

Proposed AB 32 Cost of Implementation Fee Regulation

**Public Workshop
California Air Resources Board
Office of Climate Change
April 20, 2009
Sacramento**

Workshop Documents

- Slide Presentation
- Proposed AB 32 Cost of Implementation Fee Regulation and Proposed Amendment to the Mandatory Reporting of Greenhouse Gas Emissions Regulation
- Fee Expenditure Background Document

Introduction

Workshop Objectives

- Provide updated timeline
- Discuss changes to the proposed Fee Regulation
- Discuss amendment to the Mandatory Reporting Regulation
- Provide information on Fee expenditure

Updated Timeline

April 24, 2009	3 rd Workshop Comment Period Ends
May 8, 2009	Initial Statement of Reasons Published
June 25/26, 2009	ARB Board Hearing
Summer/Fall 2009	Final regulatory package submitted to the Office of Administrative Law (OAL)
December 2009	Affected Entities report 2008 emissions to ARB
January 2010	Fee Determination Notice sent to Affected Entities
March 2010	Affected Entities remit fee to ARB

Overview of the Fee Regulation

Fee Background

- Authorized by AB 32, HSC section 38597
- Included in Scoping Plan/approved by Board
- Loan repayment required in 07/08 and 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

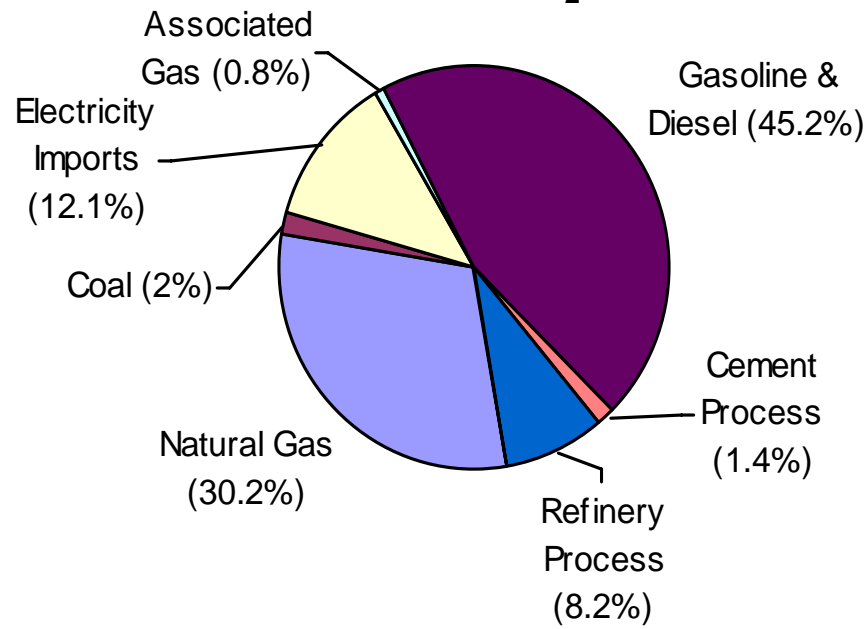
Fee Approach

- Broad-based, economy-wide
- “Upstream” entities
- Minimize administration costs
 - ARB
 - Affected Entities
- Consistent with existing programs
- Use of existing data

Applicability

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
- Producers and importers of transportation fuels
- Refineries
- Cement manufacturers
- Importers of out-of-state electricity
- Facilities that combust coal

Affected Entities

Natural Gas

- Public Utility Gas Corporations
- Interstate pipelines that deliver natural gas directly to end users
- Intrastate pipelines that deliver natural gas directly to end users
- Natural gas producers subject to ARB's mandatory reporting regulation consuming gas produced on-site
- Oil production operations subject to ARB's mandatory reporting regulation that consume "associated gas" produced on-site

Affected Entities

Producers and Importers of California transportation fuels

- California gasoline
- CARBOB
- California diesel

Affected Entities

Refineries

- Refineries that produce, consume
Catalyst coke
Petroleum coke
Refinery gas
or utilize
Steam methane reforming processes

Affected Entities

Cement Manufacturers

- Direct, non-combustion related, CO₂ emissions from clinker manufacturing

Affected Entities

Imported Electricity

- Retail providers & marketers
- Fee assessed at the first point of delivery in California

For Fee Regulation only

Affected Entities

Coal Combustion

Entities using coal as a fuel and subject to ARB's Mandatory Reporting Regulation

- Cement manufacturers
- Cogeneration facilities
- Others

Other Emissions

- Emissions not covered by Fee Regulation (15%)
- High Global Warming Potential Gases (3%)
 - Separate regulation being pursued
- Other GHG sources (12%)
 - Non-CO₂ Agricultural processes
 - Forest sector
 - Other fuels
 - e.g. Aviation gasoline, jet fuel, kerosene and biodiesel

Entity-Specific Reporting Requirements

Reporting Requirements

Natural Gas

- Public utility gas corporations
 - Therms of NG delivered to end users at the meter
- Interstate and intrastate pipelines
 - Therms of NG gas delivered directly to end users at the meter
- Natural Gas producers consuming gas produced on-site and subject to ARB's mandatory reporting regulation
 - Therms of NG produced on-site that are consumed on-site
- Producers that consume "associated gas" and are subject to ARB's mandatory reporting regulation
 - Emissions resulting from combustion of associated gas

Reporting Requirements

Producers and Importers of Transportation Fuel

- Gallons of California gasoline, CARBOB, and Ca diesel supplied for use in California

Refineries

- GHG emissions that result from the refining process
 - Direct process emissions from the steam methane reforming process
- Combustion emissions from refining process by-products from:
 - Catalyst and petroleum coke
 - Refinery gas

Reporting Requirements

Cement Manufacturing

- Direct CO₂ emissions from clinker manufacturing

Imported Electricity

- Based on MWh from each affected entity, reported per Mandatory Reporting regulation

Coal

- Tons of coal and the associated grade of coal combusted

Reporting Requirements

Additional Requirement

- Required use of ARB's Online Greenhouse Gas Reporting Tool
- Tool will be modified to facilitate use with the Fee Regulation

Fee Calculations

Fee Calculation

Common Carbon Cost (CCC)

- Annual cost of the program (current fiscal year)
 - Total Revenue Requirement
- Annual emissions (previous calendar year)
 - Quantities of reported fuels, imported electricity, and emissions
 - Source-specific emissions factors

Fee Calculation

$$CCC = \frac{TRR}{(Q_{ng} \times EF_{ng}) + (Q_g \times EF_g) + (Q_d \times EF_d) + (Q_c \times EF_c) + (Q_{ie} \times EF_{ie}) + TE_i}$$

TRR = Total Required Revenue

$(Q_i \times EF_i)$ = Quantity of fuel/electricity multiplied by the emission factor for fuel/electricity

TE_i = Total state process emissions inventory for cement manufacturers and refineries, and emissions from the combustion of associated gas

Total Required Revenue

Total Required Revenue (TRR) is the sum of

1) Required Revenue (RR)

- AB 32 expenditures budgeted for a fiscal year for all state agencies based on the approved state budget
and
- Debt repayment
 - Fiscal years
 - » 09/10, 10/11, 11/12 and 12/13

And

2) Annual adjustments for excess or under collection

Specific Fee Calculations

Fee Rate

- Fuel/Electricity/Coal
Fee Rate = $CCC \times EF_i$
- Process Emissions
CCC serves as the Fee Rate

Fee

- Fuel/Electricity/Coal
Fee = Fee Rate x Quantity of fuel/electricity/coal supplied, consumed or produced
- Process Emissions
Fee = $CCC \times$ Quantity of Emissions

Specific Fee Rate Calculations

- **Natural Gas**

Fee Rate = CCC x EF for natural gas

- **California Gasoline and Finished CARBOB**

Fee Rate = CCC x EF for gasoline

- **California Diesel fuel**

Fee Rate = CCC x EF for diesel

- **Cement and Refinery Process Emissions, Associated Gas**

Fee Rate = CCC

- **Coal**

Fee Rate = CCC x EF for coal*

*each grade of coal has its own emission factor

Specific Fee Calculations

- **Associated Gas**

Fee = CCC x Emissions associated with gas consumed on-site or supplied

- **Imported Electricity**

Fee = Fee Rate x Quantity of Electricity Imported by each entity

- Fee Rate = CCC x Emission Factor (MWh) for each source

Emission factors (MTCO₂E/MWh) for:

- Generating facilities
- Asset-owning & asset-controlling suppliers
- Unspecified sources

Specific Fee Calculations

Imported Electricity continued . . .

- Emission Factors for Specified Sources
 - Generating facilities
 - Fuel use, emissions data reported to ARB or taken from EIA and EPA data
 - ARB calculates specific emission factor and fee rate for imports from generating facility
 - Asset-owning or -controlling suppliers
 - Must be issued a supplier-specific ID and submit data per Mandatory Reporting
 - Emission factor is weighted average of EFs for generating facilities and purchased power (including unspecified power with default EF)

Specific Fee Calculations

Imported Electricity continued . . .

- Emission Factors
 - Unspecified sources
 - Default emission factor of 0.499 MTCO₂E or 1,100 lbs / MWh
 - Based on CPUC and CEC recommendation for the Mandatory Reporting Regulation
 - Not a precedent for treatment of unspecified imports in any other regulation
 - Will be revisited pending development of Cap-and-Trade regulation

Proposed Implementation Schedule

First Two Years of the Fee

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 Regulation

Mandatory Reporting Requirement

- **Mandatory Reporting Regulation Amendments:**
 - Entities subject to the Mandatory Reporting Regulation required to use ARB's Online GHG Reporting Tool
 - New Section added--95104(e)
 - Reporting tool use no longer voluntary

Mandatory Reporting Requirement

Greenhouse Gas Reporting Tool

- Web-based platform for reporting information required by ARB's Mandatory Reporting Regulation
 - Ensures complete reporting to ARB
 - 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

Mandatory Reporting Requirement

Greenhouse Gas Reporting Tool

- User friendly
 - Comprehensive user guide, sector-specific reporting guidance, and training videos available
 - Training Site provides practice with Tool's structure and function
- Data fields to be added for entities subject to the Fee regulation

<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-tool.htm>

Preliminary Costs and Fee Estimates

Eligible Costs

Limited to state agencies' activities and programs costs directly related to AB 32 Implementation

- Formally approved staff positions
- Other costs directly related to administering AB 32

Eligibility for funding

- FY 2007/2008 – ARB and Cal/EPA
- FY 2008/2009 – ARB and Cal/EPA
- FY 2009/2010 – Approved State Agencies

Non-Eligible Costs

- AB 32 compliance costs
- Non-state agency costs
- GHG reductions achieved as co-benefit to principal agency activities
- Pre-existing GHG reduction programs
- Activities related to adaptation or CEQA analysis for projects

Approval Process

Example: Fiscal Year 2012/2013

- | | |
|-------------|---|
| Sept. 2011 | State agencies submit BCPs to DOF |
| Fall 2011 | DOF approves or denies BCPs based on criteria |
| Jan. 2012 | Approved AB 32 BCPs included in Governor's Proposed Budget
→ CalEPA issues " <i>Preliminary AB 32 Crosscut Budget Summary</i> " |
| Summer 2012 | New Budget Approved
→ CalEPA issues " <i>Approved AB 32 Crosscut Budget Summary,</i> "
→ RR 2012/2013 based on Budget Summary |

State Agency Costs for FY 09-10

Preliminary

Agency	Positions	Funding (\$millions)
Calif. Environmental Protection Agency	6.0	1.8
Calif. Air Resources Board	155.0	33.1
Integrated Waste Management Board	7.0	1.6
Calif. Energy Commission	4.75	0.6
Department of Food and Agriculture	1.9	0.5
Department of General Services	2.0	1.4
TOTAL	176.65	39

Year 1-3 Costs Preliminary

AB 32 Implementation Costs 2007/2008 – 2009/2010

Fiscal Year	Program Cost (\$ millions)
2007/2008	24
2008/2009	32
2009/2010	39
Total	95

Breakdown of Start-up Costs

2007/2008 Fiscal Year

\$8.5 Million Air Pollution Control Fund

\$15.7 Million Loan from Motor Vehicle Account (ARB)

\$300,000 Loan from Motor Vehicle Account (Cal/EPA)

2008/2009 Fiscal Year

\$32 Million Loan from Beverage Container Recovery Fund
(ARB and Cal/EPA)

2009/2010 Fiscal Year

\$35 Million Budgeted Loan from Beverage Container
Recovery Fund-Do not anticipate using

Loan Repayment Schedule

Payment Due	Estimated amount due including interest (millions)
June 30, 2010	\$ 14.8 (MVA only)
June 30, 2011	\$ 15.1 (MVA and BCRF)
June 30, 2012	\$ 14.8 (MVA and BCRF)
June 30, 2013	\$ 13.7 (BCRF only)

Total Revenue Required FY 09-10

Preliminary

- Total Revenue Required - \$54 million
 - Program Costs - \$39 million
 - Debt Repayment - \$15 million

Sector-Specific Fee Estimates FY 09-10

Preliminary based on TRR=\$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

Preliminary Costs and Fee Estimates

ARB Process for Determining Expenses

- **Approved BCPs**
 - Salaries and staff benefits
 - Operating expenses and equipment
 - Other costs
 - Contracts

Questions or Comments?

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Thank you for your Feedback!