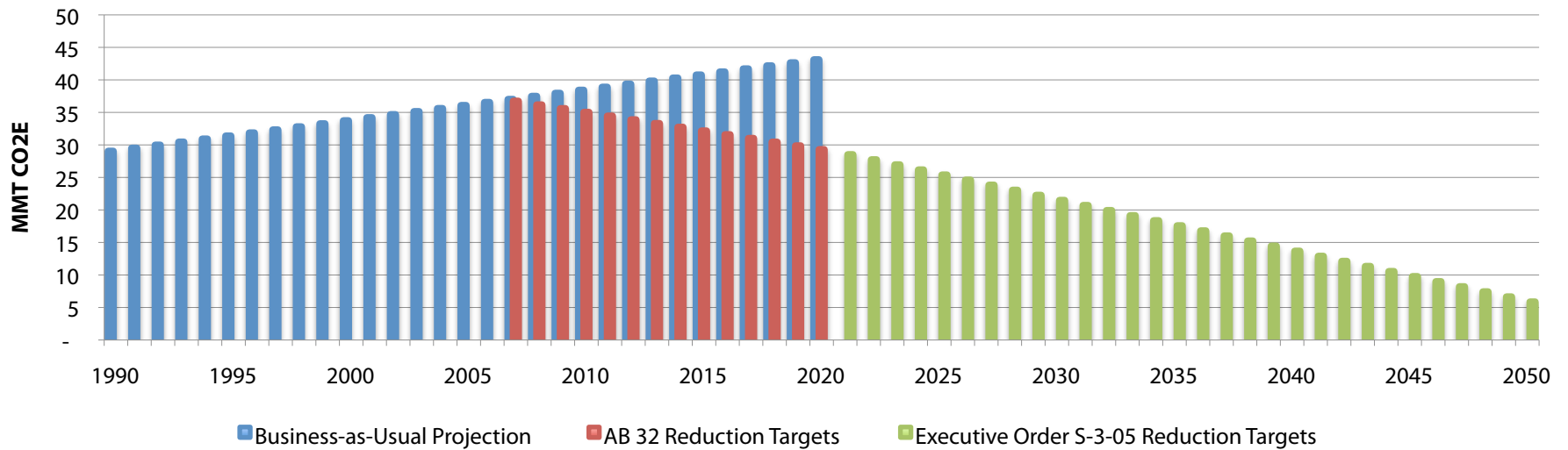
Regional Greenhouse Gas Emissions (2006)



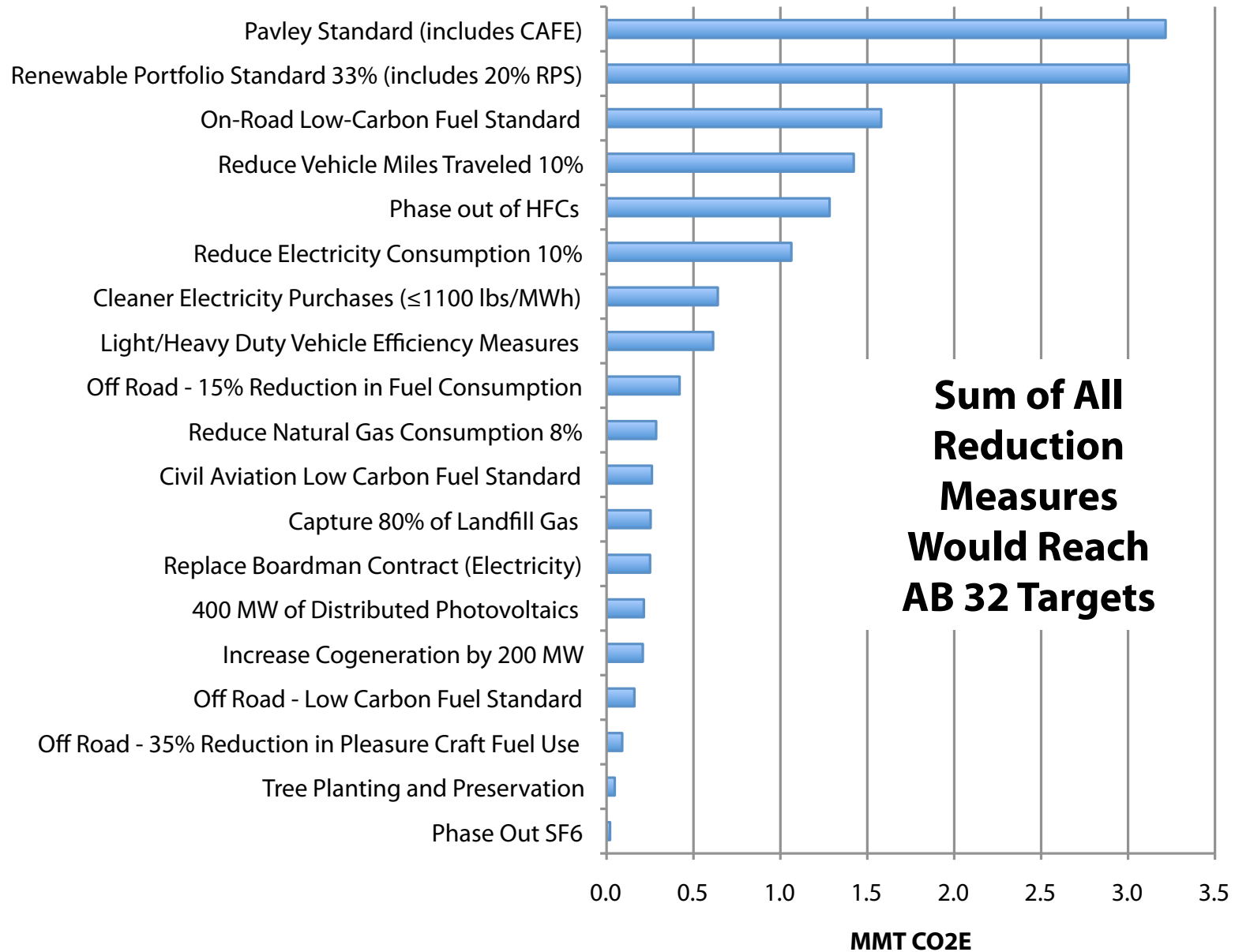
34 million
metric tons

GHG Reduction Targets

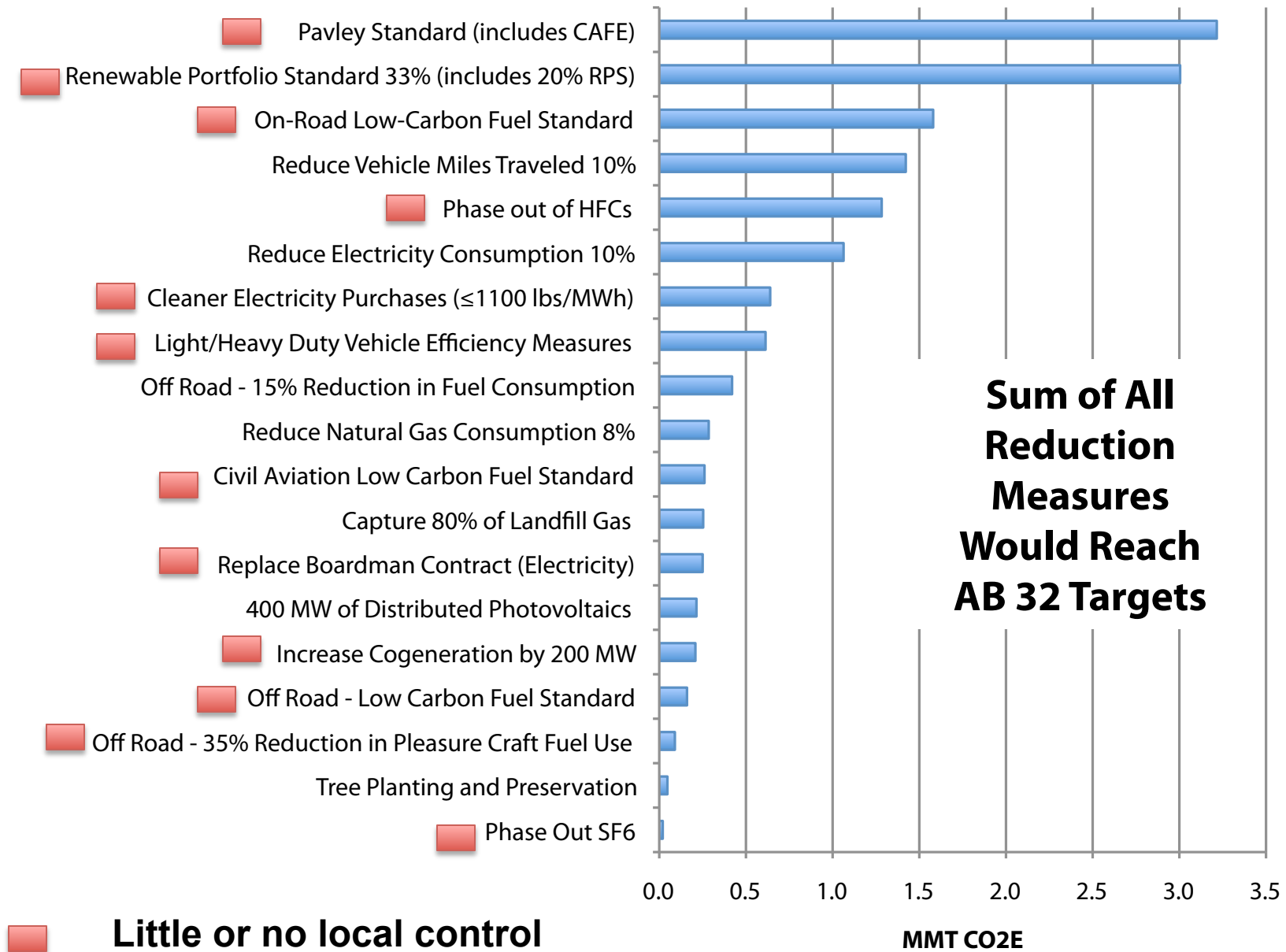
Theoretical GHG Reduction Targets for San Diego County



Emissions Reduction Strategies to meet AB 32 target applied to San Diego County

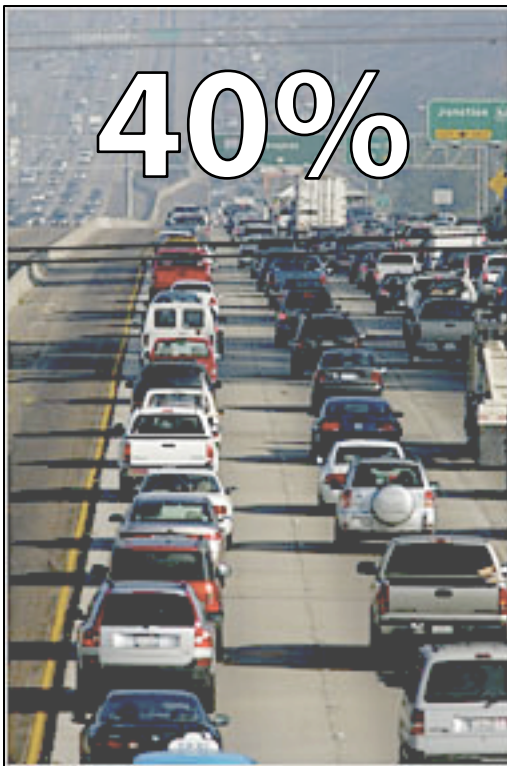


Emissions Reduction Strategies to Achieve AB 32 Target Applied to San Diego County



GHG Inventory Project Results - 2006

Emissions in SD County come from...



Private Cars & Light-Duty Trucks 14.1 MMT

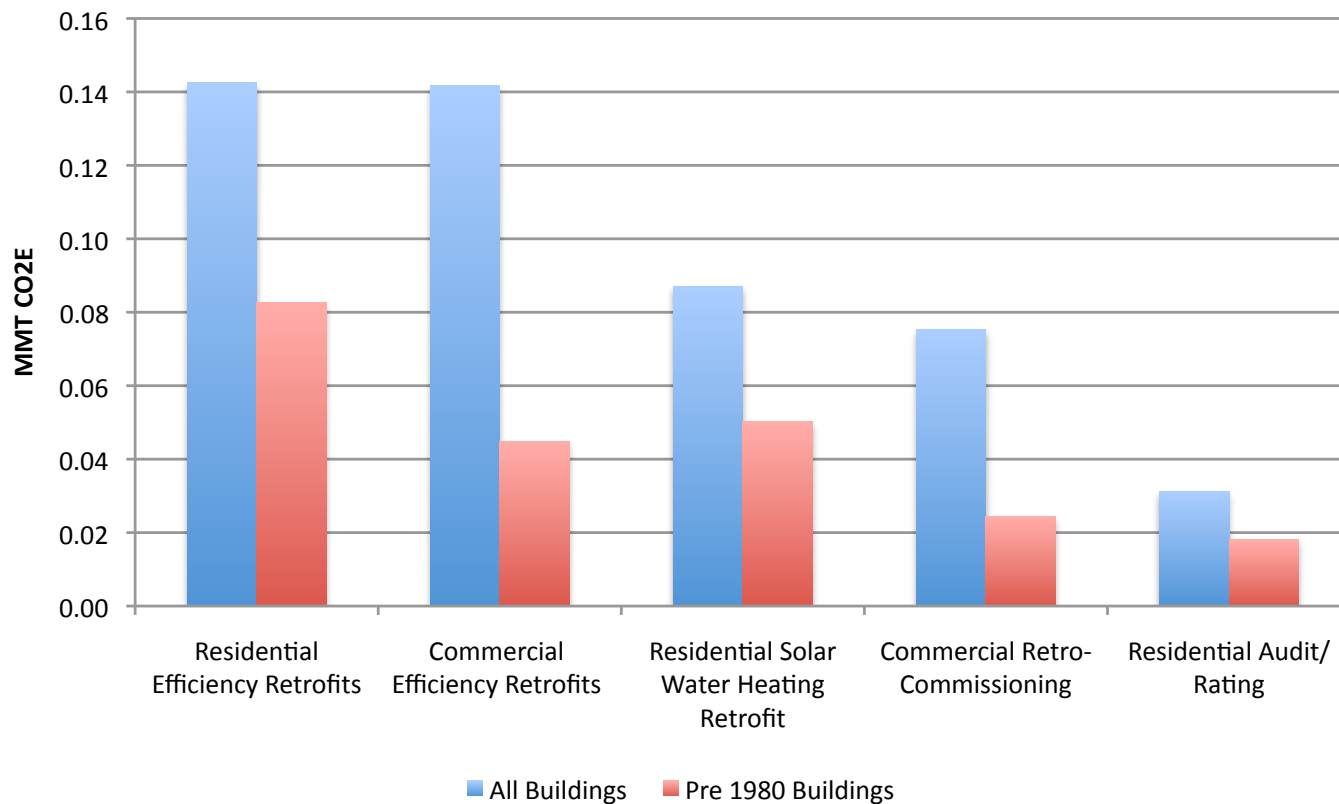


Buildings
12.6 MMT

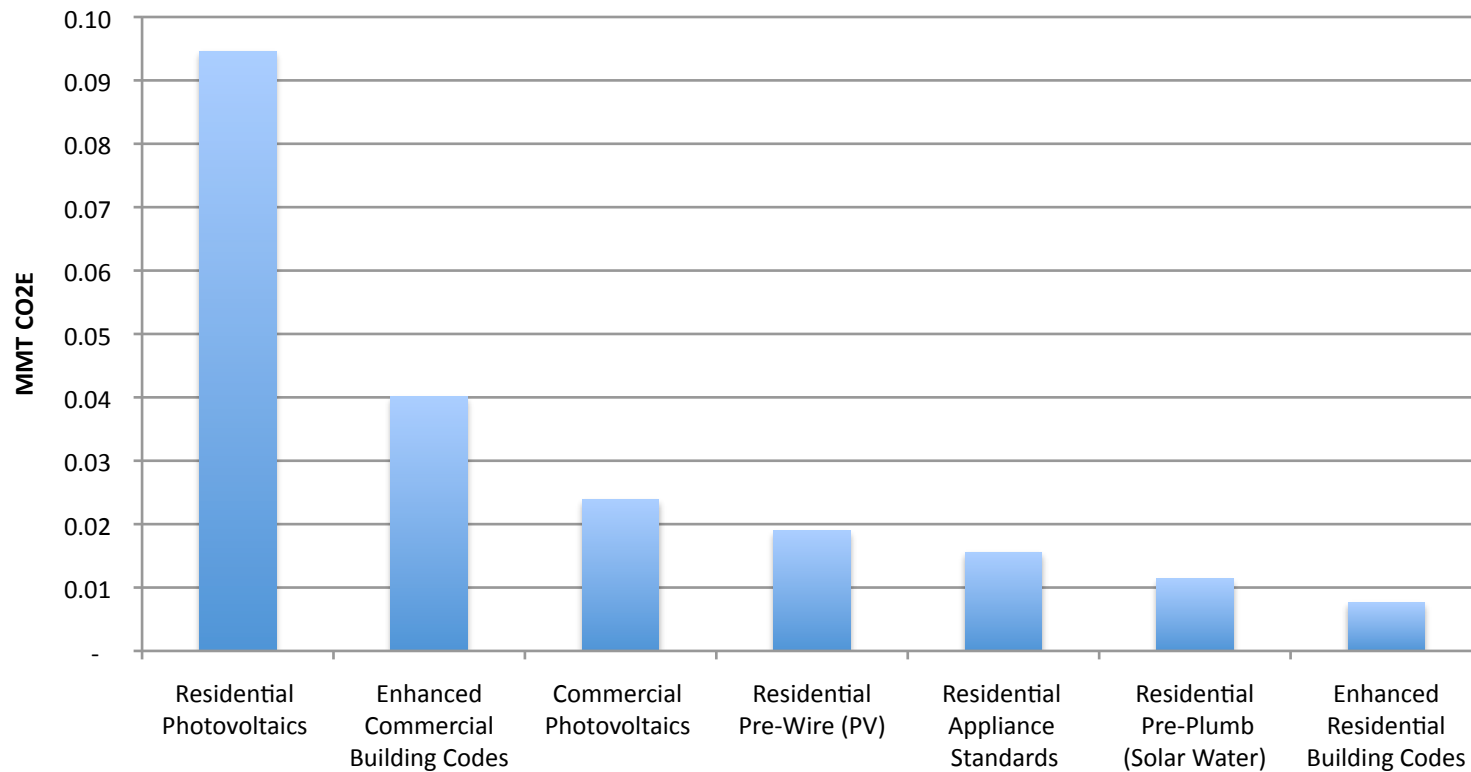
Buildings



GHG Reduction Policy Options – *Existing Buildings*



GHG Reduction Policy Options – *New Construction*

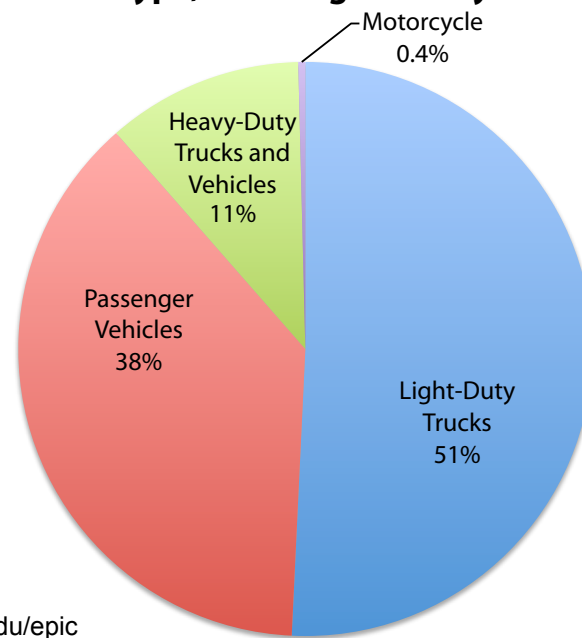


On-Road Transportation



GHG Inventory Results – On Road 2006

On-Road Transportation GHG Emissions by Vehicle Type, San Diego County 2006

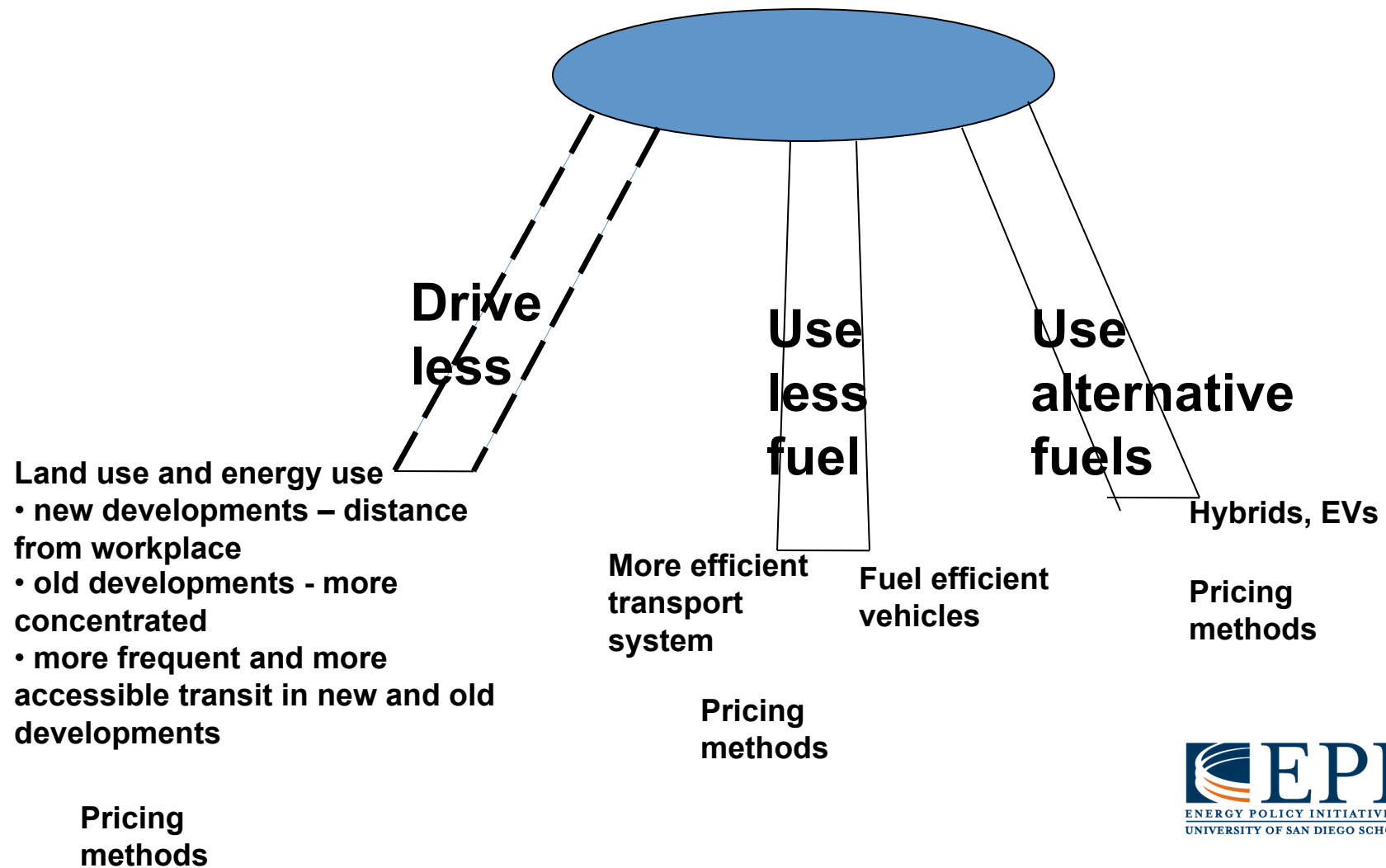


**Private Cars & Trucks
14.1 MMT**

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What can we do locally to achieve GHG/fossil fuel use reduction from on-road transportation?

GHG Reduction Options– on road transportation



Aligning transport energy use with land use planning - SB 375

- MPOs must adopt a Sustainable Communities Plan (SCS) as part of RTP.

SCS must:

- Identify areas to house all population growth (migration, local growth, employment, household types) for the planning period
- Integrate housing goals and transportation measures/policies to achieve GHG target
- **Provide measures to reduce GHGs to reach target**
- If SCS does not meet GHG target, MPO must prepare Alternative Planning Strategy (APS), outside of RTP process

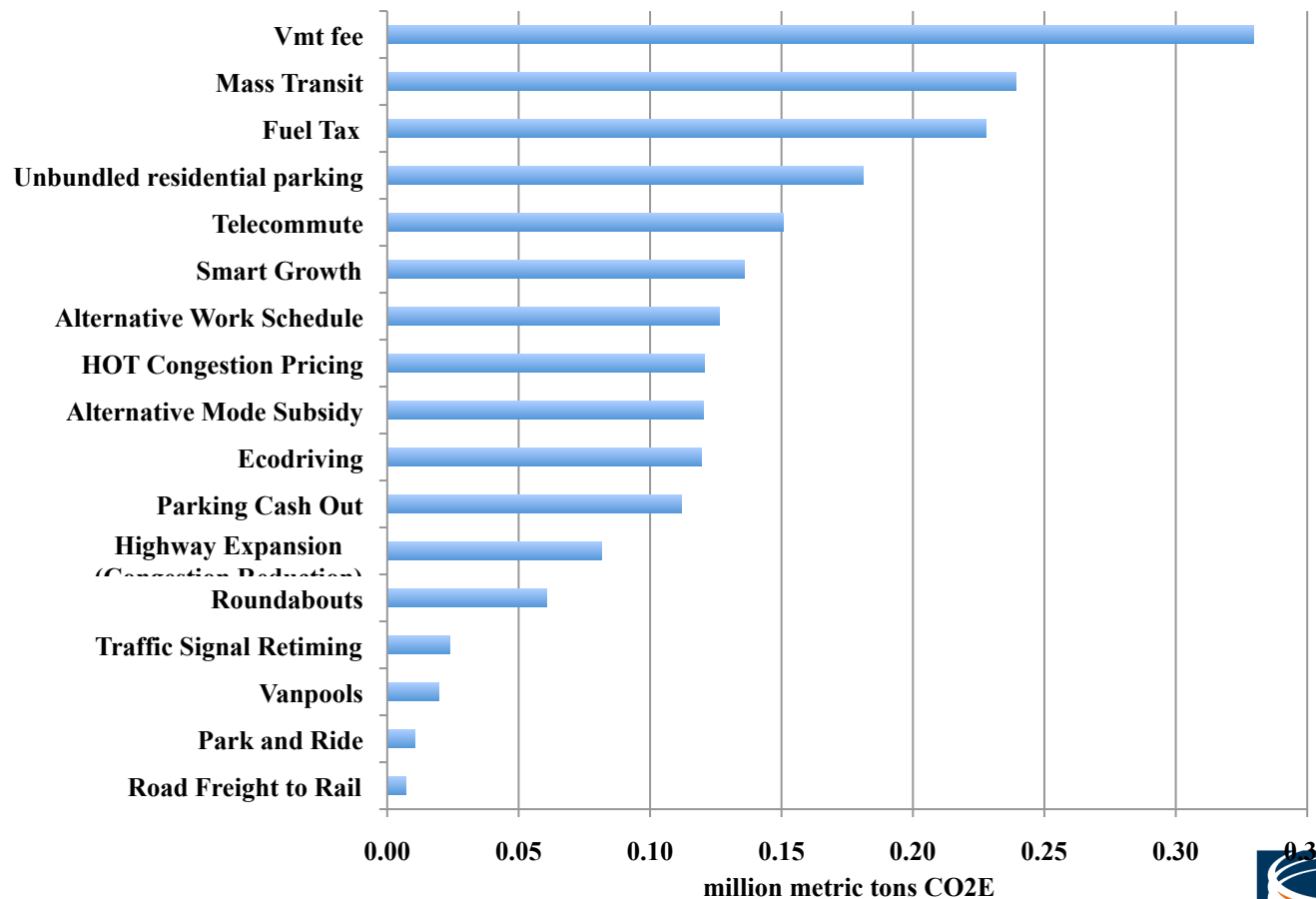
CARB will adopt regional 2020 GHG target for the automobile and light truck sector by Sept 30, 2010

GHG reduction options from on-road transportation

Strategy	Potential Local Measures to achieve SB 375 target	
Reduce Vehicle Miles Traveled	Mass Transit	Alternative Mode Subsidy
	Vanpools	Parking Cash Out
	Road Freight to Rail	Unbundled Residential Parking
	Park and Ride	Fuel Tax
	HOT Congestion Pricing	Vmt Fee
	Telecommute	
	Alternative Work Schedule	
Reduce Fuel Use	Reduce Congestion (Highway Expansion)	Dynamic traffic and parking control
	Smart Growth	Ecodriving
	Traffic Signal Retiming	
	Roundabouts	
Increase Alternative Fuel Use	Some local effects through infrastructure planning and incentives	

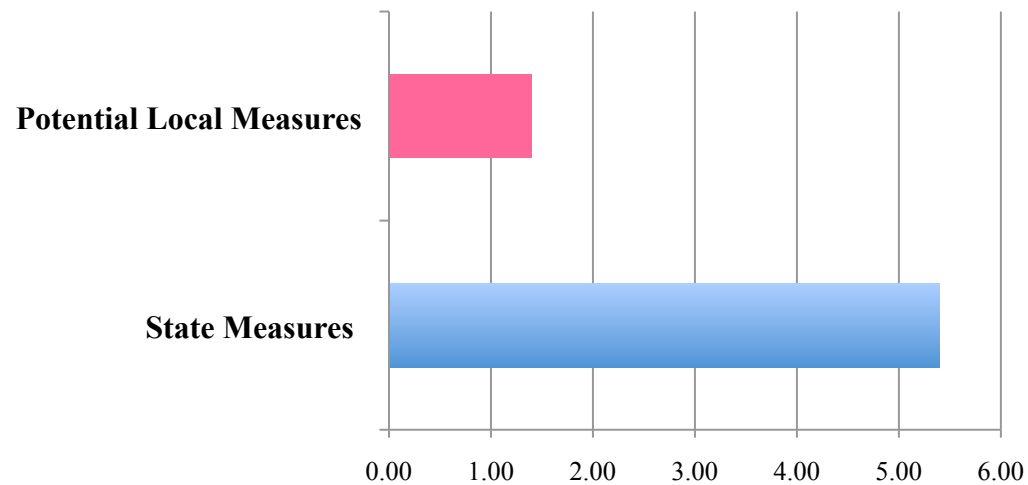
GHG reduction options – on-road transportation

Potential Local Measures for GHG Reduction - on road transportation



GHG Reduction – on road transportation

Relative contributions to meeting AB 32 target - on road transportation



**5.4 MMT
in 2020**

For more information...

To Download the Summary and Full Report

www.sandiego.edu/epic/ghghpolicy

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