

# **California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms**

**California Air Resources Board  
October 20, 2011**

# Purpose

- Consider approval of the Response to Comment on the Cap-and-Trade Functional Equivalent Document (FED)
- Consider approval of the Adaptive Management Plan
- Consider adoption of the Final Regulation Order, including four Compliance Offset Protocols

# Presentation Outline

- Background and Rule Development Process
- Cap-and-Trade Regulation
- Functional Equivalent Document (FED)
- Adaptive Management Plan
- Next Steps
- Staff Recommendation

# Cap-and-Trade Rule Development Process

- Three year development and consultation process
  - Thousands of meetings, workshops, and public comments
- December 2010 - Board considered the proposed regulation and directed staff to make changes
- 2011 - Two 15-day packages for public comment
- 2011 - Additional public workshops to discuss modifications

# Why Cap-and-Trade?

- Key element of comprehensive approach to AB 32 implementation
- Program's declining cap on emissions ensures that California meets the AB 32 target
- Creates an economy-wide carbon price that drives investment in clean and efficient technologies

# How Does it Work?

- The “cap” limits GHG emissions, and uses allowances to control total emissions
  - One allowance equals one ton of GHGs
- The cap declines each year
- Covered entities must reduce emissions or compete for allowances

# What Is the Cap?

- The cap is the aggregate limit on GHG emissions from covered sources from 2013-2020
  - The cap applies to all sources combined
  - Individual facilities do not have caps
- Cap covers 85% of California's GHG emissions
  - Large industrial sources
  - Electricity generation and imports
  - Transportation fuels (beginning in 2015)
  - Residential and commercial use of natural gas (beginning in 2015)

# What Do Covered Entities Need to Do?

- Register with ARB
- Report GHG emissions annually
- Acquire compliance instruments (allowance and offsets) equivalent to emissions
- Surrender allowances and offsets to match emissions at the end of each compliance period
- Comply with recordkeeping, market rules, verification, and other requirements in the regulation



# What are the Other Key Program Elements?

- Allowance allocation
  - Some allowances given for free and some are auctioned
- Cost containment and compliance flexibility
- Oversight and enforcement

# Program Start

- Deployment of program infrastructure in 2012
- First compliance period begins in 2013
- Cap stringency unchanged from initial proposal
- Covered entities must report 2011 emissions in 2012 using revised reporting regulation

# Allowance Allocation Overview

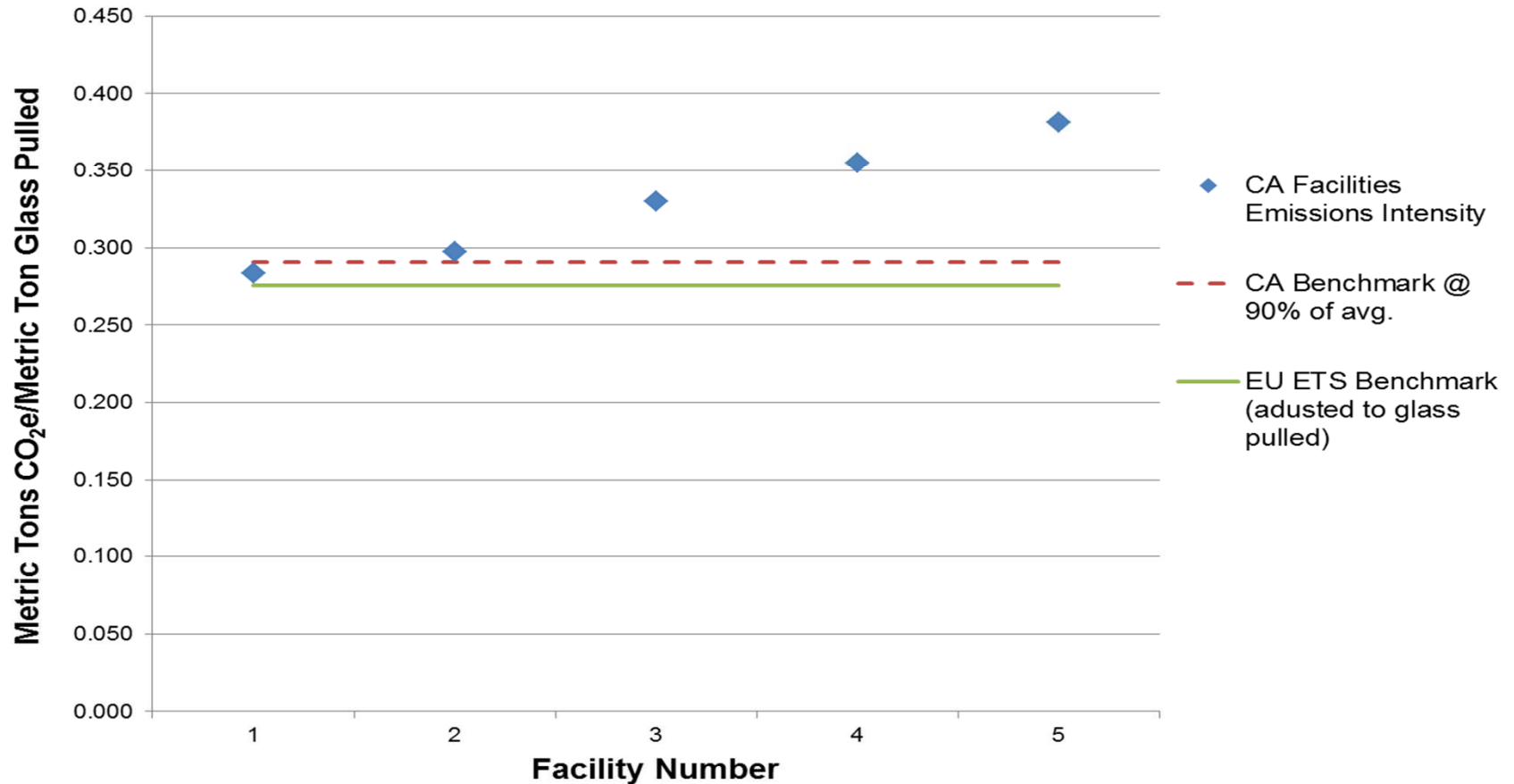
- Principles recommended by the Economic and Allocation Advisory Committee (EAAC)
  - Cost effectiveness
  - Fairness
  - Environmental effectiveness
  - Simplicity
- High initial levels of free allocation to industry
  - Provide transition assistance to ensure a smooth program start
  - Sustain free allocation only if needed to minimize leakage
- Gradual transition to more auction

# Industrial Allocation Benchmarks

- Allocation based on emissions efficiency benchmarks
- Benchmarks set to reward highly-efficient, low-emitting facilities within each sector
- Benchmark: “90 percent of average or best-in-class”
  - 90% of average approach: Described in the ISOR released in October of 2010
  - Best-in-class exception: Added in 2011 for any sector where 90% of average would be more stringent than the best California facility

# Example 90% of Average Benchmark

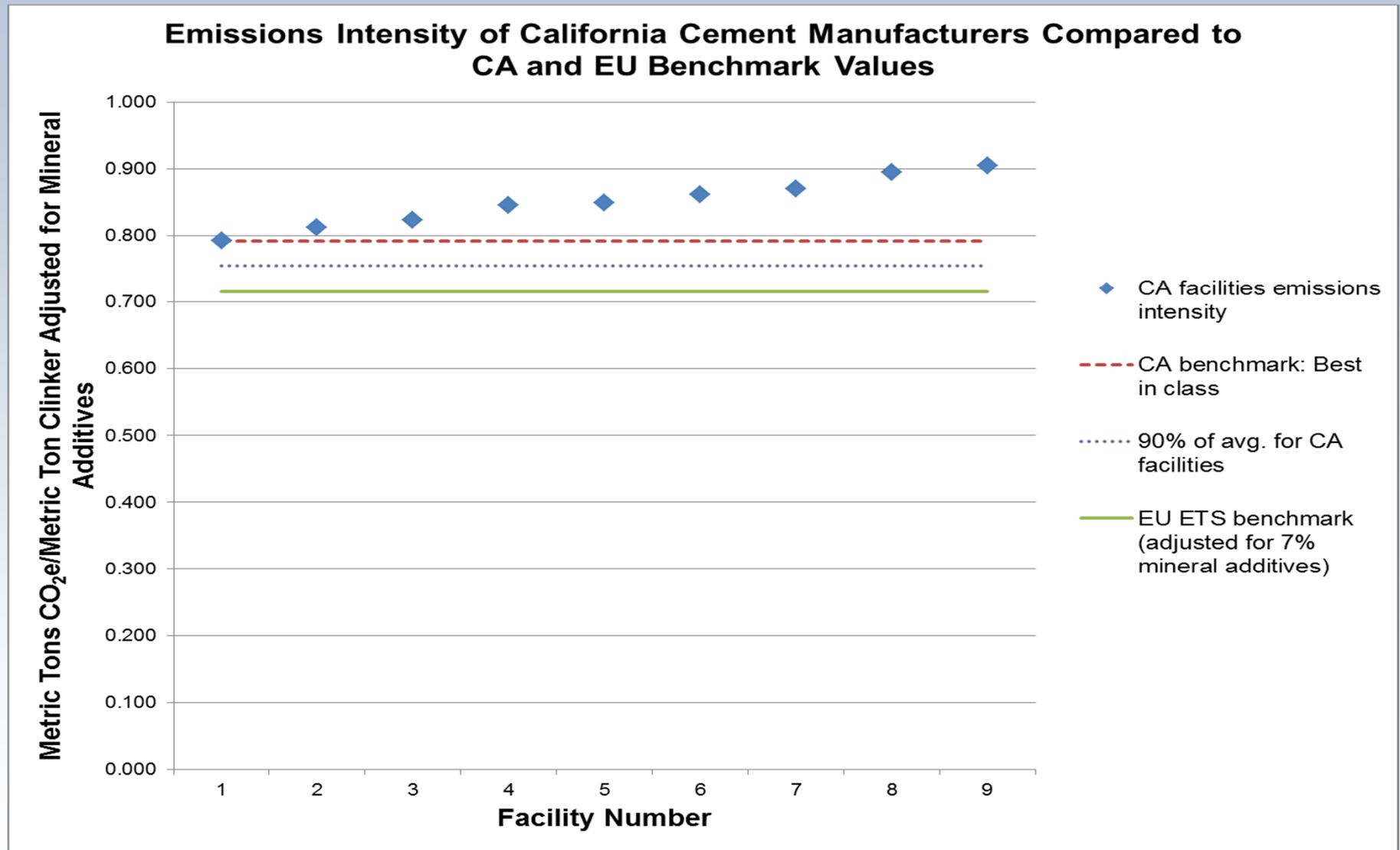
## Emissions Intensity of California Glass Container Manufacturers Compared to CA and EU Benchmark Values



Source:

<http://www.arb.ca.gov/regact/2010/capandtrade10/candtappb.pdf>

# Example Best-in-Class Benchmark



# Electricity Sector Allocation

- Utilities receive allowances on behalf of their customers
  - Initial sector allocation is 90% of historical emissions
- Allocation to each utility:
  - Recognizes rate payers' cost burden, investments in energy efficiency and renewable power
- Utilities use allowance value to meet AB 32 goals

# Electricity Sector Allocation (cont.)

- No direct allocation to electricity generating facilities
- Waste-to-Energy
  - Treated like all other electricity generators
  - Coordinate with CalRecycle on overall climate policy
  - Ensure equitable treatment of waste sector
- Water Agencies
  - Compensation for customer cost provided through electricity distribution utilities



# Compliance Flexibility and Cost-Containment

- Trading of allowances and offsets
- Multi-year compliance periods
- Banking
- Allowance reserve
- Offsets
- Linkage

# Strong Oversight and Enforcement

- Registry and account tracking
  - All participants must register in the cap-and-trade tracking system
  - System provides chain of custody for allowances and offsets
  - Market safeguards
- Independent market monitor
- Enforcement
  - Firm but fair penalties incentivize compliance
  - Ensure environmental integrity

# Functional Equivalent Document for Cap-and-Trade Regulation

# Cap-and-Trade FED

- Staff prepared a programmatic environmental analysis in accordance with ARB's certified regulatory program under the California Environmental Quality Act
- FED was included in the ISOR as Appendix O
- Analyzed proposed regulation and offset protocols
- Scope of analysis
  - Potential adverse environmental impacts
  - Feasible mitigation measures for significant impacts
  - Alternatives

# Cap-and-Trade FED: Public Input

- Scoping Meeting held on August 23, 2010
- FED Released on October 28, 2010, circulated for 45-Day public comment period
- Two 15-Day Change Notices
- Written responses to FED comments released October 10, 2011

## Cap-and-Trade FED: Public Input (cont.)

- Received 19 comment letters related to the FED
  - Alternatives to Cap-and-Trade (Tax/Fee or Direct Regulation)
  - Cap-and-Trade Design Features
  - Localized impacts
  - Forest / Offsets

# Adaptive Management Plan

California Environmental Protection Agency

 **Air Resources Board**

# Adaptive Management Plan Focus Areas

- Localized air quality impacts
- Forest impacts from the proposed Compliance Offset Protocol for U.S Forest Projects



# Adaptive Management Key Elements

- Information Gathering
- Review and Analysis
- Response

# Adaptive Management Next Steps

- |                |  |
|----------------|--|
| Mid 2012:      | Board update on Adaptive Management Plan implementation                      |
| December 2012: | Adaptive Management Implementation Report (prior to first compliance period) |
| December 2013: | Board update on Adaptive Management implementation                           |
| December 2014: | Adaptive Management Report for calendar year 2013                            |
| Ongoing:       | Annual Adaptive Management reports   |

# Next Steps and Staff Recommendation

# Next Steps: Implementation

- Operations
  - Market tracking system
  - Market simulation
  - Implementation documents and training
- Auctions
  - RFP for financial services provider
  - RFP for auction platform
- Oversight
  - RFP for market monitoring
- Additional Analyses
  - Continue leakage and benchmarking work

# Next Steps: Future Rulemaking

- Offset Protocols
- Ongoing Coordination with WCI
  - Continue working with WCI partner jurisdictions
  - Harmonize program elements
  - Establish regional administrative organization
  - Propose regulatory amendments to link programs

# Staff Recommendation

- Approve Response to Comment on Functional Equivalent Document
- Approve Adaptive Management Plan
- Adopt Final Regulation Order, including Four Compliance Offset Protocols