



# **AB 32 Scoping Plan Economic Analysis**

April 21, 2010

California Air Resources Board

# New in this Analysis

- New Business-as-Usual projection
  - Updated forecasts reflecting recent economic downturn
  - Pavley regulations
  - 20% RPS
- Uses a dual modeling approach
  - Energy 2020 model
  - E-DRAM model
- Sensitivity analysis

# Models

- ENERGY 2020 is a detailed energy model that simulates the supply, price, and demand for all fuels
- E-DRAM is a computable general equilibrium (CGE) model of the California economy

# Key Measures Analyzed

The modeling focuses on several key Scoping Plan measures

- Electricity and natural gas energy efficiency programs and standards
- 33 percent Renewable Energy Standard
- Increased use of combined heat and power
- Regional VMT reduction targets
- California's clean car standards (LEV III)
- Goods movement measures
- Low Carbon Fuel Standard
- Cap and Trade

# Cases Analyzed

Case 1: Full complementary policies

Case 2: No offsets in cap-and-trade; full complementary policies

Case 3: Fewer reductions from transportation measures

Case 4: Fewer reductions from electricity and natural gas measures

Case 5: Combination of Cases 3 and 4

Note: AB 32 target achieved in all cases

# Reference Case Growth

	<b>2007 Reference</b>	<b>2020 Reference</b>	<b>Average Annual Growth</b>
Gross State Product (\$ Billions)	\$1,845	\$2,502	2.4%
Personal Income (\$ Billions)	\$1,492	\$2,027	2.4%
Income Per Capita (\$Thousands)	\$39.3	\$46.1	1.2%
Labor Demand (Millions)	16.4	18.4	0.9%

# 2020 Economic Effects

	<b>Case 1</b>	<b>Case 2</b>	<b>Case 3</b>	<b>Case 4</b>	<b>Case 5</b>
Gross State Product (\$ Billions)	\$2,498	\$2,480	\$2,477	\$2,483	\$2,467
Personal Income (\$ Billions)	\$2,029	\$2,018	\$2,011	\$2,019	\$2,003
Income Per Capita (\$Thousands)	\$46.1	\$46.0	\$45.8	\$46.0	\$45.8
Labor Demand (Millions)	18.4	18.2	18.27	18.22	18.09
Percent Change					
Gross State Product	-0.2%	-0.9%	-1.0%	-0.8%	-1.4%
Personal Income	0.1%	-0.4%	-0.8%	-0.4%	-1.2%
Income Per Capita	0.1%	-0.1%	-0.5%	-0.1%	-0.6%
Labor Demand	0.1%	-1.2%	-0.8%	-1.0%	-1.7%
2020 Allowance Price	\$21	\$103	\$40	\$87	\$102