



# Regional Climate Action Plan (RCAP) Greenhouse Gas (GHG) Analysis

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# Presentation Overview

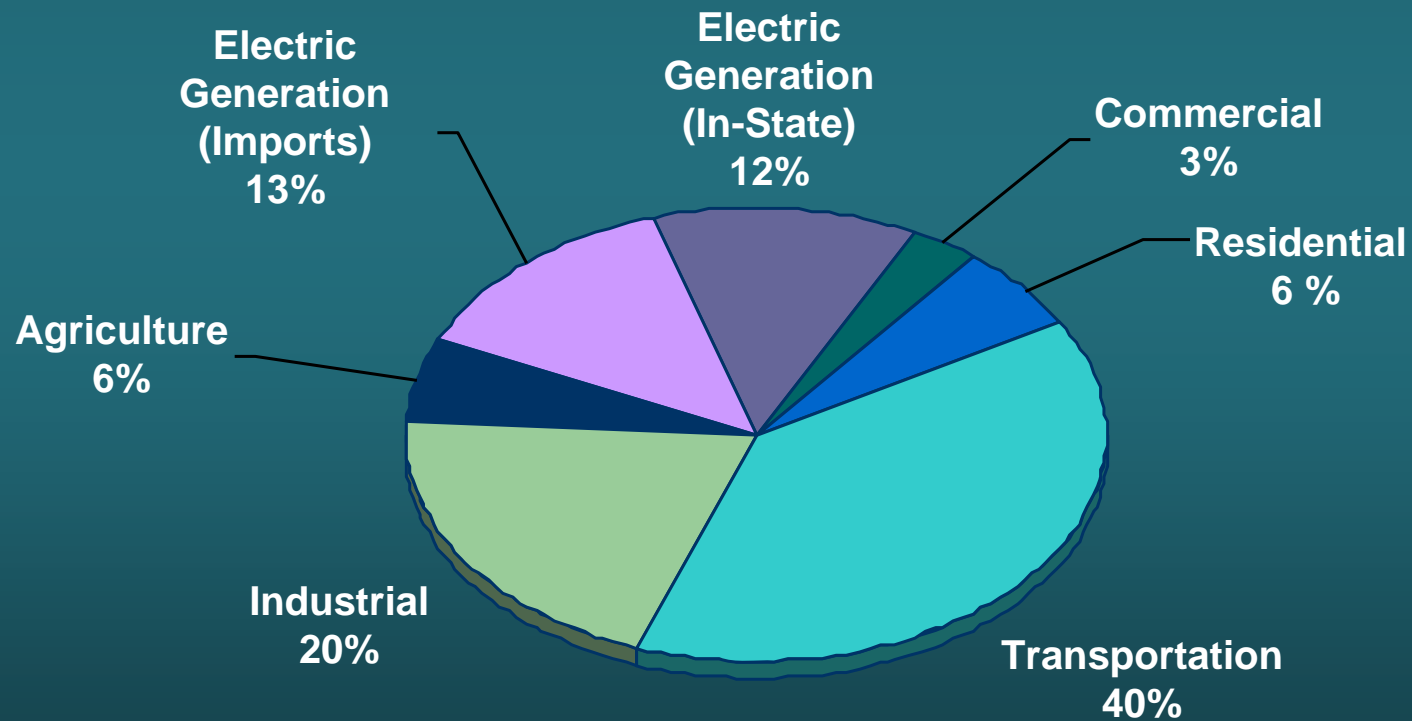
- What is the RCAP?
- Policy Drivers
- Planning Process
- Timeline
- Transportation Emissions
- Transportation Scenario
- Next Steps

# What is the RCAP?

- Long-range policy plan (2030)
- Focus on transportation, electricity, and natural gas sectors
- Complement to Regional Energy Strategy 2030 Update
- Feed in to SANDAG Regional Transportation Plan (RTP) and Regional Comprehensive Plan (RCP)

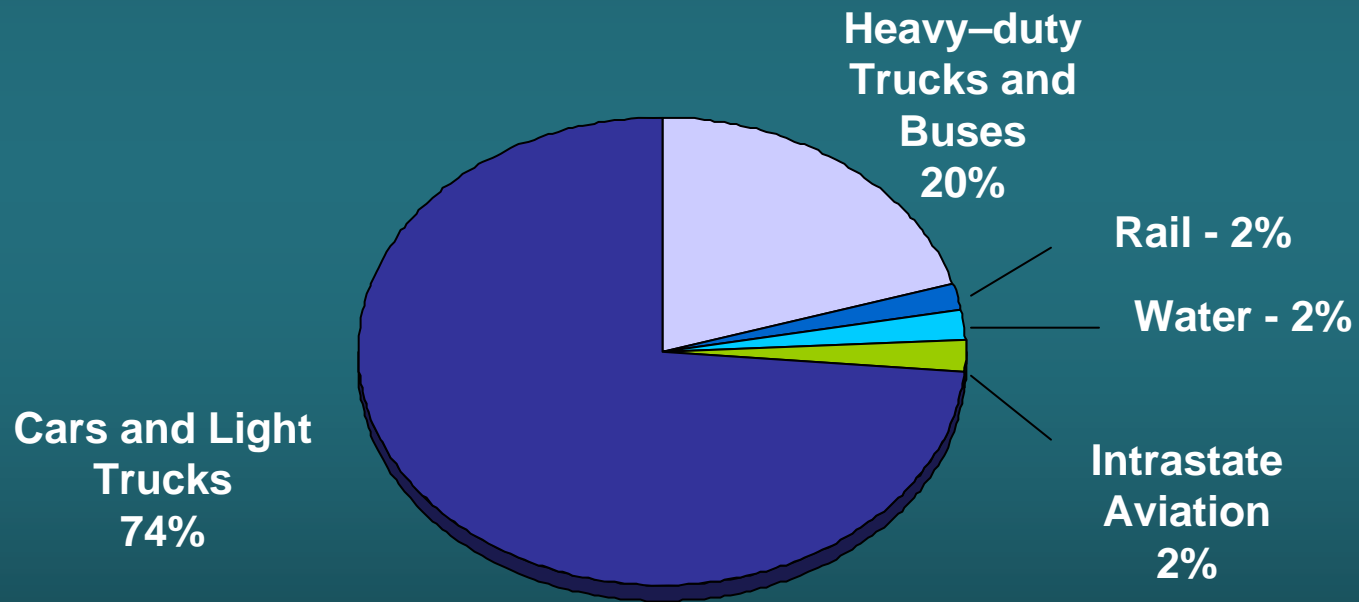
# What Contributes to Greenhouse Gas Emissions?

*Statewide Greenhouse Gas Emissions by Sector in 2004*



# What Contributes to Transportation's Greenhouse Gas Emissions?

*Statewide Transportation Greenhouse Gas Emissions in 2004*



# RCAP Policy Drivers

- CA Global Warming Solutions Act of 2006  
Reduce GHG emissions to 1990 levels by 2020
- Executive Order S-3-05  
Reduce GHG emission to 80 percent below 1990 levels by 2050
- CA Senate Bill (SB) 375
- Attorney General comments on RTP
- RTP EIR mitigation measure
- CEC Agreement

# RCAP Planning Process

- GHG inventory (1990 to current)
- Business-as-usual forecasts
- GHG test targets
- GHG reduction scenarios
- Policy development

GHG Analysis

# RCAP Timeline

- Transportation GHG Analysis: July '08
- Electricity/Natural Gas GHG Analysis: Fall '08
- Policy Development: Fall '08 – Winter '09
- Draft Plan: Winter '09
- Final Plan: Summer '09



# On-road Transportation Emissions 2030

RTP Business-as-usual Forecast (22.5 mmtCO<sub>2</sub>)

29 percent above current levels

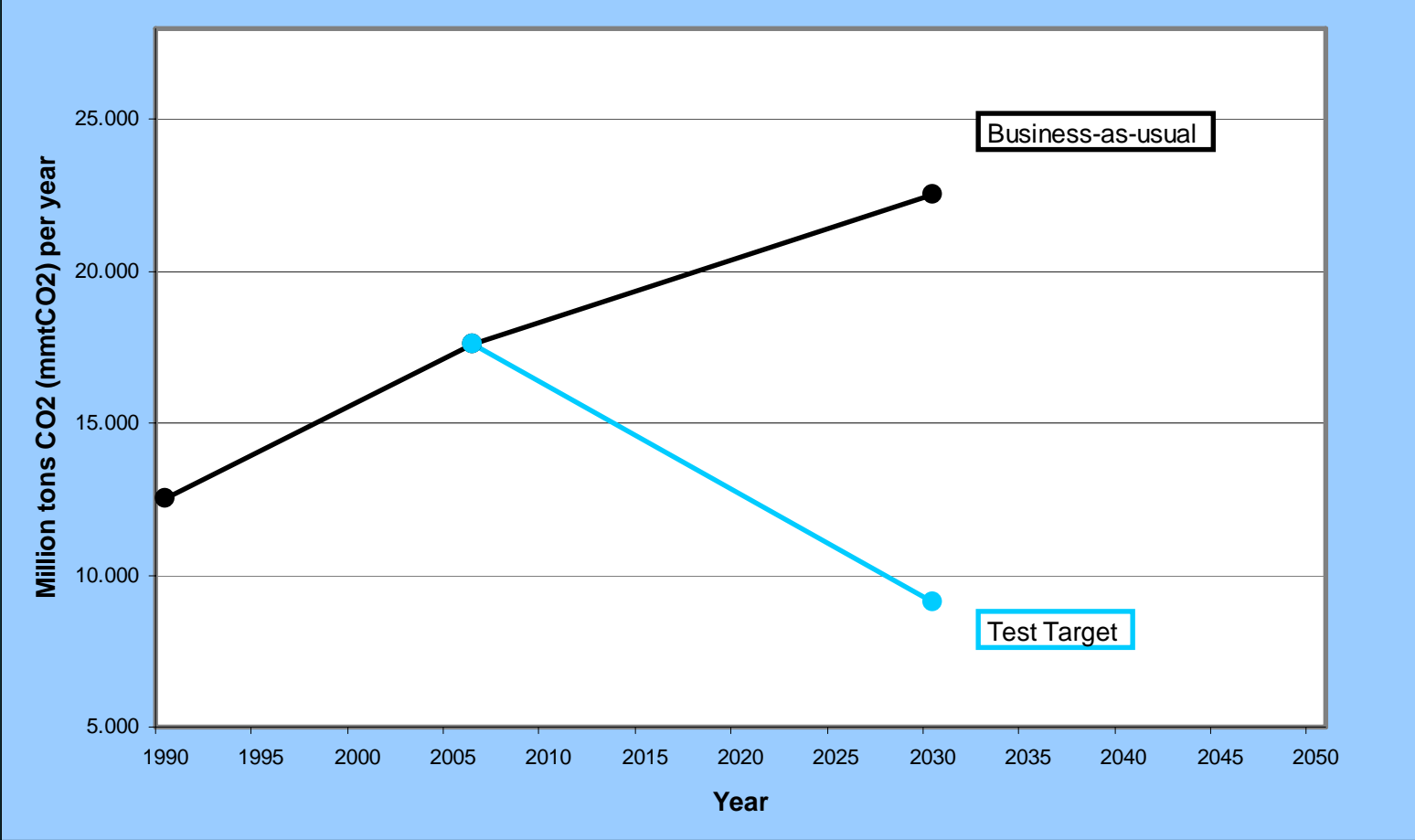
GHG Test Target (9.1 mmtCO<sub>2</sub>)

27 percent below 1990 levels

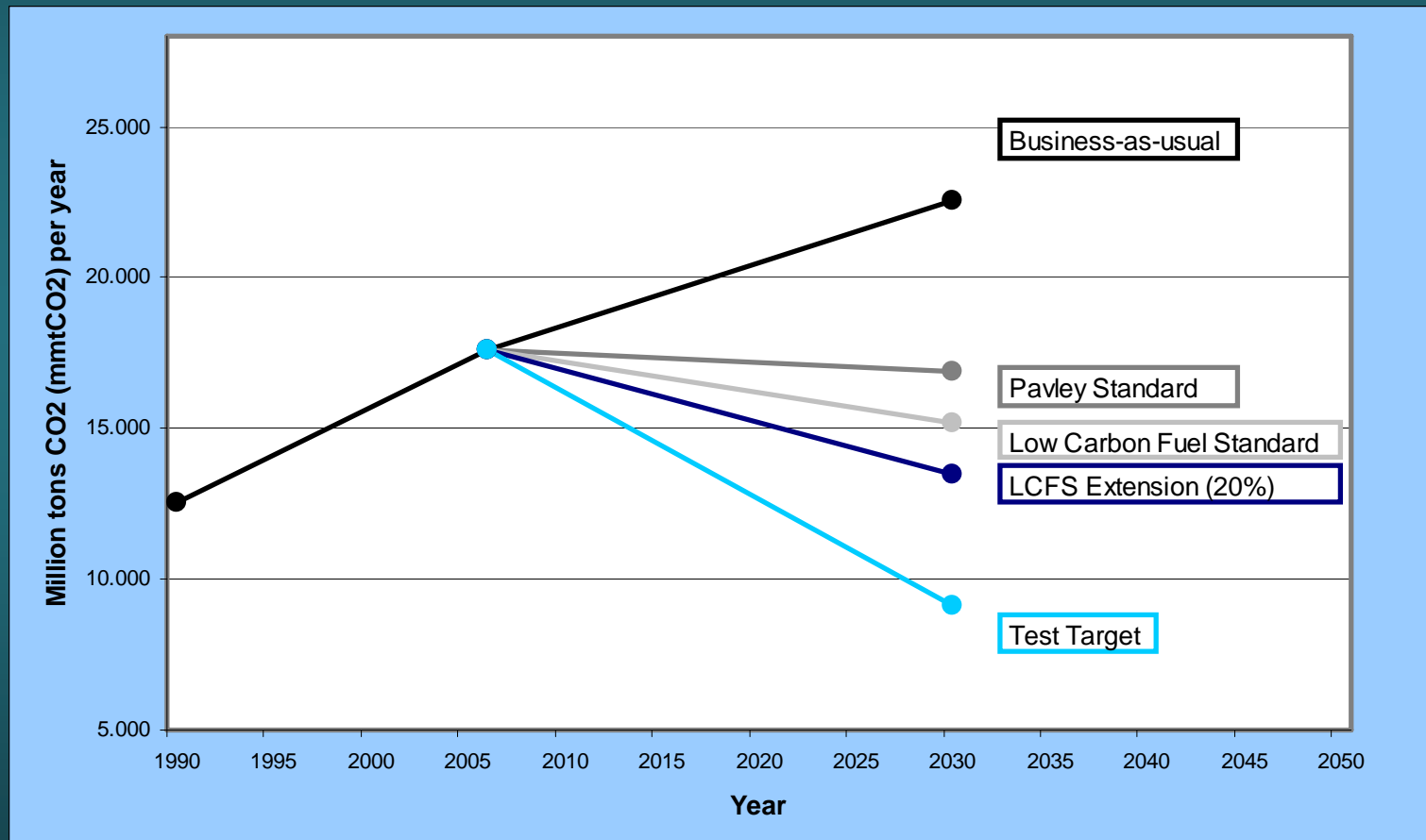
48 percent below current levels

60 percent below 2030 levels

# San Diego Regional On-road Transportation Emissions



# GHG Reductions from State Efforts: Fuel Efficiency and Alternative Fuels



# Regional GHG Reduction Scenarios for Transportation

- Low Carbon Land Use Scenario
  - Smart growth intensifies
- Enhanced Transit Scenario
  - Increase routes and headways
- Transportation Demand Management (TDM)
  - Telecommuting
  - Regional Carbon Fee
  - Pay-as-you-drive Insurance
  - Smart Growth Parking Pricing

# Land Use and Transit Assumptions

- Build-out of Smart Growth Concept Map
- New circulator bus service in central San Diego
- Shorter headways for COASTER, light rail, bus rapid transit, regional buses

# Enhanced Land Use and Transit Scenario Results

Emissions Outcome: 2.5 to 6 percent reduction

## Highlights

- Reduces inter-regional commuting
- Increases share of transit and non-motorized trips
- Reduces VMT

## Challenges

- Land use planning mostly impacts increment of new growth
- Current model does not account for full effects of smart growth

# Transportation Demand Management (TDM) Assumptions

## Telecommuting

- ~33% of workforce, 2x / week

## Pay-as-you-drive Insurance

- Per mile rate = Average CA premium / Average regional VMT

## Regional Carbon Fee

- 20 cent gasoline tax

## Parking Pricing

- Pricing in smart growth opportunity areas

# TDM Scenario Results

Emission Reduction: additional 17 percent

## Highlights

- Increase share of transit and non-motorized trips
- Reduces VMT
- Large reductions from telecommuting and parking pricing

## Challenges

- Does not include congestion pricing
- Does not capture indirect benefits that could be obtained by reinvesting new revenue in low-carbon mobility projects



# 2030 Transportation Emissions

RTP Business-as-usual Emissions:	22.5 million tons CO <sub>2</sub>
Emissions from RCAP Test Scenario:	10.5 to 11 million tons CO <sub>2</sub>
Estimated 2030 Emissions Target:	9 million tons CO <sub>2</sub>

# Next Steps

- Develop a 4D modeling tool to better account for results from “smart growth” strategies
  - Density | Diversity | Design | Destinations*
- Improve modeling capabilities for congestion pricing and ridesharing
- Refine transportation policy options with cost-benefit analysis
- Analyze electricity and natural gas sector emissions
  - Including impact of building standards and distributed generation
- Develop policy recommendations



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