Energy - Docket Optical System

From:	Cliff, Steven@ARB [scliff@arb.ca.gov]
Sent:	Thursday, June 28, 2012 9:54 AM
To:	Energy - Docket Optical System
Cc:	Grant, Sekita@Energy; Corey, Richard@ARB; Chang, Edie@ARB; Jones, Melissa@Energy
Subject:	Docket No. 12-OIR-1
Attachments:	Cap and Trade presentation Oct 20, 2011.pdf; cap_trade_overview.pdf; Cap and Trade presentation Dec 16, 2010.pdf
Categories:	Ready to Docket

RE: Docket No. 12-OIR-1 Rulemaking to Consider Modification of Regulations Establishing a Greenhouse Gases Emission Performance Standard For Baseload Generation of Local Publicly Owned Electric Utilities

Dear Commissioner Weisenmiller:

The California Air Resources Board (ARB) would like to thank you for the opportunity to provide comment on the Rulemaking to Consider Modification of Regulations Establishing a Greenhouse Gases Emission Performance Standard (EPS) For Baseload Generation of Local Publicly Owned Electric Utilities.

ARB believes that the EPS is an important part of California's overall approach to reducing greenhouse gas emissions and provides an important complement to cap-and-trade. However, as discussed below, we believe ARB's ARB enforceable cap-and-trade regulation does not trigger reevaluation of the EPS for possible modification or replacement.

Section 8341(f) of Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006) states:

> The Energy Commission, in a duly noticed public hearing and in consultation with the commission [Public Utilities Commission] and the State Air Resources Board, shall reevaluate and continue, modify, or replace the greenhouse gases emission performance standard when an enforceable greenhouse gases emissions limit is established and in operation, that is applicable to local publicly owned electric utilities.

In its Notice of Rulemaking Workshop, the Energy Commission sought comments on:

> Whether the requirements of Public Utilities Code section 8341, subdivision (f), have been triggered by the State Air Resources Board's (ARB) recent adoption of cap-and-trade regulations [footnote omitted] or whether ARB must first verify the efficacy of and compliance with its cap-and-trade regulations before Section 8341, subdivision (f) is triggered.

ARB believes that the trigger for Section 8341, subdivision (f) depends on whether or not an emissions limit applicable to local publicly owned electric utilities is established and in operation, rather than on ARB's verification of the efficacy of and compliance with the cap-and-trade regulation. By statute, the Energy Commission is to undertake a reevaluation of the EPS when an emissions limit is established that is "applicable to local publicly owned electric utilities." ARB is implementing a cap-and-trade program that creates an enforceable economy-wide cap covering approximately 85 percent of California's greenhouse gas emissions. The cap-and-trade program became effective January 1, 2012. The program does not set any specific emissions limit for any single entity, or for any sector nor does the program require specific reductions in emissions from any entity or sector. Instead, it establishes a program-wide limit on aggregate emissions from those covered by the program. This limit on emissions (the cap) and the ability to trade create a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities, including local publicly owned utilities, the flexibility to seek out and implement the lowest-cost options to reduce emissions.

Because the cap-and-trade program does not create an emissions limit applicable to local publicly owned electric utilities, ARB believes the trigger for the Energy Commission to reevaluate the emission performance standard has not been met as a result of ARBs enforceable cap-and-trade regulation. The following attached public documents demonstrate how the cap-and-trade program is intended to function with an economy-wide cap, rather than limits on specific entities or sectors:

- Staff Presentation, Public Hearing to Consider the Adoption of a Proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols, Dec 16, 2010. See slide 9.
- Staff Presentation, ARB Public Hearing to Consider Adoption of the Proposed California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols, October 20, 2011. – downloaded at: http://www.arb.ca.gov/board/ma/2011/ma102011.htm See slide 7.
- Overview of ARB Emissions Trading Program – downloaded at http://www.arb.ca.gov/newsrel/2011/cap_trade_overview.pdf

Thank you again for the opportunity to provide input on the emission performance standard rulemaking. We look forward to continuing to work with the Energy Commission on the State's efforts to reduce greenhouse gas emissions.

Sincerely,

Steven S. Cliff, Ph.D.
Chief, Climate Change Program Evaluation Branch
Stationary Source Division
California Air Resources Board
(916) 322-7194

Cap-and-Trade Program

December 16, 2010
California Air Resources Board

Presentation Overview

- Introduction
- Proposed cap-and-trade program, including compliance offset protocols
- Proposed amendments to the Mandatory Reporting Regulation
- Next Steps
- Proposed 15-day changes

Objectives of the Cap-and-Trade Program

- Reduce statewide GHG emissions
- Balance environmental stringency and compliance costs
- Establish framework for a low-carbon economy
- Complement other air quality and GHG programs
- Link with Western Climate Initiative (WCI)

What is Cap-and-Trade?

- 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 a decreasing supply of allowances

Public Process for Stakeholder Involvement

- 40 public meetings on program design
- Stakeholder meetings
- Stakeholder comments
- Release of Preliminary Draft Regulation and public workshop in late 2009

Regional Participation

- Founding member of WCI
- Three Regions Process
  - WCI, Regional Greenhouse Gas Initiative (RGGI), and Midwest Greenhouse Gas Reduction Accord

Federal Interaction

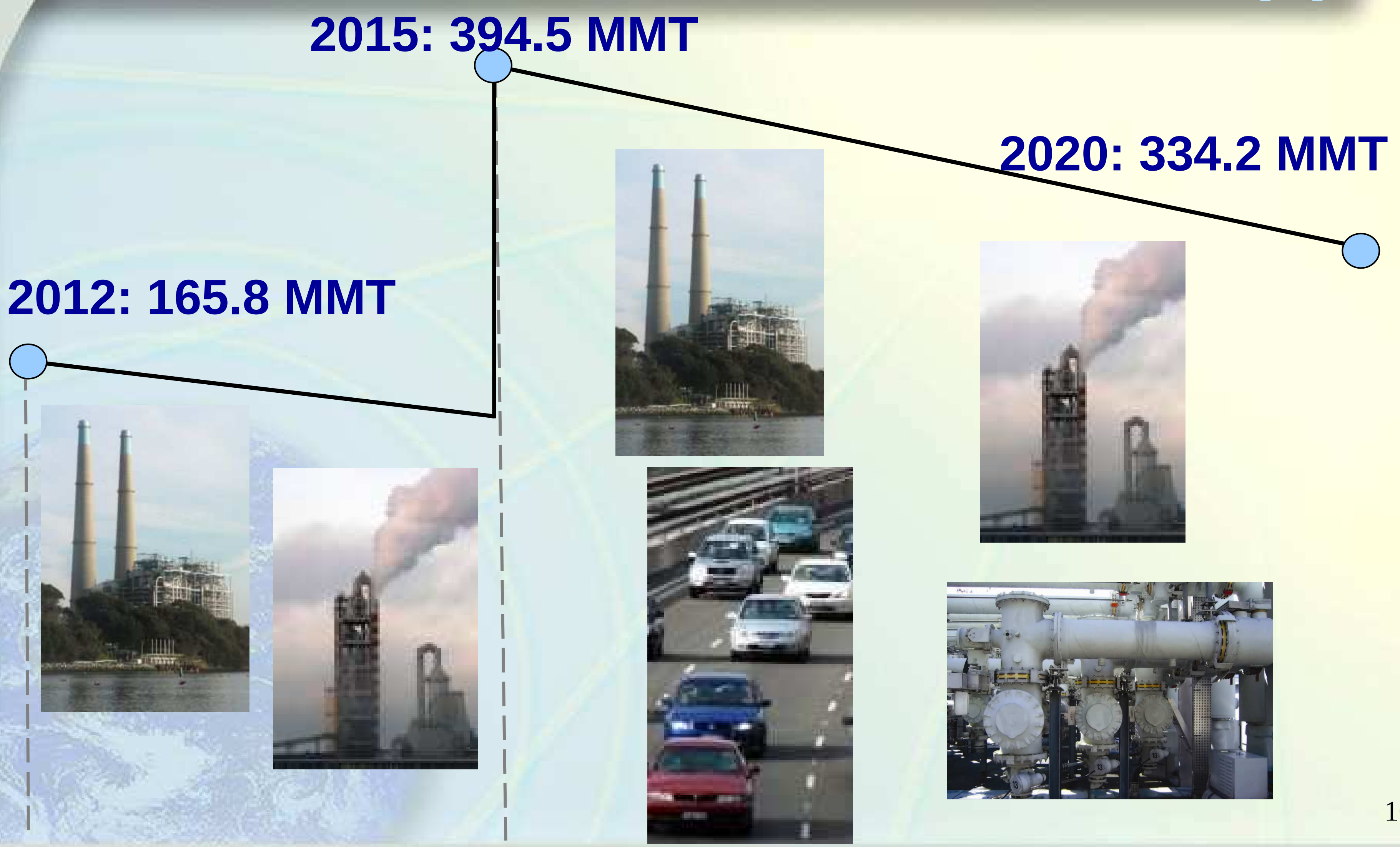
- ARB supports U.S. EPA's GHG permitting guidance
- State-federal collaboration maximizes California's investments in low-carbon technologies, fuels, and energy efficiency
- ARB will partner with U.S. EPA as they develop the federal regulatory framework to grant delegation or equivalency to California's climate program

How Does the Proposed Cap-and-Trade Program Work?

What Is the Cap and Who Is Covered? (1)

- The cap is the aggregate limit on GHG emissions from covered sources from 2012-2020
  - The cap applies to all sources combined
  - Individual facilities do not have caps
- Total number of allowances equals the cap
- The allowance budget starts at expected 2012 emissions for sources covered by the program and declines over time

What Is the Cap and Who Is Covered? (2)



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 record-keeping, market rules, verification and other requirements in the regulation

What’s Tradable in the Program?

- “Compliance Instruments” that can be traded include:
  - Allowances issued by ARB
  - Offsets issued by ARB
  - Allowances and offsets from other programs (e.g. WCI partner programs) if linkage is approved by the Board
  - Other compliance instruments if approved by ARB

Who Can Trade?

- Covered entities
- Other participants, e.g., wholesale marketers or other individuals who register in the tracking system could also buy, sell, or retire allowances and offsets
- Offset project developers

How Are Allowances Distributed?

- Most allowances freely distributed to covered entities at program start
  - Provide smooth transition and minimize leakage
- Small percentage auctioned in 2012
  - Auction floor price of $10 in 2012
- Auction increases in 2015 as fuel suppliers are added and transition assistance declines
- Use of revenue to protect consumers and further goals of AB 32

Industry Allocation

- Allocation strategy allows growth and minimizes leakage
- Individual facilities receive free allowances based on an emissions efficiency benchmark
  - Based on an assumed efficiency equal to 90% of the average emissions intensity for each industry
- Staff working to finalize benchmarks as part of 15-day changes

Electricity Allocation

- Free allowances to utilities for the benefit of their ratepayers and to achieve further GHG reductions
- Recognize early actions already taking place to reduce GHG emissions
- Acknowledge different emissions intensity profiles of California utilities
- Method for allocating allowances to utilities part of 15-day changes

How Does the Program Design Control Costs of Compliance?

- Inherent trading flexibility
- Three-year compliance periods
- Banking
- Allowance reserve
- Offsets
- Linkage

What is the Allowance Reserve?

- Allowances from the cap deposited into an account at the beginning of the program
  - 4.6 percent of total allowances from 2012-2020
- Covered entities may buy reserve allowances at specified prices quarterly
- Balances environmental integrity and risk of high prices

What Are Offsets and How Are They Used? (1)

- An offset is a credit for a verified emission reduction from a source outside the cap-and-trade program
- Offsets reduce emissions in sectors not easily reached through the cap-and-trade program or other regulatory means

What Are Offsets and How Are They Used? (2)

- Reductions must be real, additional, quantifiable, permanent, verifiable and enforceable
- Offsets must result from compliance offset protocols
- A covered entity may cover no more than 8% of its emissions using offsets

When Will There Be Approved Compliance Offset Protocols? (1)

- Four compliance offset protocols are included with the cap-and-trade regulation
  - Livestock Manure (Digester) Projects Protocol
  - Urban Forest Projects Protocol
  - U.S. Ozone Depleting Substances Projects Protocol
  - U.S. Forest Projects Protocol

When Will There Be Approved Compliance Offset Protocols? (2)

- Staff propose additional protocols be evaluated and adopted in 2011
- Kick-off meeting in February 2011 to identify projects types for next round of protocols

Is There a Process for Allowing Existing Offsets in the Program? (1)

- Proposed regulation include a process and criteria for accepting “early action” offsets from qualified existing offset projects
  - Brings in initial supply of offsets
  - Allows existing offset projects to transition to the compliance program
- Includes protocols developed by CAR for four project types

What Is the Role of International Offsets?

- Framework established for accepting sector-based offset credits from developing countries
  - Staff not proposing to approve any sectors or programs at this time
- Staff proposes first sector to be considered is international forestry
  - Reducing Emissions from Deforestation and Forest Degradation (REDD) at the subnational sectoral level
  - MOU between Acre (Brazil), Chiapas (Mexico), and California to develop recommendations for REDD specific requirements

How Does California Link with Other Programs?

- Regulatory action that requires Board approval
- Allowances and offsets from linked programs could be used for compliance in California
- Staff will evaluate linkage with Western Climate Initiative (WCI) partners
  - Some partners are on track to implement their programs by 2012
  - Rulemaking for potential WCI linkage in 2011

How Does Program Design Ensure Market Integrity?

- All traders must register in the cap-and-trade tracking system
- The tracking system provides a chain of custody for allowances and offsets that can be used in the program
- Balance need for transparency and safeguards to prevent market manipulation
- Purchase and holding limits

How Will ARB Ensure Compliance and Enforce the Regulation?

- Registration, reporting and third-party verification requirements
- Program designed to encourage compliance
- Covered entities must surrender compliance instruments for a portion of their emissions each year starting in 2013

What Analyses Did ARB Perform for the Cap-and-Trade Program?

- Environmental analysis (CEQA)
  - Functional Equivalent Document
- Economic analysis
  - Assesses effects of program on California economy
  - Compliance pathway analysis assesses emission reduction opportunities
  - Leakage assessment
- Co-pollutant emissions assessment
  - Evaluates potential for localized and cumulative emission impacts

Program Monitoring

- Monitor whether the program is meeting all the objectives of AB 32
- Staff will monitor program to ensure that it is not resulting in unanticipated outcomes
- Report to the Board on program status and implementation at least annually
- Conduct rulemaking prior to each compliance period if adjustments are needed

Amendments to the Mandatory Reporting Regulation

- Proposed changes to support the cap-and-trade program
  - Expands reporting to include fuel suppliers
  - 10,000 MT CO_2e threshold to monitor emissions leakage below the cap
  - Abbreviated reporting for emissions <25k
- Aligns most reporting requirements with U.S. EPA regulation
  - Higher-tier methods to ensure accuracy
- Maintain 3rd-party verification

Next Steps

- 15-day changes
- Conduct additional public meetings
- Market tracking system development
- Evaluate additional offset protocols for adoption
- Propose linkages to WCI partners
- Develop market monitoring system

Proposed 15-Day Changes: Cap-and-Trade

- Clarify language in regulation
- Allocation method to individual utilities
- Benchmarks
- Voluntary renewable energy set-aside
- Consistency between compliance offset protocols and regulatory requirements for offsets

Proposed 15-Day Changes: Mandatory Reporting

- Clarify air districts as verification bodies
- No inclusion of methane fugitives from farms, livestock, or landfills
- Clarify 10K to 25K abbreviated reporting: fuel use for combustion, no process emissions
- Align with more recent EPA Rule changes, including oil and gas
- Other changes as needed

Staff Summary and Recommendation

- Approve resolution on cap-and-trade program, including four compliance offset protocols, with proposed 15-day changes
- Approve resolution on amendments to Mandatory Reporting Regulation, with proposed 15-day changes
- Direct staff to take all steps needed to finalize regulations

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

California Air Resources Board
October 20, 2011

California Environmental Protection Agency
Air Resources Board

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

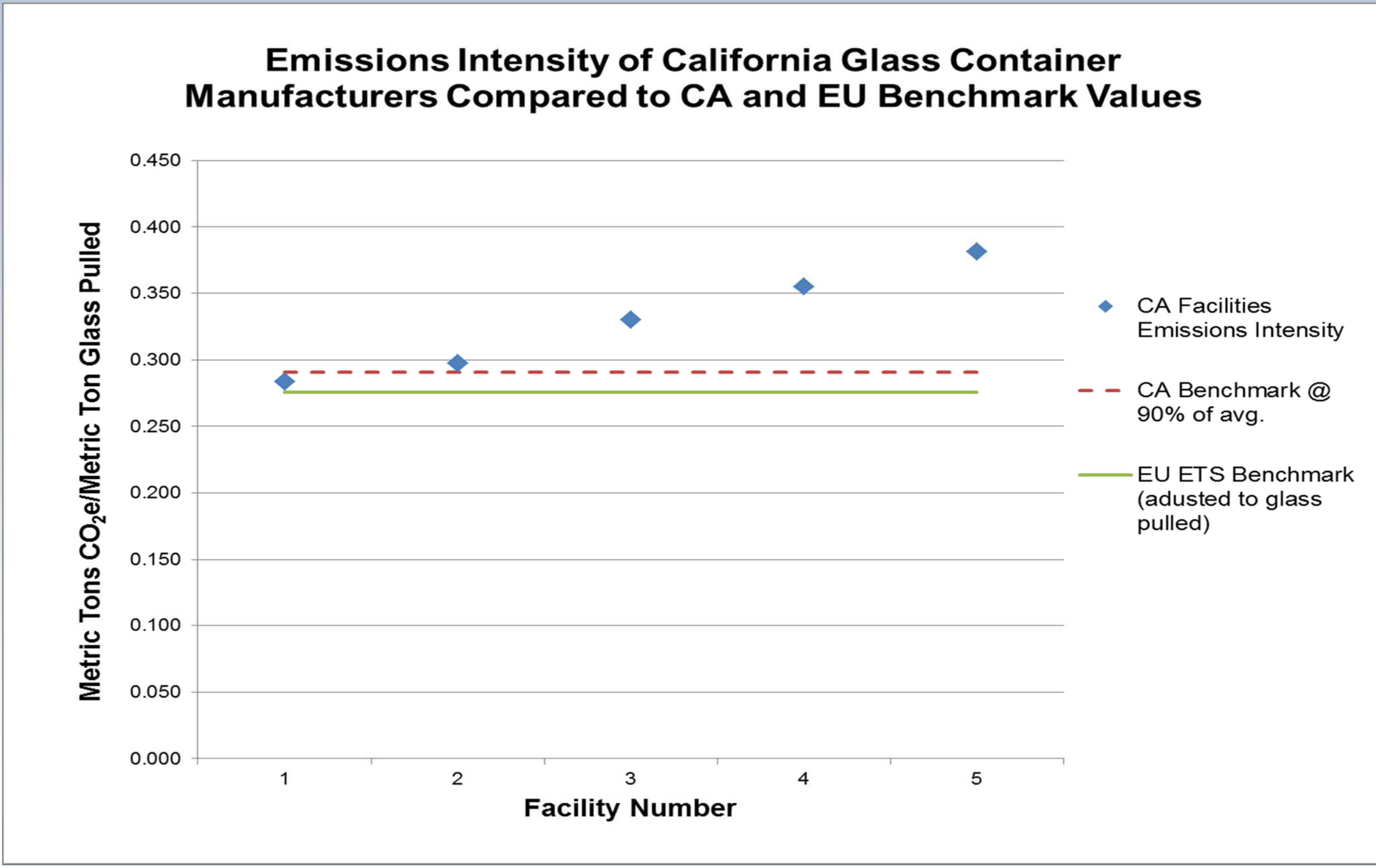
Allowance Allocation Overview

- 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

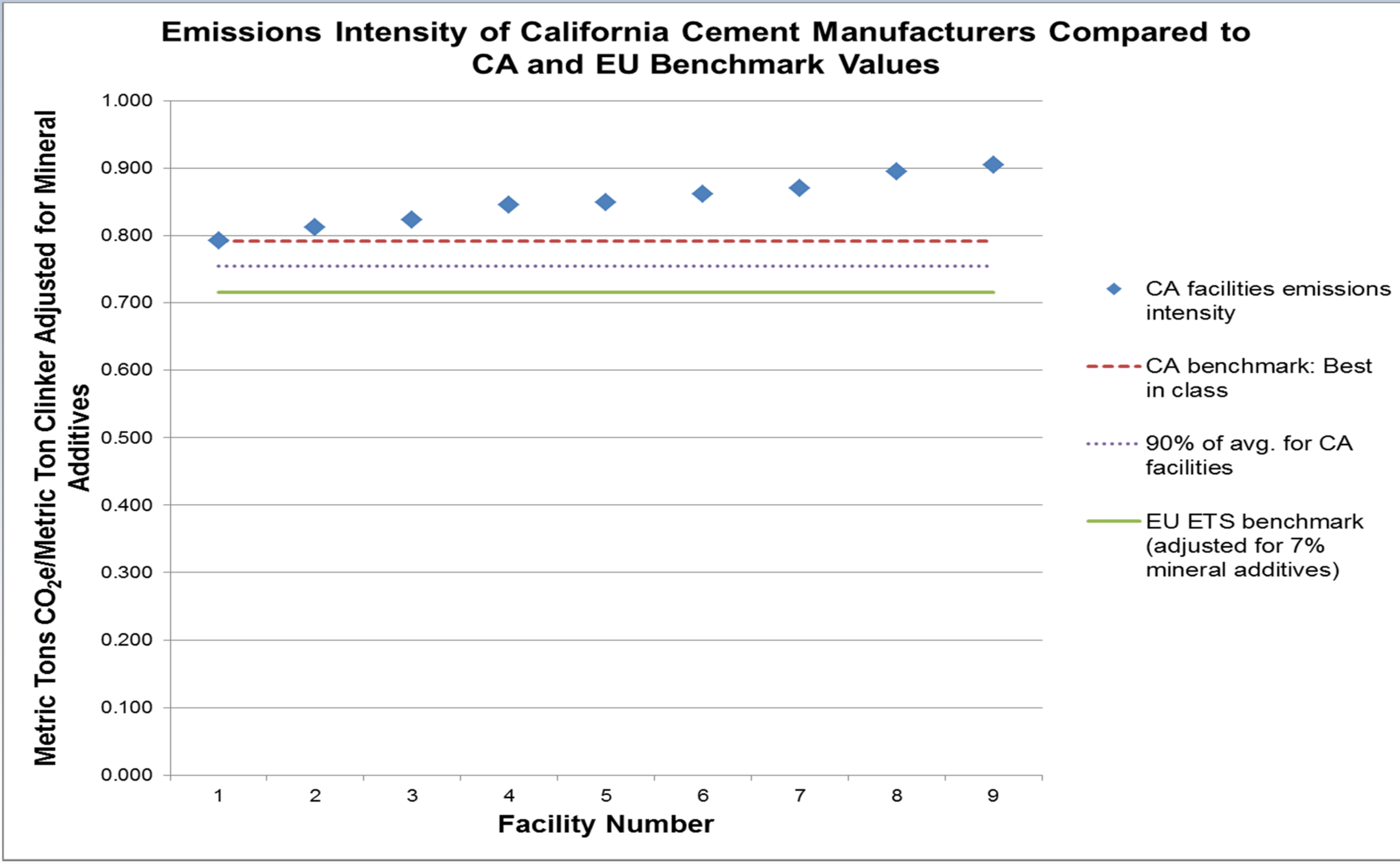
Example 90% of Average Benchmark



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

California Environmental Protection Agency
Air Resources Board

Example Best-in-Class Benchmark



Updated from:
http://www.arb.ca.gov/regact/2010/capandtrade10/candtappb.pdf

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

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

OVERVIEW OF

ARB Emissions Trading Program

AB 32 requires California to return to 1990 levels of greenhouse gas emissions by 2020. All programs developed under AB 32 contribute to the reductions needed to achieve this goal, and will deliver an overall 15% reduction in greenhouse gas emissions compared to the 'business-as-usual' scenario in 2020 if we did nothing at all.

The cap and trade program is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest-cost options to reduce emissions.

Scope

- Program covers about 350 businesses, representing 600 facilities
- Starts in 2013 for electric utilities and large industrial facilities
- Starts in 2015 for distributors of transportation, natural gas and other fuels
- Designed to link with similar trading programs in other states and regions

The cap

- Set in 2013 at about 2 percent below the emissions level forecast for 2012
- Declines about 2 percent in 2014
- Declines about 3 percent annually from 2015 to 2020

Allowances

- Large industrial facilities
- Start with free allocation but must buy auctioned allowances later in program
- Allowances for each industrial sector to be set at about 90 percent of average emissions, based on a benchmark that rewards efficient facilities
- Distribution of allowances to be updated annually for industries according to the production and efficiency of each facility
- Electric utilities
- Free distribution, with value of allowances to benefit ratepayers
- Allowances to be set at about 90 percent of average emissions computed from recent data

Cost containment and market flexibility mechanisms

- Trading allowances allowed, to minimize cost of pollution controls
- Banking of allowances, to guard against shortages and price swings
- 4 percent of allowances will be held in a strategic reserve, to contain costs
- Three-year compliance periods, to buffer annual variations in product output

Offsets

- Allowed for up to 8 percent of a facility's compliance obligation
- Limited to emission-reduction projects in U.S.
- Initially restricted to projects in four areas: forestry, urban forestry, dairy digesters, and destruction of ozone-depleting substances
- Offsets must be independently verified
- Provisions to credit offsets registered with entities outside ARB
- Framework for future inclusion of international offset programs

Emissions reporting and verification

- Capped industries must continue to report emissions annually (as required since 2008)
- These industries must register with ARB to participate in emissions trading market
- Independent third-party verification of reported emissions

Compliance and enforcement

- Every year, capped industries provide allowances and offsets for 30 percent of previous year's emissions
- Every three years, these industries provide allowances and offsets covering the remainder of emissions in that three-year compliance period
- If deadline is missed or there is a shortfall, four allowances must be provided for every ton of emissions that was not covered in time
- The program includes mechanisms to prevent market manipulation

Next Steps:

- January 1, 2012: Cap-and-trade regulation becomes effective.
- August and November, 2012: first auctions will be held.
- January 1, 2013: Compliance obligation for greenhouse gas emissions begins.

For More Information

Contact Steve Cliff at (916)322-7194 or at scliff@arb.ca.gov

To obtain this document in an alternative format or language please contact the ARB's Helpline at (800) 242-4450 or at *helpline@arb.ca.gov*. TTY/TDD/ Speech to Speech users may dial 711 for the California Relay Service.

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