

State of California  
AIR RESOURCES BOARD

**Notice of Public Availability of Modified Text**

**PUBLIC HEARING TO CONSIDER ADOPTION OF A REGULATION FOR THE  
MANDATORY REPORTING OF GREENHOUSE GAS EMISSIONS**

Public Hearing Date: December 6, 2007  
Public Availability Date: May 15, 2008  
Deadline for Public Comment: June 5, 2008

At its December 6, 2007 public hearing, the Air Resources Board (the Board) approved the adoption of sections 95100 to 95133, title 17, California Code of Regulations (CCR), which provide for the mandatory reporting of greenhouse gas (GHG) emissions from large sources. The regulation specifies the types of facilities that must report their GHG emissions, requirements for reporting and estimating the GHG emissions, and requirements for emissions verification. The regulation was developed pursuant to the requirements of the California Global Warming Solutions Act of 2006.

At the hearing, the staff presented and the Board approved modifications to the regulation originally proposed in the Staff Report released October 19, 2007, in response to comments received since the Staff Report was published. In addition, the Board directed staff to modify the emissions verification schedule to remove a one-year delay initially provided for some facilities subject to a triennial verification schedule. The Board also directed staff to make other conforming modifications as may be appropriate, based on comments received, and to make the modified text available for a supplemental public comment period of at least 15 days.

Modifications made in the regulations originally published October 19, 2007 include:

General Provisions, §95100 – §95109

- Applicability language was modified to further clarify what facilities will be subject to the regulation. These modifications include the addition of an emissions threshold for petroleum refineries, geographical and ownership/operational limitations for certain facilities covered by the regulations, and clarification as to the years on which the emissions thresholds are based. (§95101)
- An exemption from the regulation's requirements for designated backup generators was modified to apply also to designated emergency generators. (§95101)
- Definitions were added for the following terms: accuracy, CAISO, California Energy Commission, carbon dioxide equivalent, clinker, final point of delivery, flexigas, fugitive source, ISO, lead verifier, long-term power contract, low Btu gas, low heating value, mobile combustion source, NVTREC, power, process,

small refiner, standard cubic foot, thermal host, useful power output, volatile organic compounds, waste-derived fuel, and WREGIS. (§95102)

- Definitions for the following terms were deleted as no longer necessary: accredited verifier, API, delayed coking, source stream, specified wholesale sales, still gas, substitute energy, and verified emissions data report. (§95102)
- Revisions were made to a number of other definitions, including but not limited to definitions of the following terms: adverse verification opinion, annual, AQMD/APCD, associated gas or produced gas, best available data and methods, biomass-derived fuels, butane, carbon dioxide, catalytic cracking, cement kiln dust, coal, coal-derived fuel, cogeneration facility, cogeneration system, coke burn-off, combustion source, conflict of interest, continuous emissions monitoring system, diesel fuel, direct emissions, distributed emissions, electricity generating facility (replacing a definition of “electric generating facility”), emission factor, emissions, entity, ethane, equipment, facility, flare, fluid catalytic cracking unit, fugitive emissions, greenhouse gas, greenhouse gas source, hydrocarbons, kerosene, kiln, liquefied petroleum gas, marketer, material misstatement, mobile combustion emissions (replacing a definition of “mobile combustion”), multi-jurisdictional retail provider (replacing a definition of “multi-jurisdictional utility”), nameplate generating capacity, natural gas, net power generated (replacing a definition of “net generation”), NERC E-tag, nonconformance, null power, operator, operational control, positive verification opinion, process emissions, process vents, pure, reasonable assurance, recycled, renewable energy, retail provider, self-generation facility, source, specified source of power, standard conditions, stationary combustion source, storage tank, sulfur recovery unit, supplemental firing, uncertainty, verification cycle, verification opinion, and verification team, as well as revisions made to various diesel fuel and distillate fuel definitions. (§95102)
- The general reporting requirement was amended to clarify that emissions calculations need to be performed and reported for all six identified greenhouse gases as specified in the sector-specific requirements. (§95103)
- Language was added to require that fuel consumption at all facilities be reported at both the facility level and, when fuel use is separately metered by process unit, at the process unit level. (§95103).
- The cap on emissions from designated de minimis sources, to which simplified calculation methods may be applied, was raised from 10,000 to 20,000 metric tonnes of CO<sub>2</sub> equivalent emissions, and other changes were made to the de minimis provision. (§95103)
- The required level of accuracy for fuel use measurements was revised to require accuracy to within 5 percent of actual use, a decrease from the 2.5 percent originally required. In addition, documentation and calibration requirements were added, and language in the fuel analytical data and fuel use measurement provisions was otherwise modified. (§95103)
- An additional year, until January 1, 2011, was provided for the optional installation of continuous emissions monitoring systems (CEMS). The option for facilities to report emissions on the basis of fuel-based calculations pending

- installation of a new CEMS or a CEMS CO<sub>2</sub> monitor was limited to apply only when a new CEMS, and not a CEMS CO<sub>2</sub> monitor, is to be installed (§95103)
- Language was added to provide a process for obtaining ARB approval of an interim data collection procedure during breakdown of fuel analytical data monitoring equipment. (§95103)
  - The reporting schedule was modified and reorganized to more clearly list the operators subject to April 1 and June 1 reporting deadlines. (§95103)
  - The verification schedule was revised to specify triennial verification for geothermal generating facilities and to make the initial year for obtaining required verification services, 2010, consistent for all operators. Another revision requires that verification bodies rather than operators submit verification opinions to ARB. (§95103)
  - A provision governing reporting requirements for new facilities was modified to clarify that it does not apply when there is a management, ownership or operational change at an existing facility, and to make other clarifying changes. (§95103)
  - Refineries and hydrogen plants were added to a provision that allows operators of certain facilities to stop filing annual reports if the facility's emissions drop below designated levels for three consecutive years. (§95103)
  - The description of information that all operators must include in annual reports was modified to require the inclusion of operator contact information, the identification of facilities owned or operated by parent companies of the operator, the reporting of emission factors developed using approved facility source testing, and other changes. (§95104)
  - A signature requirement was modified to require that when signing an annual report, the operator must attest that the reports are true, accurate and complete, and prior language permitting these statements to be based on the signer's "best knowledge and belief" was deleted. (§95104)
  - Changes to the document retention provision clarify that emissions data are just one of the types of documents that must be retained for five years. In addition, a new provision requiring operators to maintain a log of changes to GHG accounting methods was added to the section on record-keeping requirements, and other changes were made to the record-keeping provisions. (§95105)
  - Changes were made to the confidentiality section to clarify that all emissions data is public information, consistent with existing law. (§95106)
  - Enforcement provisions were consolidated and revised to, among other things, clarify that penalties for failing to file documents on time with ARB apply to all documents that are required to be submitted, including verification opinions, (§95107)
  - Additional documents have been incorporated by reference into the regulation. (§95109)
  - Other modifications were made to §§95100-95109.

## Cement Plants, §95110

- Revisions were made to the emissions data report requirements to clarify that all the listed information and methodologies are mandatory, to specify the reporting units, and to include other details. Reporting of inputs for efficiency metrics was added.
- A provision was added to clarify that cement plant operators are required to report emissions from any electric generating facilities they operate pursuant to §95111 to the extent the generating facilities are themselves subject to the reporting regulation.
- Options for calculating CO<sub>2</sub> emissions from biomass, municipal solid waste, and waste-derived fuels were added and modified, and various other provisions were modified.

## Electric Generating Facilities, Retail Providers, Marketers, §95111

- Provisions regarding the kinds of electricity transactions to be reported by multi-jurisdictional retail providers (those serving customers in more than one state) were modified and added.
- Language was added to clarify that retail providers will report imports for which they are the first deliverer.
- The option to report as an asset owning or asset controlling supplier was broadened to be available to suppliers that sell 50 percent or more renewable energy or that purchase no more than 20 percent of the power they sell from unspecified sources. As part of this change, an additional reporting requirement was included for certain suppliers that make use of this option.
- References to substitute energy were deleted.
- References to the ownership share differential of generating plants owned by retail providers were deleted and the reporting of specified information on out-of-state power transactions related to those plants was made voluntary.
- Eligibility criteria for retail providers to designate electricity from generating facilities as serving native load were modified.
- Classification categories were added for reporting power taken by retail providers from large hydroelectric and nuclear facilities.
- Biomass facilities without specified measurement devices were provided the option of testing fuels for heat value or carbon content in lieu of using default emission factors.
- A methodology to calculate fugitive hydrofluorocarbon (HFC) emissions from single unit service records was specified.
- Other provisions relating to generating facilities, retail providers and marketers were modified.

### Cogeneration Facilities, §95112

- An option and associated methods were added to allow simplified reporting by small cogeneration facilities (less than 10MW). The simplified reporting option applies only to self-generation facilities.
- Distributed emissions provisions were modified.
- Identification of facility type and nameplate data for waste heat technology were added to emissions data reports.
- Other modifications were made to cogeneration provisions.

### Petroleum Refineries, §95113

- An emission reporting threshold of 25,000 MT CO<sub>2</sub> was added for petroleum refining facilities.
- Clarifications were made to specify reporting of feedstock consumption, as well as emissions from burning low Btu gases and flexigas.
- A provision was added to clarify that refinery operators are required to report emissions from any electric generating facilities they operate pursuant to §95111 to the extent the generating facilities are themselves subject to the reporting regulation.
- Provisions were added to allow operators to measure combustion and process emissions using continuous emission monitoring systems (CEMS). A provision was also added (see §95125) to allow refiners to determine refinery fuel gas composition using in-line continuous monitoring systems.
- A calculation method was added for process emissions from catalytic regeneration to cover the full range of emissions resulting from catalyst regeneration.
- Language was added to direct refinery operators to use system specific gas analysis where available to calculate a VOC to CH<sub>4</sub> conversion factor for the calculation of equipment fugitive emissions, and to use the ARB default value where such information is unavailable.
- A provision was added to various emissions calculation equations to allow molar volume conversion at the standard temperature and pressure values typically used at refineries.
- The section on equipment fugitive emissions was restructured to reflect differences in the Leak Detection and Repair (LDAR) program operational and emission calculation requirements in effect at the various air districts.
- Language was added to provide sampling and calculation methods for both associated gas and low Btu gas. A method was added to section 95113(d) for calculation of emissions resulting from the destruction of low Btu gases by incineration or combustion as a supplemental fuel.
- Other modifications were made to refinery provisions.

#### Hydrogen Plants, §95114

- A correction was made to the equation for the fuel and feedstock mass balance option.
- A provision was added to clarify that hydrogen plant operators are required to report emissions from any electric generating facilities they operate pursuant to §95111 to the extent the generating facilities are themselves subject to the reporting requirements.
- A provision requiring tracking and reporting of transferred CO<sub>2</sub> was expanded to also require tracking and reporting of transferred CO.
- Other modifications were made to refinery provisions.

#### General Stationary Combustion Facilities, §95115

- Emission calculation methods were specified for non-common fuels for which emission factors are not available.
- Other modifications were made to general stationary combustion provisions.

#### Additional Calculation Methods, §95125

- Language was added to specify methods and sampling requirements for determination of the high heat value of solid fuels.
- Test methods were added for biomass-derived, waste-derived, and other fuels. The term “alternative fuels” was changed to “waste-derived fuels.”
- A carbon content sampling frequency requirement for refinery fuel gas was added.
- Reduced refinery fuel gas sampling requirements were added for refineries that qualify as “small” under title 13 of the California Code of Regulations.
- Facilities burning biomass were provided the option to use CEMS data to calculate CO<sub>2</sub> emissions, and requirements for the determination of biomass content in waste-derived fuels were clarified.
- A provision was added to allow operators to use an in-line continuous analyzer for the determination of fuel gas carbon content.
- Language was added to specify a method to convert low heating values (LHV) to high heating values (HHV).
- Other modifications were made to this section.

#### Verification, §95130 - §95133

- Provisions were added to clarify that the sampling plan must be maintained by the verification body, but need not be included in the verification report.
- Language regarding the accreditation application process was modified.
- A provision regarding lead verifiers’ experience working in other reporting programs was clarified.

- Language was added to clarify that verifiers (like operators) are subject to verification deadlines.
- Provisions were added to: limit the circumstances under which a final verification opinion may be changed, allow the Executive Officer to set aside opinions under certain circumstances, and require the cooperation of the verification body in the event of an audit of the services it provided.
- Other modifications were made to the verification provisions.

#### Appendix A – Emission Factors and Methods

- In Table 3, fuel usage equivalents to CO<sub>2</sub> were added in additional units for natural gas, landfill gas, and petroleum coke.
- Biogas emission factors were corrected to include both CH<sub>4</sub> and pass-through CO<sub>2</sub>, and the geothermal emission factor was corrected for the proper units.
- Emission factors for fugitive methane emissions from coal were updated to be more current and region specific.
- A table was added for emission factors for oil/water separators.
- The table for mass balance estimation of SF<sub>6</sub> and HFCs was augmented with a pounds-to-kilograms conversion.
- Other corrections, additions and updates were made to emission factors and other tables.

The preceding list identifies many of the changes made to the regulations published on October 19, 2007, but the list does not identify or summarize all changes made. All changes made to the regulation since October 19, 2007 are shown in underline and strikeout in the modified text appended to this notice as Attachment A.

Also attached is a copy of Board Resolution 07-54 approving sections 95100 to 95133, title 17, CCR, as modified. The regulatory documents for this rulemaking are available online at the following ARB internet site:

<http://www.arb.ca.gov/regact/2007/ghg2007/ghg2007.htm>

In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to adopt sections 95100 to 95133, title 17, California Code of Regulations, after making them available to the public for comment for a period of at least 15 days. The Board further provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if warranted.

Written comments on the modifications approved by the Board may be submitted by postal mail, electronic mail, or facsimile as follows:

Postal mail: Clerk of the Board, Air Resources Board  
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Facsimile submittal: (916) 322-3928

Please note that under the California Public Records Act (Government Code section 6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this information may become available via internet search engines.

In order to be considered by the Executive Officer, comments must be directed to the ARB in one of the three forms described above and received by the ARB by 5:00 p.m. on the deadline date for public comment listed at the beginning of this notice.

Attachments