

Climate Change

AB 32 and Scoping Plan Implementation

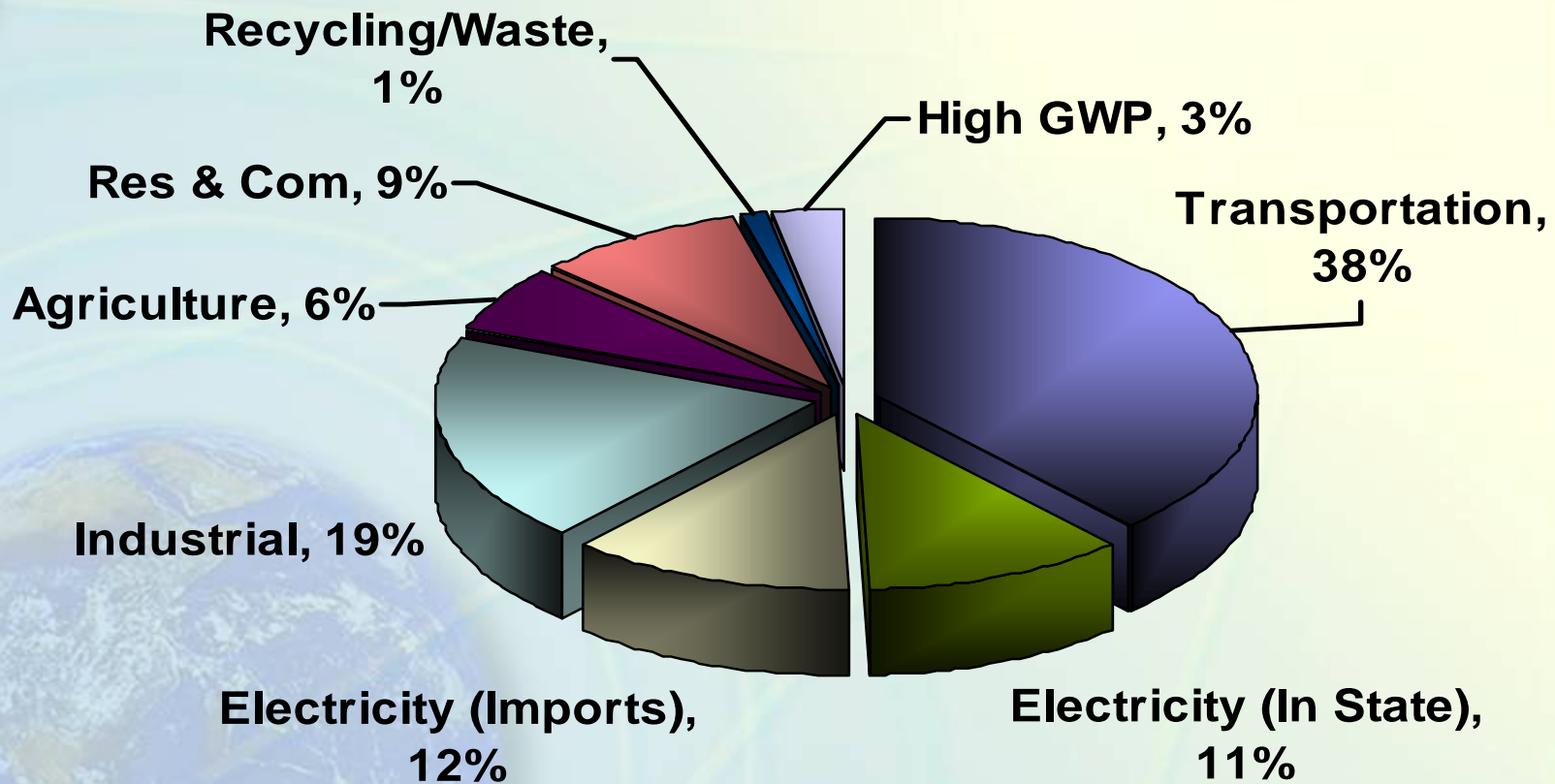
Long Beach Harbor Association June 23, 2009

California Air Resources Board

AB 32 and the Scoping Plan

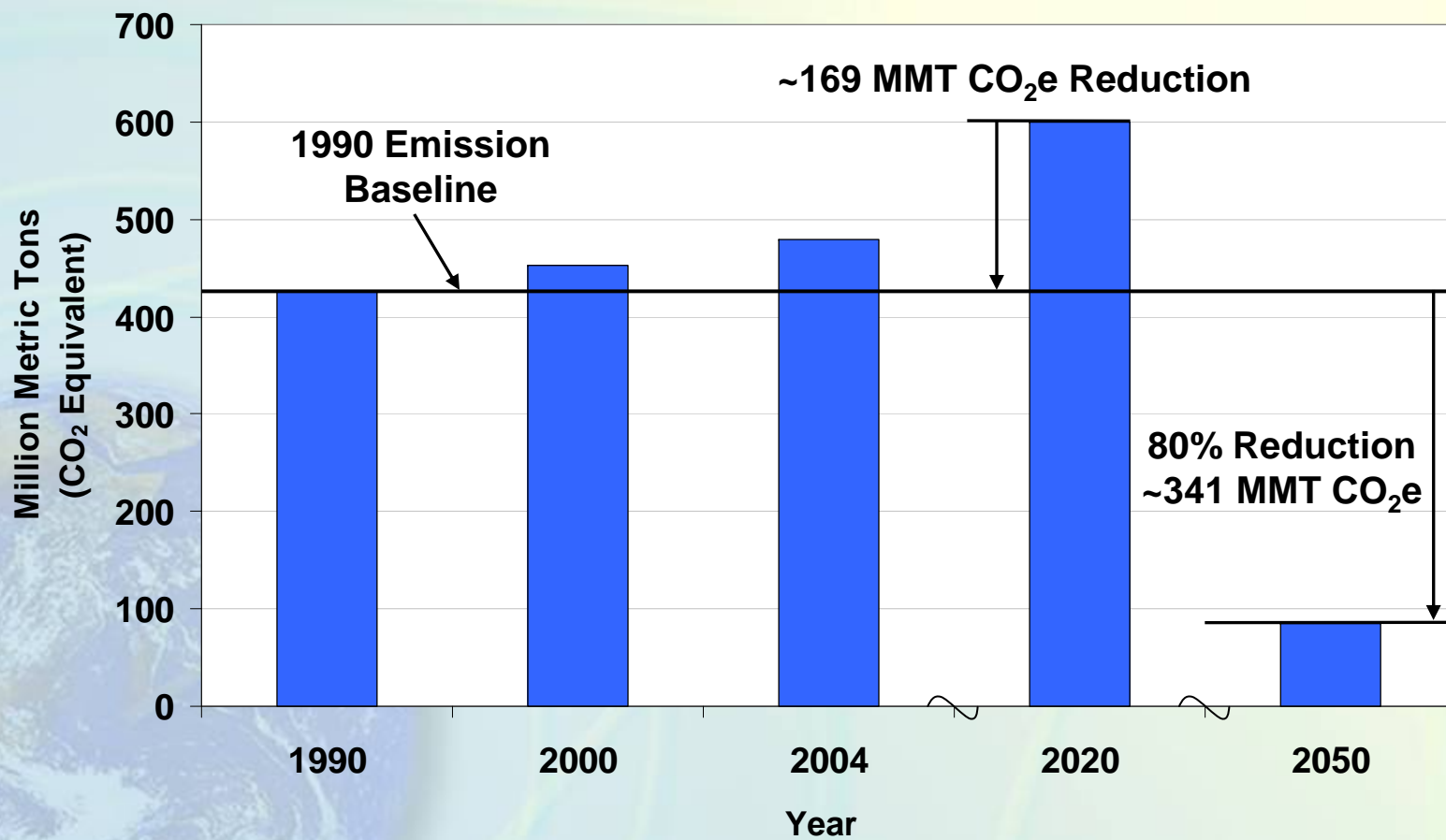
- AB 32 signed by Governor Sept. 27, 2006
- Directed ARB to develop Scoping Plan
- Board Adopted Plan Dec. 12, 2008
- Plan recommends mix of strategies combining market mechanisms, other regulations, voluntary measures, energy efficiency, and fees
- Scoping Plan goals:
 - By 2020 reduce GHGs back to 1990 levels
 - On track to reduce 80% from 1990 level by 2050

2002-2004 GHG Emissions (469 MMTCO₂E)



The Challenge

ARB Emissions Inventory



Implementation of the Plan

- 2009–2010: adopt regulations
- ARB uses a formal structure to elicit public input in the regulatory process
 - Regulatory development will follow public process
 - Extensive stakeholder outreach and involvement
 - Close and ongoing coordination with Cal/EPA, CEC, CPUC, and other state agencies
- Regulations adopted by end of 2010
- Regulations in effect by January 1, 2012

Transportation & Electricity

- Transportation is 38% -- Pavley Auto Rules
- Electricity is 23% -- New Efficiency Measures
 - Reductions in Agricultural, Commercial, Industrial, Residential and Schools:
 - “Zero Net Energy” buildings (produces the energy it uses)
 - More stringent building codes
 - Standards for new appliances and for water efficiency
 - Better compliance with existing standards
 - Voluntary targets for new buildings beyond existing codes
 - Voluntary and mandatory retrofits for existing buildings

Adopted To Date

- Pavley AB 1493 automobile rule: Sept. 04
- Inventory and Mandatory reporting: Dec. 07
- Ship electrification in ports: Dec. 07
- Port and rail yard cargo trucks: Dec. 07
- Scoping Plan: Dec. 08
- Reduce GWP in consumer products: June, 08
- Heavy duty truck efficiency: Dec. 08
- Motor vehicle DIY refrigerant cans: Jan. 09

Adopted to Date

- SB 375 Regional Targets Advisory Committee: Jan. 09
- High GWP in semi-conductors : Feb. 09
- Sulfur Hexafluoride reductions: Feb. 09
- Auto tire inflation: March 09
- Low Carbon Fuel Standard: April 09
- Small business toolkit: April 09
- Local government toolkit: May 09

For Adoption June 25

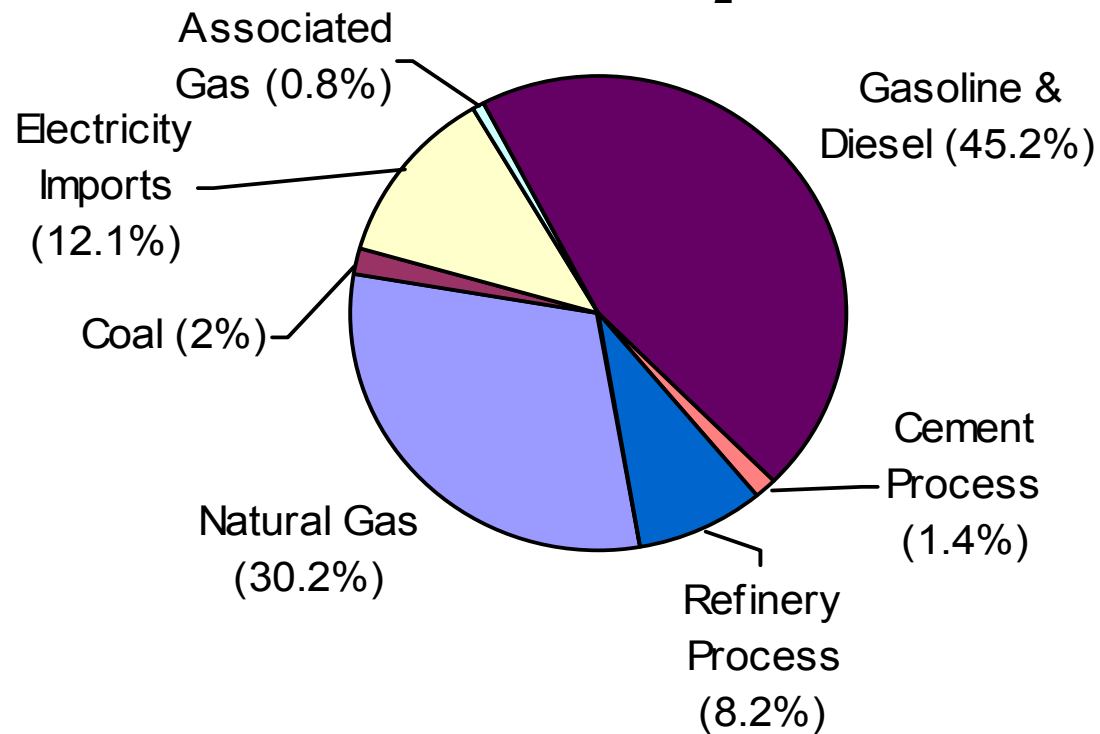
- Landfill methane control
- Cool cars
- Fees and Changes to Reporting Rules

Fee Background

- Authorized by AB 32, HSC section 38597
- Included in Scoping Plan/approved by Board
- Loan repayment required in 07/08 & 08/09 Budgets
- Collected revenues shall be used to administer and implement AB 32
 - ARB and other State agencies
 - Support Scoping Plan
 - Repay start-up loans for ARB and Cal/EPA
 - Funding to be secured beginning with 09/10 Budget

Fees Breakdown by Sector

Greenhouse Gas Emissions by Sector included in the Fee Regulation 412 MMTCO₂E



Affected Entities

- Natural gas: utilities, select users, and pipeline owners and operators
- Transportation fuel producers and importers
- Refineries
- Cement manufacturers
- Importers of out-of-state electricity
- Facilities that combust coal

Sector-Specific Fee Estimates FY 09-10

Preliminary based on \$54M

Emissions Source	Emissions (Million MTCO ₂ E)	Estimated Fee (Million)	Share of Costs by Emissions Source (%)
Refinery Process Emissions	33.9	\$4.3	8.2
Gasoline	143.4	\$19.2	34.8
Diesel	42.8	\$5.6	10.4
Natural Gas	124.5	\$16.1	30.2
Associated Gas	3.2	\$0.4	0.8
Cement	8.4	\$1.1	2.0
Non-Cement Coal Use	5.7	\$0.7	1.4
Electricity Imports	49.6	\$6.6	12.1
Total	411.7	\$54.0	100.0

Note: Emissions data from 2006 ARB Emissions Inventory, all other entries based on ARB calculations.

Costs per Unit Product

Preliminary

2009/2010 Pass Through		
Product	2009/2010 Program Costs	Program Cost + Loan Repayment
Natural Gas (\$/therm)	0.0005	0.0007
Gasoline & Diesel (\$/gallon)	0.001	0.0014
Cement Manufacturers (\$/ton)	0.05	0.07
Imported Electricity (\$/MWh)	0.05	0.07
Coal (\$/short ton)	0.20	0.28
Approximate Cost per Californian	\$1.00	\$1.50

Potential Gasoline Fee

Less than one cent per 10 gallons

Proposed Implementation Schedule

First Two Years of the Fee

Goes to Board for adoption June 25

Year 1

December 2009

Affected Entities report 2008 emissions to ARB using the GHG Reporting Tool

January 2010

Fee Notice Sent to Affected Entities

March 2010

Entities Remit Fee

Year 2

June 2010

Affected Entities report 2009 emissions to ARB

January 2011

Fee Notice Sent to Affected Entities

March 2010

Entities Remit Fee

Mandatory Reporting Who's Affected?

- Stationary combustion sources ($\geq 25,000$ MT CO₂/yr)
- Cogeneration facilities (≥ 1 MW & $\geq 2,500$ MT CO₂)
- Cement plants
- Oil refineries $\geq 25,000$ MT CO₂/yr
- Hydrogen plants $\geq 25,000$ MT CO₂/yr
- Electric generating facilities (≥ 1 MW & $\geq 2,500$ MT CO₂)
- Electric retail providers and marketers



Reporting Facility Examples

- Natural gas transmission
- Industrial gases
- Paperboard manufacture
- Colleges and universities
- Electricity generation
- Oil production
- Food processing
- Steel foundries
- Mineral processes
- Glass containers
- Malt beverages
- Cement manufacturing

About 750 in the state

About 80% have completed 2009 reporting

Mandatory Reporting Requirements

Greenhouse Gas Reporting Tool:

- Web-based reporting required
- Required to use ARB Online Reporting Tool
- Ensures complete reporting of data
- Provides reporting, QA, certification, tracking, and verification access
- Designed to facilitate reporting & ease administrative burden
- All reported information is held in a secure, password-protected database

Exempt from Reporting

- Primary and secondary schools
- Hospitals
- Nuclear, hydroelectric, wind and solar power plant (except hybrids)
- Portable equipment
- Backup or emergency generators (permitted by air districts)

Preparing for 2009 Reports

- Must report 2008 emissions in 2009
- Deadline is June 1, 2009
- Emissions calculations may be based on best available data and methods
 - Regulation methods preferred
- Verification is optional for 2009 emissions reports

Calculations and Penalties

- Calculations of GHGs is based on fuel consumption
- Some fuels must be sampled to verify carbon content
- No penalties at this time if good faith efforts being to determine & report GHGs

Relationship Between AB 32 and Cap-and-Trade Program

- AB 32 requires ARB adopt a statewide limit for 2020 emissions equal to 1990 emission levels
 - Board approved a target of 427 MMT CO₂e in December 2007
- The cap for 2020 in the cap-and-trade program is a subset of the statewide target
 - Scoping Plan estimate for 2020 cap is 365 MMT CO₂e

Capped Sources

- 2012-2014 (Narrow Scope)
 - In-State Electricity Generation Facilities (>25,000 MT CO₂e/year) and Imported Electricity
 - Large Industrial Facilities (>25,000 MT CO₂e/year)
- 2015-2020 (Broad Scope)
 - Adds 'upstream' treatment of fuel combustion where fuel enters into commerce covering
 - Small industrial fuel use (for facilities \leq 25,000 MT CO₂e/year)
 - Residential and commercial fuel use
 - Transportation fuel use

Scoping Plan Commitments

- Cap set in 2012, declining to 2020 target
- Three year compliance periods
- Minimum 10% auction; expect transition to 100% auction
- Offsets use limit: up to 49% of required emissions reductions
- Use complementary measures to reduce market barriers, spur innovation, and distribute costs more equitably
- Remaining reductions (35 mmtCO₂e) achieved through cap-and-trade program

Tracking Progress

- ARB to track Scoping Plan activities with assistance of Climate Action Team
- Insure consistency among State agencies
- Prevent double counting of reductions
- Update Board twice a year

For Additional Information

- ARB Climate Change Web Site: www.arb.ca.gov/cc/cc.htm
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