

California Regulation for the
Mandatory Reporting of Greenhouse Gas Emissions

**2013 GHG Reporting for
Fuel Suppliers**

Applicability and Reporting Guidance
(Sections 95121 and 95122)

March 20, 2014

Presentation Slides Available Here:

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

Outline

- Introduction
- Suppliers of Transportation Fuel
 - 2013 Revisions
 - Summary of Applicability and Reporting
- Suppliers of Natural Gas, NGLs, LPG, CNG, and LNG
 - 2013 Revisions
 - Applicability
 - NG Supplier Reporting
 - NGL Fractionator Reporting
 - Cal e-GGRT Changes
 - Consignee Reporting
- Q&A

Introduction

§95101(c):

- Contains rule applicability requirements for suppliers of transportation fuels, natural gas, NGLs, LPG, CNG, and LNG

§95121:

- Contains reporting requirements for transportation fuel suppliers including refineries producing LPG
- References 40 CFR Part 98, Subpart MM

§95122:

- Contains reporting requirements for suppliers of natural gas and NGL fractionators, and Consignees
- References 40 CFR Part 98, Subpart NN

Suppliers of Transportation Fuels (Section 95121)

2013 MRR Revisions – Transportation Fuels

- §95113– added requirement that “petroleum refinery operators” and “refiners” are separate reporting entities
 - Refinery emissions (Subpart Y) must be reported under separate ARB ID than fuel supplier emissions (Subpart MM)
 - Reports require separate verification, so plan ahead
- §95121 (no substantive changes)
 - Clarified that aviation and marine fuels are not reportable fuels

Transportation Fuel Suppliers are:

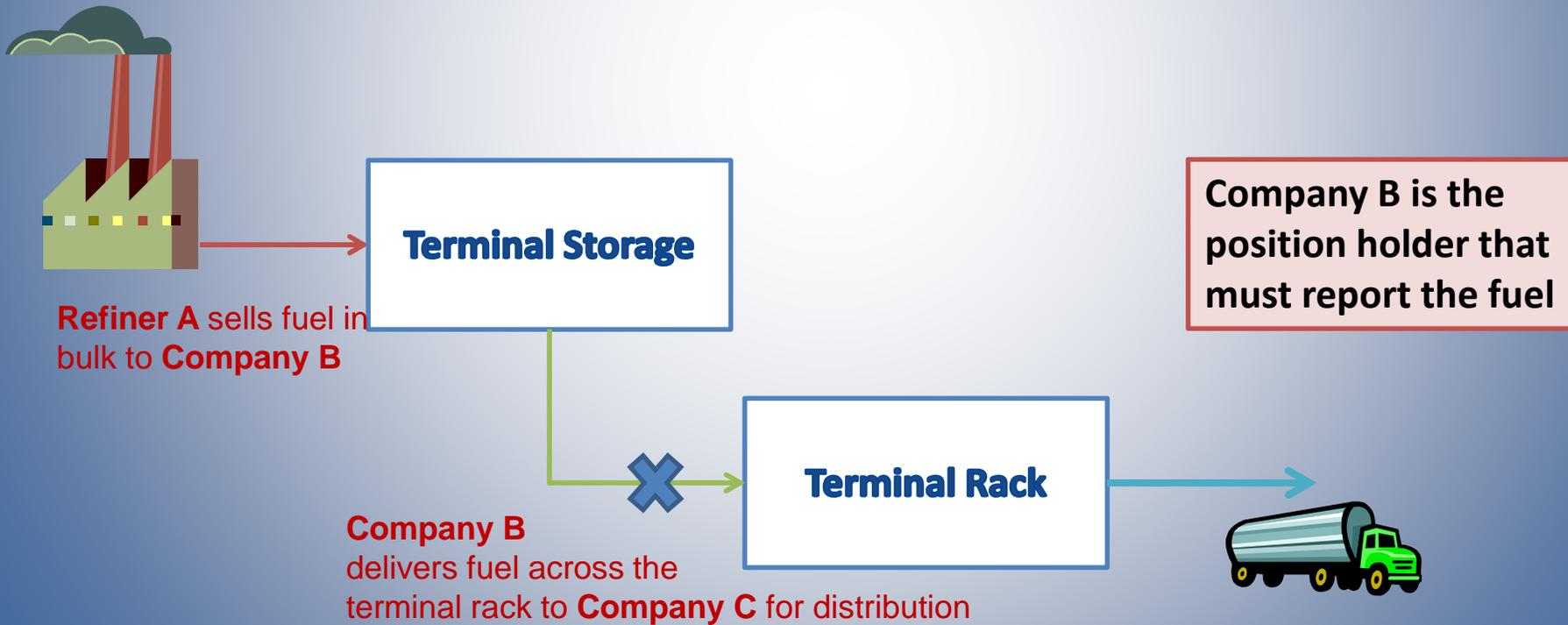
- ***Position holders*** delivering fuel across terminal racks
- ***Refiners*** delivering fuel across racks at refineries and downstream pipeline terminals as the position holder
- ***Enterers*** (importers) importing fuel outside the bulk transfer/terminal system
 - *Example: an importer delivering finished E85 blended in Nevada directly to California service stations*

Applicability Thresholds

- ***Reporting Threshold:*** Fuel suppliers delivering an annual quantity of transportation fuel that, if completely oxidized, would result in the release of greater than or equal to 10,000 MT CO₂e in California
 - RBOB: ~1.14 M gallons
 - Diesel # 2: ~ 975 k gallons
- **Verification and Cap and Trade threshold:** 25,000 MT CO₂e
 - RBOB: ~2.85 M gallons
 - Diesel #2: ~2.45 M gallons

Point of Regulation

- The entity who has ownership of the fuel immediately upstream of the terminal or refinery rack must report the fuel removed from the rack



Transportation Fuels

Fuel

RBOB (CARBOB)—Summer	Distillate Fuel Oils
Regular	Distillate No. 1
Midgrade	Distillate No. 2
Premium	Liquefied Petroleum Gas (LPG)
RBOB(CARBOB)—Winter	Ethane
Regular	Ethylene
Midgrade	Propane
Premium	Propylene
CBOB—Summer	Butane
Regular	Butylene
Midgrade	Isobutane
Premium	Isobutylene
CBOB—Winter	Pentanes Plus
Regular	Biomass-Derived Fuel
Midgrade	Ethanol (100%)
Premium	Biodiesel (100%, methyl ester)

CBOB should be zero, not legal in California.

LPG components only reported by refiners that produce these products.

Reporting Fuels

- The position holder or refiner must report annual volume of fuel delivered across terminal or refinery racks in units of barrels (bbls)
 - 1 Barrel = 42 U.S. Gallons
 - Reported by fuel type
 - All gasoline blendstocks must be reported by component
 - Example: 100 barrels (bbls) of E10 motor gasoline would be reported as 90 bbl RBOB, 10 bbl ethanol

Bulk Transfer to Other Fuel Suppliers

- Refiners commonly trade (buy/sell) transportation fuel products in bulk with other fuel suppliers
- Refiners do not report fuel delivered in bulk to other fuel suppliers (typically via pipeline)
 - Refiner must confirm that the purchaser is a licensed fuel supplier with the California Board of Equalization (BOE).
 - If this cannot be confirmed, the refiner must report the fuel delivered in bulk to the unlicensed entity
 - Contact ARB staff for assistance determining BOE status if it is unclear

Liquefied Petroleum Gas

- Refiners must report emissions from LPG produced and delivered in California
- Refiners should only report LPG components that are produced and delivered in mixtures that could be used as a fuel by an end-user
 - Bulk Butanes/Pentanes etc. sold to other refineries for use as feedstock or blendstock do not fit the definition of LPG and are not reported in MM

Cal e-GGRT

- **Step 1:** Download Excel Spreadsheet, enter fuel volume data in BBLs and follow directions for 'exporting data to 'XML format'
- **Step 2:** Upload the saved XML file into Cal-eGGRT

SUBPART MM SUMMARY INFORMATION FOR THIS FACILITY

1.) DOWNLOAD FORM

Suppliers of Transportation Fuels Calculation and Reporting Tool

2.) UPLOAD COMPLETED FORM

Browse... **UPLOAD**

Uploaded File Name
No files found.

	A	B	C	D	E	F
1	Calculations and Reporting	Return to Instr				
2		Calculate CO ₂				
3	Reported Emissions	[Product] An				
4	Blendstock, Distillate Fuel Oil or Biomass-Derived fuel	volume of pro				
5	TOTAL	8802				
6	CBOB— Summer					
7	Regular	56,78				
8	Midgrade	2,000	0.3758			
9	Premium	3,000	0.3763			

Export...

	D	E	F
	98.393(a)	Calculate CH ₄ and N ₂ O	
		CH ₄ or N ₂ O = 1 x10	
	Annual CO ₂		
	ns that		
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Suppliers of Natural Gas, Natural
Gas Liquids, and Liquefied
Petroleum Gas (Section 95122)

2013 MRR Revisions –NG Suppliers, Fractionators and Consignees

- §95101(c)
 - Added LNG Production Facilities that liquefy NG from interstate pipelines - **Effective for 2014 data reported in 2015**
- §95122
 - Clarified that intrastate pipelines delivering gas to end-users are considered Local Distribution Companies (LDCs)
 - Clarified that consignees of imported CNG/LNG are required to report similar to consignees of LPG
 - Added reporting requirements for LNG production facilities - **Effective for 2014 data reported in 2015**

2013 MRR Revisions –NG Suppliers, Fractionators and Consignees

- §95122 (effective for 2013 data reported in 2014)
 - (d)(2)(D): Added requirement for LDCs to report list of downstream pipelines and/or LDCs to which gas is “re-delivered”
 - (d)(2)(E): Changed threshold for reporting end-user delivery and customer data from 460,000 Mscf (~25,000 MT CO₂e) to 188,500 MMBtu (~10,000 MT CO₂e)
 - Supplier must also report ARB ID of each end-user *if available*
 - (d)(4): Revised data reporting requirements for intrastate pipelines for consistency with other LDC requirements
 - (d)(6): Added specific biomass reporting requirements for LDCs that purchase biomass on behalf of customers

Cal-eGGRT Changes for NG Suppliers

- Added two uploadable spreadsheets for reporting:
 - Delivery data for re-deliveries to downstream LDCs and pipelines
 - End-User Customer and Delivery Data

FORM.XLS			
MM - Suppliers of Transportation Fuels Calculation and Reporting Tool	Suppliers of Transportation Fuels Calculation and Reporting Tool.xls	carb_subpart_mm.xsd	XML
NN - Suppliers of Natural Gas and NGLs	Subpart NN Natural Gas Received by End Users.xls	n/a	XLS
NN - Suppliers of Natural Gas and NGLs	Subpart NN Natural Gas Deliveries to Pipelines and LDCs.xls	n/a	XLS
NN - Suppliers of Natural Gas and NGLs	Subpart NN - Interstate NG Pipeline.xls	n/a	XLS
SF6 Gas Insulated Switchgears	SF6 Gas Insulated Switchgear (GIS) Reporting.xls	carb_sf6gis.xsd	XML

Applicability

- NG suppliers and consignees that supply an annual quantity of fuel that, if completely combusted, would result in $\geq 10,000$ MT CO₂e, including:
 - Local Distribution Companies:
 - Public Utility Gas Corporations (PUGCs)
 - Publicly Owned Gas Utilities (POGUs)
 - Operators of intrastate pipelines delivering gas to end-users
 - Operators of interstate pipelines
 - Consignees of LPG/CNG/LNG
 - Operators of LNG Production Facilities that liquefy gas received from *interstate* pipelines (starting with 2014 data reported in 2015)
- Natural gas liquid (NGL) fractionators, regardless of quantity

Natural Gas Suppliers

- Local Distribution Companies
 - Public Utility Gas Corporations (PUGCs)
 - Publicly Owned Natural Gas Utilities (PONGUs)
 - *Intrastate* Pipelines delivering fuel to end-users*
- *Interstate* Pipelines**

* *Intrastate pipelines have different reporting requirements than other LDCs*

** *Interstate pipelines are not required to report emissions data, only volume and customer data*

Emissions Reporting – NG Suppliers

- PUGCs and POGUs must report total CO₂ as:
 - CO₂i: Gas received at city gate (or state border), **minus**
 - CO₂j: Net sum of gas re-delivered to or received from other gas utilities or pipelines, **minus**
 - CO₂l: Net sum of gas in/out of storage and or received from local production

Emissions Reporting – Intrastate Pipelines

- *Intrastate* Pipelines report using the same equation as other LDCs, with a few differences:
 - CO_2j : The total amount of gas delivered by the pipeline to all entities (LDCs, other pipelines, or end-users) **minus**
 - CO_2j : Net gas re-delivered to other gas utilities or pipelines
 - CO_2l : Must be set to Zero

Customer Data - All LDCs

- All LDCs must report delivery and customer data for each end-user registering supply equal to or greater than **188,500 MMBtu** (~10,000 MT CO₂e)
 - Customer data includes ARB ID *if available*
- This information is used by ARB to calculate each NG suppliers 'covered emissions'

Interstate Pipelines

- *Interstate* Pipelines must report only:
 - Gas volume and customer data as specified in section 95122(d)(3)
 - No emissions data is reported; therefore, verification is not required for *interstate* pipelines

NG Supplier Covered Emissions Calculation

- Covered emissions for each NG supplier are equal to:
 - Total emissions from all fuel delivered to end users, as calculated in §95122(b)(6), **minus**
 - The emissions from all fuel that is delivered to covered facilities in California (as determined by ARB staff)
- The calculation relies on supplier reported customer data and facility reported data
 - Final covered emissions values are finalized 30 days after the annual verification deadline
 - See Section 95852(c) of the cap and trade regulation

Biomethane Reporting

- Natural gas suppliers can supply biomethane, which is biomass-derived natural gas meeting pipeline quality standards
- Only biomethane purchased by the supplier on behalf of the end user is reported as biomethane
- If biomethane is purchased directly by the end user, it is reported as fossil NG by the supplier (and reported as biomethane by the end user)
- If reporting biomethane, must include name and address of biomethane vendor and production facility, and annual MMBtu received for each contracted delivery (§95103(j)(3))

Emissions Reporting – NGL Fractionators

- NGL fractionators report two sets of emissions data:
 1. Per 40 CFR 98.402(a): CO₂ emissions from all NGL Products (LPG and non-LPG) listed below that are produced and delivered (irrespective of destination). These are your **Total Emissions**
 2. In addition: CO₂e from all LPG products produced and delivered, unless destination outside of California can be demonstrated. These are your **Covered Emissions**

NGLs Required per 40 CFR 98.402(a)	LPG Components per 95122
Ethane (non-LPG and LPG)	LPG – Ethane
Propane (non-LPG and LPG)	LPG – Ethylene
Butane (non-LPG and LPG)	LPG – Propane
Isobutane (non-LPG and LPG)	LPG – Propylene
Pentanes Plus (non-LPG and LPG)	LPG – Butane
	LPG – Butylene
	LPG – Isobutane
	LPG – Isobutylene
	LPG - Pentanes Plus

LPG vs non-LPG NGLs: Covered Emissions

- Natural gas liquids are any liquids from natural gas processing, including LPG, bulk products, blends, feedstocks
 - Not all covered emissions
- Liquefied petroleum gas (LPG) , aka “propane,” is a commercial fuel that meets specifications laid out in definition; used for heating, transportation, BBQ grills, etc.
 - This is a subset of total NGL production
 - These are the **COVERED** emissions
 - Why? Because they are used downstream as fuels for heating and transportation; other NGLs likely to be used as feedstocks for processes (plastics and other petrochemicals)

Cal e-GGRT Changes for Fractionators

GHG SUMMARY

Products ^{1,3}	CO ₂ (metric tons)	CH ₄ (metric tons) ⁴	CO ₂ e of CH ₄ (metric tons) ⁴	N ₂ O (metric tons) ⁴	CO ₂ e of N ₂ O (metric tons) ⁴	Status ²	
<input type="checkbox"/> Ethane (LPG and non-LPG)							
<input checked="" type="checkbox"/> Propane (LPG and non-LPG)	234,900.0	11.01	231.2	2.201	682.5	Complete	OPEN
<input checked="" type="checkbox"/> Butane (LPG and non-LPG)	5,522.0	0.25	5.3	0.051	15.8	Complete	OPEN
<input checked="" type="checkbox"/> Isobutane (LPG and non-LPG)	13,275.0	0.61	12.8	0.122	37.9	Complete	OPEN
<input type="checkbox"/> Pentanes Plus (LPG and non-LPG)							
<input type="checkbox"/> LPG Ethane							
<input type="checkbox"/> LPG Ethylene							
<input checked="" type="checkbox"/> LPG Propane	225,504.0	11.01	231.2	2.201	682.5	Complete	OPEN
<input checked="" type="checkbox"/> LPG Propylene	1,261.0	0.06	1.2	0.011	3.6	Complete	OPEN
<input checked="" type="checkbox"/> LPG Butane	2,761.0	0.13	2.7	0.025	7.9	Complete	OPEN
<input type="checkbox"/> LPG Butylene							
<input type="checkbox"/> LPG Isobutane							
<input type="checkbox"/> LPG Isobutylene							
<input type="checkbox"/> LPG Pentanes Plus							

Report all NGLs produced and delivered (including LPG components) in the top portion. Data entered into the top section should be identical to data reported to EPA using e-GGRT. Note that NGL produced is calculated as NGL supplied (CO_{2i}) minus NGL received (CO_{2m})

Report only LPG produced and delivered in California in the bottom portion. Note that LPG produced and delivered in CA should be entered as the CO_{2i} parameter. CO_{2m} is set to zero for LPG products.

SUMMARY

Equation NN-8 $CO_2 = CO_{2i} - CO_{2m}$

Hover over an element in the equation above to reveal a definition of that element.

Product	CO _{2i}	CO _{2m}	Result
Propane (LPG and non-LPG)	305,370.0	18,792.0	286,578.0

[FINISHED](#) [NEXT →](#)

SUMMARY

Equation NN-8 $CO_2 = CO_{2i} - CO_{2m}$

Hover over an element in the equation above to reveal a definition of that element.

Product	CO _{2i}	CO _{2m}	Result
LPG Propane	225,504.0	0	225,504.0

[FINISHED](#) [NEXT →](#)

NGL Fractionator Product Data Reporting

- **All NGL fractionators are required to separately report NGL *product* data**
 - Reported per section 95156(d) of the MRR in subpart W of the Cal-eGGRT reporting tool
 - Data used for allocation purposes
- **All NGL and LPG products are considered ‘covered product data’**
- **Only NGLs *produced* at the facility are counted**

Emissions Reporting – LPG Consignees

- A California consignee is the entity to whom the imported product is to be delivered
- Consignees of LPG must report:
 - LPG volumes by individual LPG component if the composition is provided by the producer
 - ‘LPG’ using default the emissions factor if the LPG composition is not provided
- Consignees of CNG/LNG must report:
 - Total CNG and LNG energy (MMBtu) delivered into California

Questions?

Additional Training Sessions

- ARB sector-specific training (check link for times)
<http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance-training.htm>
 - March 13 - General Information and Updates
 - March 13 - Petroleum and Natural Gas Systems
 - March 20 - Petroleum Refineries: Complexity Weighted Barrel
 - March 20 - Hydrogen Production: Product Data Reporting
 - March 20 - Fuel Suppliers: Transportation Fuels, Natural Gas, Others
 - Mid-April – Electricity Providers
- Contact ARB staff as needed for questions

Key Reporting Dates

Date	Activity
February 1	Regulatory deadline: Due date for electric power entities to register specified facilities outside California
February 13	Public release of Cal e-GGRT
April 10	Regulatory deadline: Reporting deadline for facilities and suppliers of fuels and carbon dioxide, except when subject to abbreviated reporting
June 2	Regulatory deadline: Reporting deadline for electric power entities and those subject to abbreviated reporting
July 15	Regulatory deadline: Deadline for corrections to RPS Adjustment data required for electric power entity data reports
September 2	Regulatory deadline: Final verification statements due (emissions data and product data)

GHG Reporting Contacts

Subject Matter	Contact
GHG Mandatory Reporting (General)	Brieanne Aguila , Manager 916.324.0919
Reporting Requirements, Stationary Combustion, Other Sectors (cement, glass, pulp and paper, etc.)	Patrick Gaffney 916.322.7303
Reporting Tool Registration and General Questions	Karen Lutter 916.322.8620
Electricity Generation and Cogeneration Facilities	Patrick Gaffney 916.322.7303
Electricity Retail Providers and Electricity Marketers	Wade McCartney 916.327.0822
Fuel and CO ₂ Suppliers - Transportation Fuels, Natural Gas, LPG, CO ₂	Syd Partridge 916.445.4292
Petroleum Refineries, Hydrogen Plants, Oil & Gas Production	Byard Mosher 916.323.1185
Product Data – Refineries, and Oil & Gas	Byard Mosher 916.323.1185
Greenhouse Gas Report Verification	Renee Lawver , Manager 916.322.7062
Chief – Climate Change Program Evaluation Branch	Rajinder Sahota , Chief 916.323-8503

Resources

- Reporting Guidance: Applicability, Metering, Fuel Supplier Reporting
<http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance.htm>
- Tool Training: Registration, Subparts
<http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm>
- Cal e-GGRT Main Help Page
<http://www.ccdsupport.com/confluence/display/calhelp/Home>
- U.S. EPA Detailed Sector Training Slides
<http://www.epa.gov/climatechange/emissions/training.html>
(use as a supplement to ARB summary slides)

End