



**Status of AB 32 Implementation
and
Consideration of Updated
Environmental Analysis of
Scoping Plan Alternatives**

**California Air Resources Board
August 24, 2011**

Presentation Outline

- AB 32 implementation status
- Updated environmental analysis of alternatives to the Scoping Plan
- Staff recommendation



AB 32 Implementation Status

AB 32: California's Leadership

- Pioneer a balanced approach to address climate change
- Improve air quality and public health
- Provide a consistent policy approach to drive investment in clean technology
- Provide a model for future national and international climate change efforts

AB 32 Partners

- Collaborate with State Agency partners on the Climate Action Team
- Consult with advisory committees
 - Market Advisory Committee
 - Economic and Technology Advancement Advisory Committee
 - Environmental Justice Advisory Committee
 - Economic and Allocation Advisory Committee
- Partner with Western Climate Initiative jurisdictions to establish regional greenhouse gas programs
- Monitor international climate change efforts

AB 32 Status

- Adopted Mandatory Reporting Regulation
- Set 2020 emissions goal equal to 1990 emissions
- Adopted and implemented nine Early Action Measures
- Developed Climate Change Scoping Plan with additional recommended measures
- Adopted additional regulations
- Adopted and implemented AB 32 fee regulation

AB 32: Key ARB Measures

- **Low Carbon Fuel Standard**
 - Requires 10% reduction in carbon intensity by 2020
 - Facilities reporting/using lower carbon intensity fuels
 - Present Status and proposed regulatory changes in December 2011
- **SB 375**
 - Board set targets in September 2010
 - Update the Board on statewide activities in September 2011
- **Renewable Portfolio Standard**
 - 33% renewable portfolio by 2020 now law

AB 32: Additional Adopted ARB Measures

- Shore Power
- High GWP Consumer Products
- Heavy-Duty Trucks
- Mobile Air Conditioners (DIY Cans)
- Semiconductor Manufacturing
- SF6 Reductions from Non-Electrical sources
- Tire Pressure Regulation
- Landfill Methane Capture
- Energy Efficiency Audits for Industrial Sources
- SF6 Leak Reduction in Electrical Appliances
- Refrigerant Management Program

AB 32: Other State Agency Measures

- Building and appliance energy efficiency standards
- California Solar Initiative
 - Solar hot water heaters
 - Million Solar Roofs
- Combined heat and power
- High speed rail

AB 32 Scoping Plan

- Provides policy framework and recommendations for greenhouse gas emission reductions
- Updated emissions baseline reflects economic downturn
- Estimates need for fewer emissions reductions



Upcoming AB 32 Measures

Proposed Advanced Clean Car Program

- Program designed to:
 - Accelerate technology
 - Save consumers money
 - Promote use of domestic alternative fuels, and reduce use of fossil fuels
- Coordinated approach to meet smog and climate goals
 - Electric vehicles
 - Fuel cell vehicles
 - Infrastructure development
- Scheduled for December 2011 Board Hearing



Los Angeles Times

Obama unveils landmark fuel-economy targets

OBAMA ADMINISTRATION Fuel Economy Standards

In the year 2025

The fleet-wide average will be

 **54.5**  **MPG**



Consumers will have saved
\$1.7 TRILLION
at the pump over the
life of the program.



A family that purchases a new
vehicle in 2025 will save

\$8,200

in fuel costs when compared with
a similar vehicle in 2010.

Over the life of the program, the standards will:

Save  **12** billion
barrels
of oil.

Eliminate **6** billion
metric
tons 
of carbon dioxide pollution.

This program, together with standards already put into place by this
administration for Model Years 2011-2016, will result in significant
cost savings for consumers at the pump, dramatically reduce oil
consumption, cut pollution and create jobs.



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Cap-and-Trade

- Board considered in December 2010
 - In Resolution 11-27, Board directed staff to evaluate and report back on several issues in Summer 2011
 - Focus today is on responding to Board direction
- Proceeding with regulatory process to preserve option should Board choose proposed Scoping Plan option

Cap-and-Trade

Allocation of Emission Allowances

- Industrial sector: allocation based on efficiency benchmarks
 - 90% of California average for each sector or 'best in class'
- Electricity sector:
 - Sector allocation starts at 90% of recent emissions
 - Allocation within sector based on forecast emission costs
- Allocation reduced in future due to declining cap
 - Emission-intensive trade exposed sectors maintain more allocations in future years

Cap-and-Trade Offsets

- Maximum offset demand for first compliance period is 26 MMT
- New protocols for potential 2012 Board consideration:
 - Replacement of High Bleed Pneumatic Valves
 - Agriculture
- Interested 3rd Party Registries
- Developing implementation documents for offset program and protocol development
- Developing offset tracking system

Cap-and-Trade Biomass

- Specific types of verified biomass exempt from cap-and-trade compliance obligation
- New reporting requirements for source information for woody biomass
- Preliminary analysis indicates adverse impacts from the use of woody biomass unlikely

Cap-and-Trade Partners

- Western Climate Initiative
 - British Columbia, Ontario and Quebec developing regional programs to be compatible and enable linking to California
 - Potential rulemakings for Board consideration in 2012 to enable linkage
- Air Districts
 - District data can help in robust adaptive management plan for potential localized air quality impacts
 - Districts can be offset project developers
 - Regulation modified to clarify district roles and conflicts of interest provisions

Cap-and-Trade Tracking and Monitoring

- Developing emission reporting and compliance instrument tracking systems
- Developing contracts for additional cap-and-trade services
 - Auction and reserve sales operator
 - Financial services
 - Market monitor
 - Market monitoring training

Cap-and-Trade Market Oversight

- Market monitoring and oversight is critical to any successful cap-and-trade program
- Regulation provides level playing field
- Monitor market to detect prohibited activity and fraud
- Strong deterrent and enforcement provisions
- Strict punishment for rule violations

Cap-and-Trade Market Oversight

- Program designed to prevent prohibited activity
- Contract with independent market monitor and convene a Market Surveillance Committee
- Perform market simulations prior to start of program
- Coordinate with state and federal monitoring and enforcement agencies

Cap-and-Trade

Potential Implementation Timeline

- January 2012: Begin cap-and-trade program
- Spring 2012: Test infrastructure systems
Initiate market monitoring
Training for market participants
- Summer 2012: First auction
- Fall 2012: First allocation of allowances
Second auction
- January 2013: Compliance obligation begins

Other Upcoming Measures

- Mandatory commercial recycling (October 2011)
- Amendments to AB 32 fee regulation (October 2011)
- Consider new rule for GHG reductions based on industrial efficiency audit results (2012)
- Sustainable Freight Strategy



Updated Environmental Analysis of Alternatives to the Scoping Plan

Purpose of Alternatives

- Project is the 2008 Proposed Scoping Plan
- Agencies required to consider alternatives to proposed project
 - Describe potential adverse environmental impacts
 - Analyze ability of each alternative to meet objectives
- Compare to proposed project

Purpose of the Updated Analysis

- California state trial court found environmental analysis of alternatives was not sufficient
- ARB disagrees and has appealed the decision
- Appellate Court has stayed the trial court decision
- ARB staff released updated analysis June 13, 2011 for 45-day public comment period
- Responses to comments released August 19, 2011

Content of Updated Analysis

- Expanded analysis of five alternatives to the proposed project
- Analysis provides programmatic level assessment

Key Project Objectives

- Meet 2020 emission level
- Achieve technologically feasible and cost-effective reductions
- Avoid disproportionate impacts
- Minimize leakage

Summary of Alternatives

1. No Project
2. Cap-and-Trade
3. Direct Regulation
4. Carbon Fee or Tax
5. Combination of Cap-and-Trade, Direct Regulation, and Carbon Fee

No-Project Alternative

- Assumes ARB does not adopt additional measures
- Accounts for measures already being implemented or reasonably expected to occur
- Excludes measures not yet adopted
- Shortfall of about 22 MMTCO₂e
- Not legally feasible because would not meet statutory limit

Cap-and-Trade Alternative

- Relies on a cap-and-trade program for achieving the full remaining reductions
- Description of cap and trade program based on October 2010 staff proposal
- Advanced Clean Cars regulation would not be pursued

Cap-and-Trade Alternative Objectives

- High likelihood of meeting 2020 emissions cap
- Without Advanced Clean Cars, would not provide incentives for technological changes in transportation sector
- Remote potential for localized impacts
- Program design minimizes leakage

Cap-and-Trade Alternative Environmental Impacts

- Potential adverse environmental impacts similar to proposed Scoping Plan

Direct Regulation Alternative

- Additional direct emission limits or performance standards
 - Transportation: Advanced Clean Car regulation
 - Electricity: Require replacement of at least 50% of coal-based generation with clean natural gas
 - Large refineries: New individual facility limits to reduce emissions by 20%
 - Cement: New individual facility limits to reduce emissions by 20%
 - Large oil and gas extraction: New individual facility limit to reduce emissions by 20%
- No hard cap on most emissions

Direct Regulation Alternative Objectives

- Reduced potential to meet main objective of attaining 2020 emissions goal
- Less cost-effective
- Substantial risk of leakage
- Uncertain effect on disproportionate impacts

Direct Regulation Alternative Environmental Impacts

- Reduced greenhouse gas benefits because of leakage
- Other potential impacts similar to Proposed Scoping Plan

Carbon Fee or Tax Alternative

- Price on carbon via fee or tax
 - Same sectors and point of regulation as proposed cap and trade program
 - Administrative mechanisms available to minimize leakage
- No firm cap or performance standard

Carbon Fee or Tax Objectives

- Lack of emission cap risks failure to meet main objective of attaining 2020 emissions goal
- Uncertain that approach would be most cost-effective approach
- Uncertain effect on disproportionate impacts
- May result in leakage

Carbon Fee or Tax

Environmental Impacts

- Reduced greenhouse gas benefits due to leakage if administrative mechanisms not included
- Other adverse potential impacts similar to proposed Scoping Plan

Combination of Alternatives

- Combination approach
 - Transportation: Direct regulation (Advanced Clean Car)
 - Industrial Sources and Electricity: Cap-and-trade
 - Transportation Fuel: Carbon fee
 - Commercial and Residential Natural Gas: Carbon fee

Combination of Alternatives Objectives

- Reduced potential to meet main objective of attaining 2020 emissions goal
- Uncertain that approach would be most cost effective
- Fee on transportation fuel and commercial/residential natural gas less susceptible to leakage than industrial fee

Combination of Alternatives Environmental Impacts

- Other adverse potential impacts similar to proposed Scoping Plan

Comparison of Alternatives

- Alternative 1 would not meet objectives of AB 32
- Alternative 2 (Cap-and-Trade)
 - Good potential to meet project objectives
 - Similar adverse environmental impacts as Plan
- Alternatives 3 (Direct Regulation)
 - Lower potential to meet project objectives
 - Similar adverse environmental impacts as Plan
- Alternative 4 (Carbon Fee/Tax)
 - Lower potential to meet project objectives
 - Similar adverse environmental impacts as Plan
- Alternative 5 (Combination of Strategies)
 - Good potential to meet project objectives
 - Similar adverse environmental impacts as Plan

Public Comments

- Received 109 written comments
- Comments at July 8 workshop
- Posted Response to Comment on August 19
- Comments received on:
 - Alternatives to Proposed Scoping Plan (Tax/Fee or Direct Regulation)
 - Cap-and-Trade Design Features
 - Localized impacts
 - Forest / Offsets

Summary

- Proposed Scoping Plan is preferred option
- Quantitative cap provides certainty that 2020 goal will be reached
- Program design most likely to achieve cost-effective emission reductions
- Minimizes leakage

Staff Recommendation

- Set aside approval of 2008 Scoping Plan
- Approve Functional Equivalent Document for the AB 32 Scoping Plan
 - Including Supplemental Alternatives Analysis and written responses to public comments on the FED that raise significant environmental issues
- Approve Proposed AB 32 Scoping Plan