

Overview of California Greenhouse Gas Emissions Reporting and Verification Procedures, Cap & Trade

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AB 32 Background

- Reduction in California Carbon Footprint reducing GHG emissions to 1990 levels.
- Cutting business-as-usual emission levels projected for 2020 by 30%.
- On Per-capita basis reducing annual emissions of 14 tons of CO₂ to 10 tons per person by 2020.



Scoping Plan Recommendations

- Expanding & strengthening existing energy efficiency programs, and building and appliance standards.
- Achieving a statewide renewable energy mix of 33%.
- Develop CA cap & trade program (WCI) to create a regional market system.
- Est. targets for transportation GHG emissions for region throughout CA.
- Adopt & Imp State laws and policies for clean car standards, goods measures & low carbon fuel standards.
- Create fees, on water use, High GWP gases, fees to fund AB 32 administrative costs.



Cap & Trade

A cap and trade system is required in order for facilities to comply by allowing them to purchase emission credits from other facilities. For example, facilities such as landfills, wastewater treatment plants, asphalt plants etc., whose throughput rates depend on population increase, will show an increase in CO₂ emissions. Without cap and trade, it would be possible for many facilities to comply with the broader AB-32 mandate.



Projected Emissions MMTCO₂E

(If Business-as-Usual)

Sector	2002-04 Average Emissions	Projected 2020 Emissions
Transportation	179.3	225.4
Electricity	109.0	139.2
Commercial & Residential	41.0	46.7
Industry	95.9	100.5
Recycling and Waste	5.6	7.7
High GWP	14.8	46.9
Agriculture	27.7	29.8
Forest New Emissions	-4.7	0.0
Emission Total	469	596



Total Recommended Reduction Measures

Total Estimate reduction-169 MMT eCO₂

- Emission reductions from capped sectors-146.7 MMTCO₂E (estimated 85% of overall reduction). Covering the electricity, transportation, natural gas, and industrial sectors.
- Emission reductions from sources & sectors not covered by cap & trade-27.3 MMT eCO₂.



GHG Mandatory Reporting

94% of point source CO₂ Emissions

Based on emitting > 25,000 MT CO₂ or 1 MW Name plate generation capacity & emitting ≥ 2,500 MT CO₂

- Cement Plants - 10
- Oil Refineries & Hydrogen Plants - 21
- Electric Generating Facilities - 350+
- Electric Retail Providers & Marketers*
- Cogeneration Facilities - 25
- General Stationary Combustion Facilities - +++

* Most interstate electrically marketed is coal fired



Exemptions

- Hospitals, Primary & Secondary Schools with specific NAICS Codes (Universities Not Exempt)
- Equipment/Sources
 - Any process/fugitive sources NOT specified
 - Backup Generators permitted by districts for emergency use only
 - Portable Equipment
 - Electricity generation from – Nuclear, Hydro, Wind or Solar
 - Mobile Sources-Reporting is “**Optional**” based on fuel or mileage



Annual Reporting For GSC & Sector Specific

- Calendar year reporting
- Report all Kyoto Gases separately.
- Stationary, process, fugitive emissions, as specific by sector.
- Specific sources-including routine maintenance, start-ups, shutdowns, upsets and downtime.
- Separately track & report CO₂ emissions from biomass.
- Indirect energy purchases (kWh/BTU) reported by not associated emissions.
- Fuel & feedstock consumption
 - Report at Facility and last point of (sub) metering
- Electricity Transaction records (Providers & Marketers).
- Non-emissions information, when specified.



Reporting and Verification Schedules

- General stationary combustion, electric generating and cogeneration facilities not operated by other reporters
 - **Emission Reports Due-April 1st**
 - **Verification Opinions Due-Oct 1st**
- Power and cogen plants within a refinery, cements plants, refineries (including oil & gas) electric retail providers and marketers, hydrogen plants.
 - **Emission Report Due-June 1st**
 - **Verification Opinions Due- Dec 1st**



Facility

- “any property, plant, building, structure, stationary source, stationary equipment of grouping or stationary equipment or stationary sources located on one or more **contiguous or adjacent** properties, in actual physical contact or separated solely by a public roadway or other public right-of-way, and **under common operational control**, that emits or may emit any greenhouse gas. Operators of military installation may classify such installation as more than a single facility based on distinct and independent functional grouping within contiguous military properties”.



Operational Control

- “the **authority to introduce and implement** operating, environmental, health and safety **policies**”. In any circumstance where this authority is shared among multiple entities, the entity holding the **permit to operate** from the local air pollution control district or air quality management district is considered to have operational control for purposes of this article”.

**Reporters located within LA County with Submitted GHG Plans

- Azusa
- Brentwood
- Burbank
- Carson
- Cerritos
- Compton
- El Segundo
- Encino
- Glendale
- Glendora
- Industry
- Irwindale
- Long Beach
- Los Angeles
- Manhattan Beach
- Norwalk
- Paramount
- Pasadena
- Rosemead
- Santa Clarita
- Signal Hill
- South Gate
- Sun Valley
- Sylmar
- Thousand Oaks
- Torrance
- Vernon
- Whittier
- Wilmington

** The Reporter could be either a
City or Business



Types of Facilities/Reporters Registered in County of Los Angeles

- Airports
- Chemical
- Cement
- Cogen
- Granite
- Industrial
- Landfill
- Light & Water
- Marketers of Power
- Power Entities
- Refineries
- Universities
- Waste to Energy

Note: To date, 601 reporters have registered statewide, per CARB estimated 850 facilities reporting.



Verification Body (VB)

VB & Verifiers accredited only by CARB

Must include:

- 2 lead verifiers and
- Minimum 5 total full-time staff (including support)
- Liability in (PI) \geq US \$1 million
- Subcontractors require individual accreditation.



Accreditation

- VB must have COI mgnt., policies, processes & procedures
- Technical training for verifiers- policies, processes & procedures, performance monitoring & evaluation.
- Verification processes; contractual agreement, COI & notifications, reporting tool, verification delivery.



Conflict of Interest (COI)

- A situation which a person or VB has a potential or actual inability to render an impartial verification opinion.
- Their objectivity to perform services is otherwise potentially compromised
 - Because of financial or other activities of relationships with the organization or personnel
- For VB cannot provide consulting services within previous 3 years.



Key Characteristics of an Audit

- Systematic-rigorous and thorough.
- Documented-recorded for inspection and audit must be clearly defined.
- Objective-based on fact, unbiased & independent.
- Evidence based-findings supported by evidence.
- Auditors should be independent, objective, exercise judgment & skepticism, experienced, qualified & competent.



Verification Background

- Due to future of cap & trade, a verification is an equivalent to financial statement audit; not an environmental audit.
- Results are:
 - Positive (verified) free of material mis-statements and conforms with the regulations
 - Adverse (not verified) opinion means either non-conformance or material mis-statement or both.



Verification

- Full verification due in 2010- optional for 2009
- Interim Year “Less intensive verification” only requires data checks on reported emissions data report.
- VB rotation required after 6 years
- Full verification every 3rd years.
- Annual verification for refineries, hydro plants, electricity generators or cogen \geq 10MW & burning fossil fuels, retail providers, marketers, GSC’s in oil & gas sectors. Optional for other sources.



Contact Information

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