

# Public Workshop to Discuss the Proposed Regulation for Energy Efficiency and Co-Benefits Assessment for Large Industrial Facilities

April 19, 2010

Cal-EPA Headquarters Bldg.  
1001 I Street  
Sacramento, CA

California Environmental Protection Agency

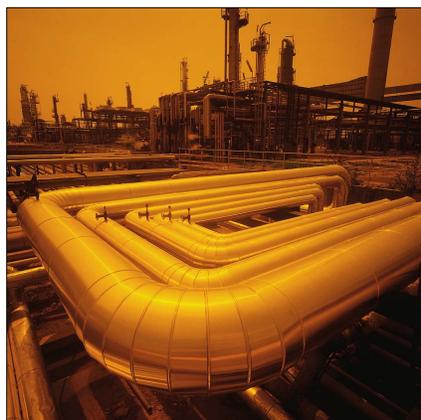


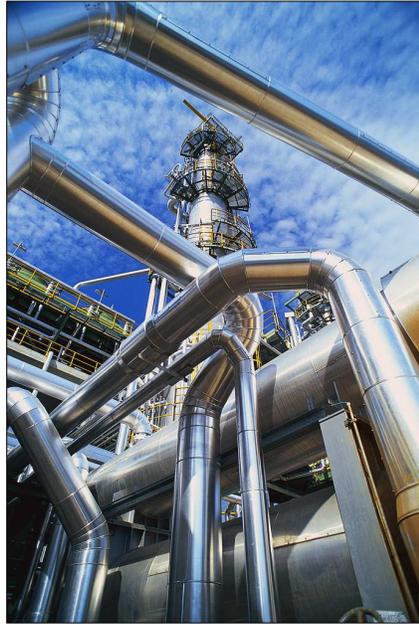
Air Resources Board



## Overview

- ◆ Background
- ◆ Revised Draft Regulation
- ◆ Next Steps
- ◆ Contacts





## Background

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*Background*

## California Global Warming Solutions Act of 2006 (AB 32)

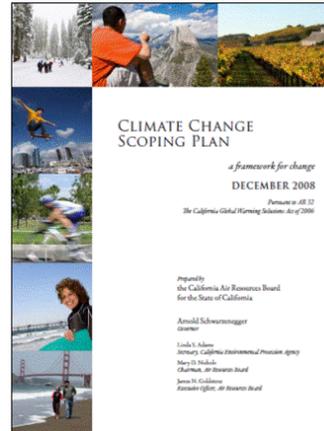
- ◆ Set the 2020 greenhouse gas (GHG) emissions reduction goals into law
- ◆ Directed the ARB to begin developing discrete early actions to reduce greenhouse gases
- ◆ Directed the ARB to prepare a Scoping Plan to identify how best to reach the 2020 limit



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## AB 32 Scoping Plan Recommended Action

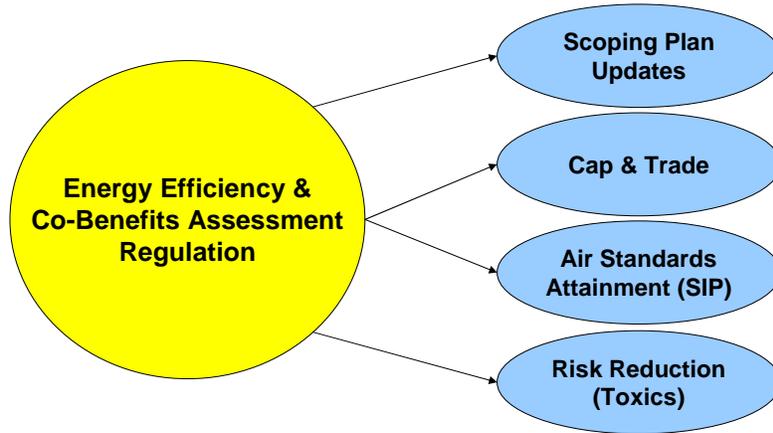
- ◆ Energy Efficiency and Co-Benefits Audit (Assessment)
  - who - large industrial sources, including power plants (emissions  $\geq 0.5$  MMTCO<sub>2</sub>E)
  - what - identify greenhouse gas emission reduction opportunities
  - other considerations - identify criteria and toxic air pollutant emission reduction co-benefits



## Purpose of the Proposed Regulation

- ◆ Identify specific actions that could be taken to reduce GHG emissions
- ◆ For each specific action:
  - develop preliminary information on cost, cost effectiveness, timing, etc.
  - identify potential criteria and toxic air pollutant co-benefits
- ◆ Use this information in designing approaches to maximize GHG and co-pollutant reductions

## Information Gathered Will Inform Air Quality and Climate Change Programs



## About 60 facilities Subject to Regulation

Emissions  $\geq 0.5$  MMTCO<sub>2</sub>E

Source Category	Number of facilities	Total 2008 Carbon Dioxide Equivalent Emissions (MMT)
Refineries*	18	34.5
Power Plants**	13	11.5
Cement Plants*	10	8.7
Oil & Gas Extraction	6	5.8
Cogeneration Facilities	5	4.9
Hydrogen Plants	3	1.9
Mineral Plants	1	1.7
Totals	56	69

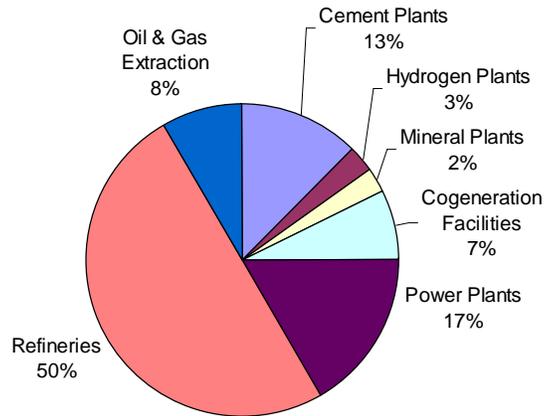
\* Also includes transportation fuel refineries and cement plants  $\geq 0.25$  MMTCO<sub>2</sub>E

\*\* About 15 combined cycle power plants would be exempt under the current proposal

Based on 2008 GHG reporting data; data for individual facilities may be accessed at: [http://www.arb.ca.gov/cc/reporting/ghg-rep/facility\\_summary.xls](http://www.arb.ca.gov/cc/reporting/ghg-rep/facility_summary.xls)

# Distribution of Direct Emissions from these Facilities

Background

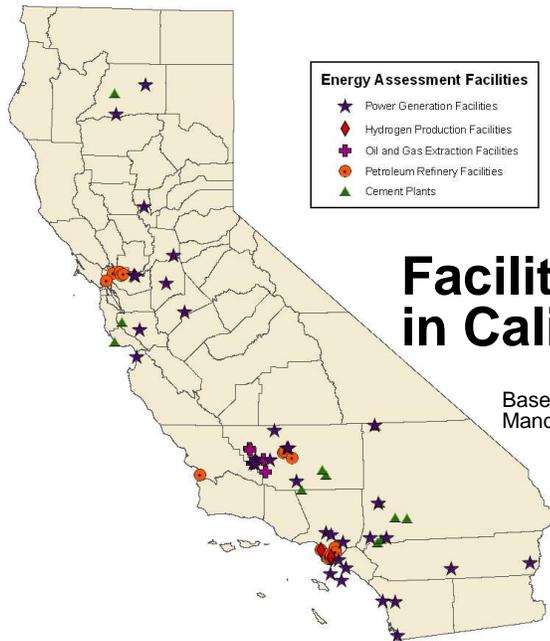


Annual GHG Emissions of Largest Industrial Sources (2008 reporting data)

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# Facility Locations in California

Background



Based on 2008 Calendar Year Mandatory GHG Reporting Data

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## Revised Draft Regulation



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*Draft Regulation*

## Three Main Elements to the Regulation Requirements

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1. Analysis of facility energy consumption and emission sources
2. Energy efficiency improvement analysis
3. Report



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## Proposed Revisions to Draft Regulation

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- ◆ Title Change
- ◆ Applicability & Exemptions  
(Sections 95135 and 95136)
- ◆ Definitions (Section 95137)
- ◆ Requirements (Section 95138)
- ◆ Compliance Extension (Section 95141)
- ◆ Report Review & Public Disclosure  
(Section 95142)

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## Applicability

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- ◆ Facilities in California emitting  $\geq 0.5$  MMTCO<sub>2</sub>E annually, based on 2009 calendar year reporting
- ◆ Also include
  - all refineries that produce transportation fuels released into commerce
  - all cement plants
- ◆ Exemptions
  - combined cycle electricity generating facilities built after 1995
  - petroleum refineries that do not produce transportation fuels
  - mobile sources or portable equipment

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## Applicability – Proposed Changes

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- ◆ Key changes:
  - clarified that transportation fuel refineries and cement plants with  $\geq 0.25$  MMTCO<sub>2</sub>E emissions in 2009 would be included
  - added the exemptions section (Section 95136)

## Definitions – Proposed Changes

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- ◆ Key changes:
  - removed unnecessary definitions
  - clarifications
    - energy efficiency
    - electricity generating facilities vs. power plants
  - added several new definitions
    - budgetary cost estimate
    - mobile combustion source
    - project life

## Facility Energy Consumption and Emissions Analysis Requirement

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- ◆ Provision included to collect information on the facility processes, energy and fuel consumption, and emissions
- ◆ Requires facility operator to provide:
  - process flow diagram; name and description of processes; equipment types used
  - types of energy used for each process
  - fuel and electricity consumption
  - emissions inventory data for GHG, criteria pollutant and toxic pollutants

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## Facility Energy Consumption and Emissions Analysis Requirement – Proposed Changes

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- ◆ Key changes:
  - require facility data vs. process-specific data to be more consistent with mandatory GHG reporting and district emissions reporting
  - fuel and emissions data to be provided for 2009 calendar year (or most recent district reporting year for criteria pollutants and toxic air contaminants)
  - removed requirement to attach copy of GHG report
  - moved facility contact info from reporting section

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## Energy Efficiency Improvement Analysis Requirement

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- ◆ Provision included to collect information on specific actions that could be taken to reduce GHG emissions
- ◆ Requires facility operator to provide information on full range of projects:
  - low-cost projects to those requiring large capital expenditures
  - implemented quickly to mid- and long-term projects
  - preliminary information on project cost, feasibility, permit requirements, timing, etc.
  - potential GHG emission reductions
  - toxic and criteria pollutant co-benefits

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## Energy Efficiency Improvement Analysis Requirement – Proposed Changes

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- ◆ Key changes:
  - added language to allow consideration of emerging technologies
  - require summary description of the potential improvement project
  - require estimates of average recurring annual costs, one-time budgetary costs, and project life
  - removed “simplified payback period”
  - require specification of methodology used to quantify estimated emission reductions (consistent with district reporting requirements)

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## Facility-Conducted Assessment

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- ◆ Staff believes allowing a self-assessment is the best approach
- ◆ Staff believes establishing an automatic trigger for project implementation is problematic without seeing the types of projects feasible

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## De Minimis Sources – Proposed Changes

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- ◆ Key changes:
  - analysis of potential improvement projects must include at least 95% of the facility's total CO<sub>2</sub>E emissions

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## Reporting Requirements

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- ◆ Provision requires reports submitted to ARB to include:
  - Energy Consumption and Emissions Analysis and Energy Efficiency Assessment information (ARB will provide a table that can be used), including methodology for quantifying estimated emission reductions
  - additional background information
  - detailed supporting data retained by facility, available to ARB upon request

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## Reporting Requirements – Proposed Changes

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- ◆ Key changes:
  - incorporated facility contact info into Energy Consumption and Emissions Analysis Section 95138(a)
  - modified reporting date from December 31 to December 15, 2011
  - moved public disclosure requirements to Section 95142

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## Compliance Extension

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- ◆ Added new Section 95141 to provide time extension for facilities that cannot meet deadline
  - criteria to be included in next draft
  - request by November 15, 2011
  - Executive Officer must approve
  - up to 45 days extension

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## Report Review & Public Disclosure

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- ◆ Added new section 95142 to clarify review and public disclosure process
  - moved data completeness and third party assessment determinations to this section
  - allows ARB to work with the facility to obtain additional information if required
  - Executive Officer can require 3<sup>rd</sup> party assessment if report is incomplete
  - Internet publication of full reports by April 30, 2012

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## Third Party Assessment Report

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- ◆ Provision contains requirements for a facility operator if the Executive Officer requires a third party assessment:
  - facility chooses third party; ARB approves
  - completed report must be submitted within 90 days of ARB approving the third party

## Third Party Assessment Report – Proposed Changes

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- ◆ Key changes:
  - retitled, since completeness determination was moved to a new section (report review)
  - added a requirement for facility operator to certify they have no conflict of interest with the third party assessor

## Next Steps



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*Next Steps*

## Regulatory Schedule

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- ◆ Public notice and staff report: early June 2010
- ◆ Board meeting: July 2010
- ◆ Facilities submit Reports to ARB: December 2011
- ◆ Public release of facility reports: April 30, 2012
- ◆ ARB Summary Report: June 2012



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## Contacts

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## Industry Sector Liaisons

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