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
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.
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