

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

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# 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*

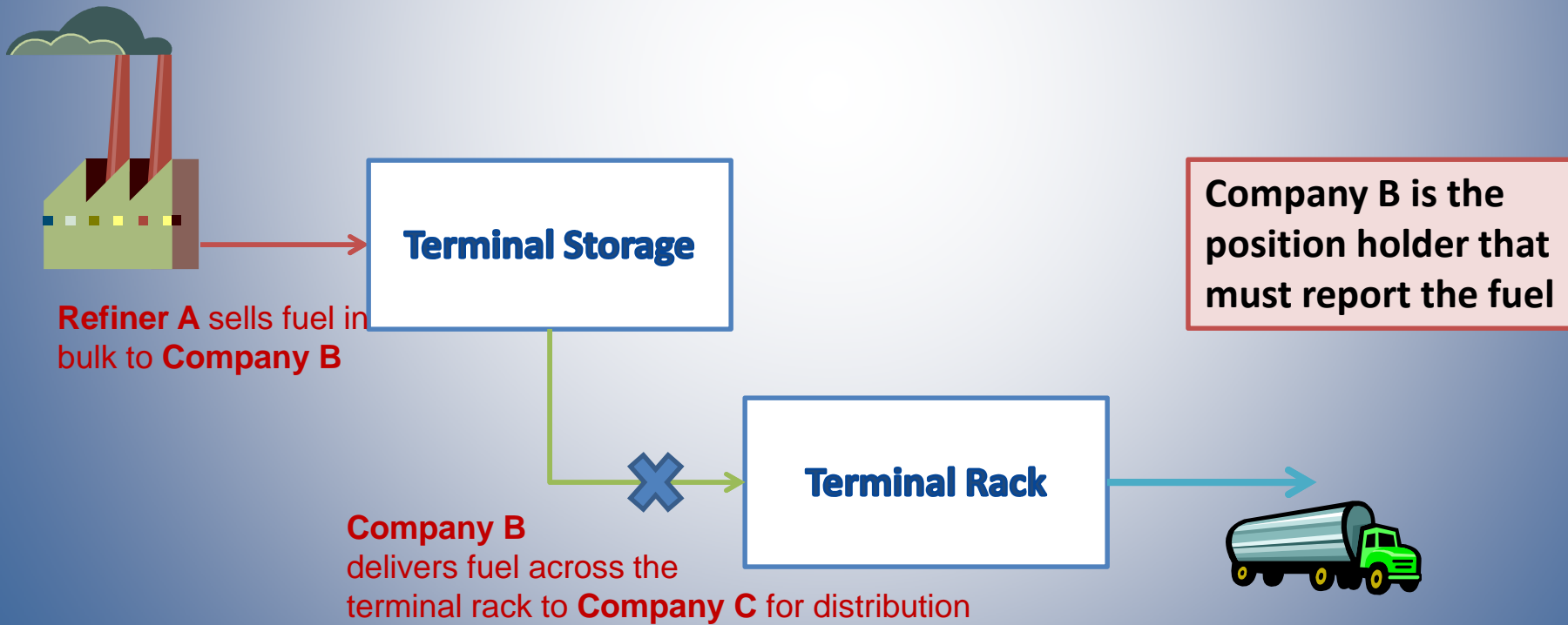


# Applicability Thresholds

- ***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 CO<sub>2</sub>e in California
  - RBOB: ~1.14 M gallons
  - Diesel # 2: ~ 975 k gallons
- **Verification and Cap and Trade threshold:** 25,000 MT CO<sub>2</sub>e
  - 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

<b>RBOB (CARBOB)—Summer</b>	<b>Distillate Fuel Oils</b>
Regular	Distillate No. 1
Midgrade	Distillate No. 2
Premium	<b>Liquefied Petroleum Gas (LPG)</b>
<b>RBOB(CARBOB)—Winter</b>	Ethane
Regular	Ethylene
Midgrade	Propane
Premium	Propylene
<b>CBOB—Summer</b>	Butane
Regular	Butylene
Midgrade	Isobutane
Premium	Isobutylene
<b>CBOB—Winter</b>	Pentanes Plus
Regular	<b>Biomass-Derived Fuel</b>
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 <sub>2</sub>				
3	Reported Emissions	CO <sub>2i</sub> = P				
4	Blendstock, Distillate Fuel Oil or Biomass-Derived fuel	[Product] An volume of pro supplied or ir into California reporting part CARBOB as f (barrels).				
5	<b>TOTAL</b>	<b>8802</b>				
6	CBOB— Summer					
7	Regular	56,78				
8	Midgrade	2,000	0.3758			
9	Premium	3,000	0.3763			

Export...

	D	E	F
	om 98.393(a)	Calculate CH <sub>4</sub> and N <sub>2</sub> O	
		CH <sub>4</sub> or N <sub>2</sub> O = 1 x10	
	rrual CO <sub>2</sub>		[HHV] De
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			on)



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 CO<sub>2</sub>e) to 188,500 MMBtu (~10,000 MT CO<sub>2</sub>e)
    - 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 CO<sub>2</sub>e, 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 CO<sub>2</sub> as:
  - CO<sub>2</sub>i: Gas received at city gate (or state border), **minus**
  - CO<sub>2</sub>j: Net sum of gas re-delivered to or received from other gas utilities or pipelines, **minus**
  - CO<sub>2</sub>l: 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 CO<sub>2</sub>e)
  - 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): CO<sub>2</sub> 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: CO<sub>2</sub>e 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 <sup>1,3</sup>	CO <sub>2</sub> (metric tons)	CH <sub>4</sub> (metric tons) <sup>4</sup>	CO <sub>2</sub> e of CH <sub>4</sub> (metric tons) <sup>4</sup>	N <sub>2</sub> O (metric tons) <sup>4</sup>	CO <sub>2</sub> e of N <sub>2</sub> O (metric tons) <sup>4</sup>	Status <sup>2</sup>
<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 <a href="#">OPEN</a>
<input checked="" type="checkbox"/> Butane (LPG and non-LPG)	5,522.0	0.25	5.3	0.051	15.8	Complete <a href="#">OPEN</a>
<input checked="" type="checkbox"/> Isobutane (LPG and non-LPG)	13,275.0	0.61	12.8	0.122	37.9	Complete <a href="#">OPEN</a>
<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 <a href="#">OPEN</a>
<input checked="" type="checkbox"/> LPG Propylene	1,261.0	0.06	1.2	0.011	3.6	Complete <a href="#">OPEN</a>
<input checked="" type="checkbox"/> LPG Butane	2,761.0	0.13	2.7	0.025	7.9	Complete <a href="#">OPEN</a>
<input type="checkbox"/> LPG Butylene						
<input type="checkbox"/> LPG Isobutane						
<input type="checkbox"/> LPG Isobutylene						
<input type="checkbox"/> LPG Pentanes Plus						
<b>Total</b>	<b>483,223.0</b>	<b>23.06</b>	<b>484.36</b>	<b>4.613</b>		

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<sub>2i</sub>) minus NGL received (CO<sub>2m</sub>)

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<sub>2i</sub> parameter. CO<sub>2m</sub> 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 <sub>2i</sub>	CO <sub>2m</sub>	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 <sub>2i</sub>	CO <sub>2m</sub>	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
<b>April 10</b>	Regulatory deadline: Reporting deadline for facilities and suppliers of fuels and carbon dioxide, except when subject to abbreviated reporting
<b>June 2</b>	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
<b>September 2</b>	Regulatory deadline: Final verification statements due (emissions data and product data)

# GHG Reporting Contacts

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