

California Electronic Greenhouse Gas Reporting Tool

Reporting for Subpart C and Subpart D

Stationary Fuel Combustion Sources and Electricity Generation and Cogeneration Units

March 8, 2012

Presentation Slides Available Here:

http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm



Outline

- When to Use Subpart C and D Modules
- Subpart C Reporting
 - Adding configurations, fuels, emissions
 - Data validation
 - Tool demonstration
- Subpart D Reporting
- Resources
- Q&A



Training Resources

- Reporting Guidance: Applicability, Metering 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
 <u>http://www.epa.gov/climatechange/emissions/training.html</u>
 (use as a supplement to ARB summary slides)



Cal e-GGRT Help

http://www.ccdsupport.com/confluence/display/calhelp/Home

alifornia Environmental Protection Agency	-	California Electronic Greenhouse Gas Reporting Tool
ome		Sea
the The Calle-GGRT help system includes general instruction on us porting requirements. Please refer to the ARB reporting website for Nome Welcome to Calle-GGRT Help his site contains news, tutorials, FAQs, help and other int Calle-GGRT News News feeds and links coming soon!	California-specific reporting requirements and additional help	



What is Cal e-GGRT Used For?

- Cal e-GGRT is the system used to report all data required by the GHG mandatory reporting regulation
- The tool contains modules for each sector required to report

 Also includes modules for Fee Regulation and SF₆
- Multiple users can be associated with a single facility or entity
- Verifiers can be associated with facilities and entities in the tool for data review purposes



When to Use Subpart C Module

- Report all emissions from stationary fuel combustion sources under the subpart C module
- Exceptions to reporting under the subpart C module
 - Units exempted from reporting combustion emissions under 40 CFR 98.30(b)
 - Electricity generating units subject to subpart D
 - Combustion units that exhaust to a CEMS that monitors both combustion emissions and process emissions from another subpart (e.g. a cement kiln that has both process and combustion emissions measured by a CEMS will be reported under Subpart H)
 - Process units that have emissions calculated according to another subpart (this does not generally apply to all combustion located at a facility with process emissions)



When to Use Subpart D Module

- Electricity generating units that are subject to the requirements of the Acid Rain Program/Part 75
- Non-Part-75 electricity generating units report under subpart C



Reporting: Facility Profile and Data Reporting

- Use the Facility Management tab to enter Facility Profile data
- Use Data Reporting tab to report other data

California Environmental Pro	es Boa	rd	and the second s		
😧 Cal e-GGRT Help	e-GGR	F Greenhouse Gas Data Reporting			
General Reporting Information	Select Fac	ility			
	You must include: S updating	GHG DATA REPORTING select a facility to begin using any Data Reporting features, which pecifying which subparts the facility will be reporting, entering or corporate parent information (subpart A), entering GHG data and alidation reports, and lastly, preparing and submitting the Annual ARB.			OPEN Facility Overview to begin entering data
	REPORTIN	G FACILITIES			
	ARB ID	Facility or Supplier	Annual Report Status	Facility Overview	
	9999999	ARB Test Facility - TEST ONLY - Production Site (Sacramento, CA)	Not generated	OPE	
	FACILITIES	NOT REPORTING IN 2011:			
	ARB ID	Facility or Supplier	Annual Report Status	Facility Overview	
	No facilities	s found.			

Reporting: Adding Subparts

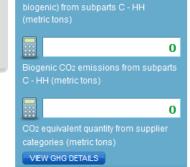
- Add or remove subparts as applicable to reporting entity
- OPEN subpart to complete data entry for each subpart

ARB Test Facility - TEST ONLY - Production Site (2011) Cal e-GGRT Greenhouse Gas Data Reporting Select Facility » Facility or Supplier Overview

FACILITY OR SUPPLIER OVERVIEW

This page allows you to add the source and/or supplier categories for which your facility or supplier will be reporting, then to access those data reporting screens using the OPEN buttons.

After data reporting is complete, you can initiate the annual report review and submission process from this page by using the SUBMIT button (or RESUBMIT for subsequent submissions if needed).



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Cal -

REPORT DATA -

2011 Reporting Source or Supp	Validation	Messages?	Subpart F	Reporting	
Sections 95100-95108 (Subpart A)	View Messa	ges		OPEN	
Sections 95115, 95112 (Subpart C	bustion View Messa	ges		OPEN	
Section 95113 (Subpart Y)-Petrol	View Messa	ges		OPEN	
ADD or REMOVE Subparts					
SUBPART ATTACHMENTS					
Uploaded File Name	Uploaded By	Upload	ed Date	_	
No subpart attachments					Q



Reporting: Adding Subparts

 Select applicable subparts EPA SUBPARTS D - AA

95112 (Subpart D)—Acid Rain Program EGU Description (SHOW | HIDE)

95110 (Subpart H)—Cement Production Description (SHOW | HIDE)

95116 (Subpart N)—Glass Production Description (SHOW (HIDE))

95114 (Subpart P)—Hydrogen Production Description (SHOW | HIDE)

95120 (Subpart Q)—Iron and Steel Production Description (SHOW | HIDE)

95117 (Subpart S)—Lime Manufacturing Description (SHOW | HIDE)

95118 (Subpart V)—Nitric Acid Production Description (SHOW | HIDE)

95150-95157 (Subpart W)—Oil and Natural Gas Systems

Not currently available for selection.

Description (SHOW | HIDE)

SAVE

CANCEL

95113 (Subpart Y)—Petroleum Refineries Description (SHOW | HIDE)

95119 (Subpart AA)—Pulp and Paper Manufacturing Description (SHOW | HIDE) GENERAL STATIONARY FUEL COMBUSTION

95115, 95112 (Subpart C)—Stationary Fuel Combustion Description (SHOW | HIDE)

SUPPLIER CATEGORIES

95121 (Subpart MM)—Suppliers of Petroleum Products Description (SHOW | HIDE)

95122 (Subpart NN)—Suppliers of Natural Gas and Natural Gas Liquids Description (SHOW | HIDE)

95123 (Subpart PP)—Suppliers of Carbon Dioxide Description (SHOW| HIDE)

AB 32 COST OF IMPLEMENTATION FEE REGULATION -

95201-95207—AB 32 Cost of Implementation Fee Regulation Description (SHOW | HIDE)

SF6 GAS INSULATED SWITCHGEAR

95350-95359—SF6 Gas Insulated Switchgear Description (SHOW | HIDE)

ELECTRIC POWER ENTITIES

95111—Electric Power Entities

Not currently available for selection.

Description (SHOW | HIDE)

California Air Resources Board



Subpart A

ARB Test Facility - TEST ONLY - Production Site (2011)

Sections 95100-95108 (Subpart A): Facility Reporting Information

Select Facility » Facility or Supplier Overview » Subpart A

SUBPART A - GENERAL INFORMATION

Each facility or supplier, and for each reporting year is required to supply some basic facility level information, including the entering and reporting of relevant NAICS codes and the entering and reporting of all highest-level United States parent companies.



Relevance

Delet

- Applies to all reporters
- Includes info for electricity generators
- Report electricity and natural gas purchases

ADD a NAICS Code

No NAICS codes found.

NAICS CODES NAICS Code

U.S. PARENT COMPANIES

Parent Company		Address	% of Ownership Delet
No parent companies found		Participation and the second	
ADD a Parent Company			
GHG report start date:*	01/01/2011		
GHG report end date:*	12/31/2011		
Explanation of any calculation methodology changes during the reporting year:			li
EPA e-GGRT ID:			
a Full or Abbreviated	Full GHG Repo Abbreviated GH		
include emissions from a cogeneration unit?	○ Yes ○ No ○ Not applicable I	because I am a supplier	

Description

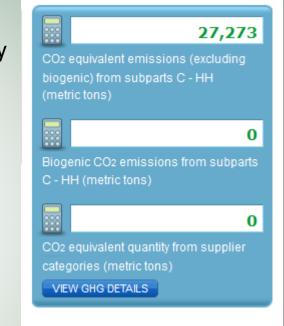
ELECTRICITY GENERATION -

Does this facility have O Yes the capacity to



Emission Roll-ups

- Cal e-GGRT automatically calculates emissions totals for each subpart and aggregates the subpart totals into facility or supplier totals
- Annual emissions are calculated from each applicable subpart, for each of the following GHGs (in metric tons of each gas)
 - Biogenic CO₂
 - CO₂ (excluding biogenic CO₂)
 - CH₄
 - N_2O
 - Each fluorinated GHG
- The subpart totals are rolled-up into the following facility totals
 - Total CO₂ equivalent for all sources and all GHGs with the exception of biogenic CO₂
 - Biogenic CO₂ from all sources
- Calculator DOES NOT calculate compliance obligation for cap and trade





Emission Roll-ups

- If certain reporting elements are left blank, the roll-ups may not be performed correctly
- Cal e-GGRT does not double count emissions within each subpart
- Some required reporting fields are not used in the roll-up calculations, but you still need to enter information for these fields
- Roll-ups are calculated independently for each subpart



Some Useful Terminology

- Total CO₂ emissions
 - Measured or calculated value of CO₂ that includes both biogenic and non-biogenic emissions
- Biogenic CO₂ emissions
 - CO₂ emissions from biomass fuels
 - Biogenic portion of CO₂ from fuels with a fossil and biomass component (i.e. MSW and tires)
- Non-Biogenic CO₂ emissions
 - CO₂ emissions from fossil fuels
 - Sorbent CO₂
 - Process CO₂
 - Fossil fuel fraction of CO₂ from fuels with a fossil and biomass component (i.e. MSW and tires)
- Fossil fuel CO₂ emissions
 - CO₂ emissions from fossil fuels
 - Fossil fuel portion of CO₂ from fuels with a fossil and biomass component (i.e. MSW and tires)



Additional Data Reporting

- ARB requires additional data, not required by the U.S. EPA
- Report all data required within Cal e-GGRT, which is harmonized with the ARB regulation
 - Additional identification of biogenic emissions
 - Equation inputs, such as monthly HHV data or carbon content data
 - Additional information for electricity generation or cogeneration facilities



Subpart C Reporting



Adding a Subpart C Configuration

- Two Step Process
- 1. Configuration Setup
 - Reported once for each configuration
 - Varies by configuration type
- 2. Fuel Use and Emissions per Configuration
 - Reported for each fuel combusted in a given configuration
 - Varies by tier and fuel type



Subpart C Configurations

- Subpart C offers 6 different reporting options, known as Configurations in e-GGRT
- The different reporting options (configurations) are provided in 40 CFR 98.36(b) – (c)
 - Single Unit Using Tiers 1, 2, or 3 [9
 - Single Unit Using Tier 4 (CEMS)
 - Aggregation of Units
 - Common Pipe
 - Common Stack or Duct (CEMS)
 - Alternative Part 75 Reporters

[98.36(b)] [98.36(b)] [98.36(c)(1)] [98.36(c)(2)] [98.36(c)(3)] [98.36(d)(2)]



Subpart C: View Validation

Reporting: Subpart C Stationary Combustion

ARB Test Facility - TEST ONLY - Production Site (2011) 95115, 95112 (Subpart C) - Stationary Fuel Combustion Subpart C Overview

OVERVIEW OF SUBPART C REPORTING REQUIREMENTS Subpart C requires affected facilities to report annual carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) emissions from each stationary combustion unit. First, use this page to identify each stationary combustion

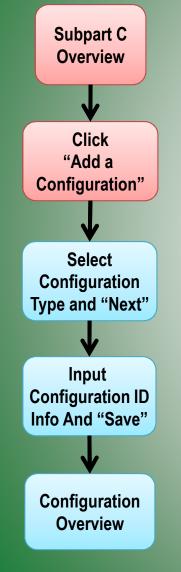
emissions information required by subpart C for each configuration. For additional information about subpart C reporting, please use the Cal

reporting configuration (reporting options listed in §98.36) and then enter

CONFIGURATION SUMMARY

e-GGRT Help link(s) provided.

Configuration Name or ID	Configuration Type	Status ¹)elete
🎲 PG Single Unit	Single Unit Using Tiers 1, 2, or 3	Incomplete	OPEN	×
PG Boiler #3	Single Unit Using Tiers 1, 2, or 3	Incomplete	OPEN	×
Add a Configuration				
★ Facility Overview				





Note: You cannot change the

starting over. This would entail

losing any emissions data for the

current reporting year, if entered.

Reporting Configuration Type for a

unit or group after this step without

Adding a Configuration

- Select appropriate configuration
- Complete descriptive information that follows

ARB Test Facility - TEST ONLY - Production Site (2011) 95115, 95112 (Subpart C) - Stationary Fuel Combustion Subpart C Overview » New Configuration

SUBPART C REPORTING CONFIGURATIONS

For stationary combustion sources required to report under subpart C. Cal e-GGRT requires a facility to identify which reporting option each unit or group of units will be using to report emissions. The different subpart C reporting options are referred to as configurations in Cal e-GGRT. The individual configurations are designed to match the reporting options made available by the rule in 40 CFR 98.36.

Once a configuration is added, Cal e-GGRT will allow the user to enter the required reporting elements for the configuration type selected. A facility may have multiple configuration types and/or multiple configurations of any given type.

For additional information about adding and editing a configuration and the different reporting configurations available, please use the Cal e-GGRT Help link(s) provided.

SELECT A REPORTING CONFIGURATION

Select	Reporting Configuration Type	Calculation Methodology	Rule Reference
\odot	Single Unit Using Tiers 1, 2, or 3	Tier 1, 2, or 3	98.36(b)
\odot	Single Unit Using Tier 4 (CEMS)	Tier 4	98.36(b)
0	Aggregation of Units	Tier 1, 2, or 3	98.36(c)(1)
0	Common Pipe	Tier 1, 2, or 3	98.36(c)(3)
0	Common Stack or Duct (CEMS)	Tier 4	98.36(c)(2)
0	Alternative Part 75 Reporters	98.33(a)(5)	98.36(d)(2)
CANCEL	NEXT		



Entering Fuel and Emissions Data

- Open Unit Configuration
 - Click on "ADD a Fuel"
 - Select a fuel
 - Select a Tier
 - Add other fuels as applicable
- Open Fuel Information
 - Select calculation method
 - Enter fuel use data
 - Enter HHV and other data as applicable
 - See U.S EPA training slides for complete walk-through http://www.epa.gov/climatechange/emissions/training.html



(Gas)

Entering Fuel Information

FUEL INDUIT DATA FOD FOUNTIONS

- Open fuel
- Enter required data
- Confirm entered or calculated results

CONFIGURATION-FUEL-PERIOD	
Unit or Group Name/ID	PG Boiler #3
Configuration Type	Single Unit Using Tiers 1, 2, or 3
Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural
Reporting Period	01/01/2011 - 12/31/2011

	ATION			olume of Fuel		(scf)	
	Single Unit Using Tiers 1	2 or 3		[Fuel]			
-	0	, 2, 01 0		ie [HHV]	0.001028	(mmBtu/scf)	
	PG Single Unit			ific CO2	53.02	Kg CO2/mmBtu	
escription of the Unit or Unit Aggregation				stor [EF]	00.02		
	RICE (Reciprocating int	ernal combustion engine)		tific CH4	0.001	Kg CH4/mmBtu	
		smar compussion engine)		stor [EF]			
Maximum Rated Heat Input Capacity	55 (mmBtu/hr)			tor [EF]	0.0001	Kg N2O/mmBtu	
		2 Emissions from Sorbent Usage					
Total Biogenic CO ₂ Emise metric tons)	sions Total CC (metric to		Status ¹				
otal Biogenic CO2 Emis: metric tons)			Status ¹	PPEN			
netric tons)	(metric to MISSIONS INFORMATIO tion) Calculation	ons) N (for fuels combusted at this	Status ¹ Incomplete				
FUEL-SPECIFIC EN	(metric to MISSIONS INFORMATIO tion) Calculation Period 01/01/2011 -	ons)	Status ¹ Incomplete	elete			



Check Results

• Results calculated by tool or user entered as applicable

CONFIGURATION-	FUEL-PERIOD)					
Unit or Gro	up Name/ID	PG Boiler #3					
Configu	iration Type	Single Unit Using	Tiers 1, 2	2, or 3			
Fuel	(Fuel Type)	Natural Gas (Weig	ghted U.S	S. Average) (N	atural Gas)		
Repo	rting Period	01/01/2011 - 12/3	1/2011				
EQUATION C-1 SU	MMARY AND	RESULT					
Fr	uation C-1	CO2=1x10 ⁻³ × F	Fuel × H	HV × EF			
	futurion o f	Hover over an ele element.	ment in t	he equation a	bove to reveal a defin	ition of that	
Emission Type	Fuel (scf) HHV (mmB	Stu/scf)	EF	Calculated Result	(metric tons)	
CO ₂	500,0	00,000	0.00	1028 53.02			27,252
EQUATION C-8 SUI	MMARY AND	CH ₄ or N ₂ O = 1			EF bove to reveal a defin	ition of that	
Emission Type F						25	
	Fuel (scf)	HHV (mmBtu/scf)	EF	Calculated F	Result (metric tons)	Metric Tons	of CO2e
CH4 5	uel (scf)	HHV (mmBtu/scf) 0.001028		Calculated F	Result (metric tons) 1	Metric Tons	of CO ₂ e
			0.001	Calculated F		Metric Tons	
N ₂ O 5 What CH ₄ result want to re	500,000,000 500,000,000 do you © L port to © E	0.001028	0.001 0.0001 esult rour	nded	1	Metric Tons	11

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Biogenic Emissions

 ARB requires reporting of biogenic emissions totals

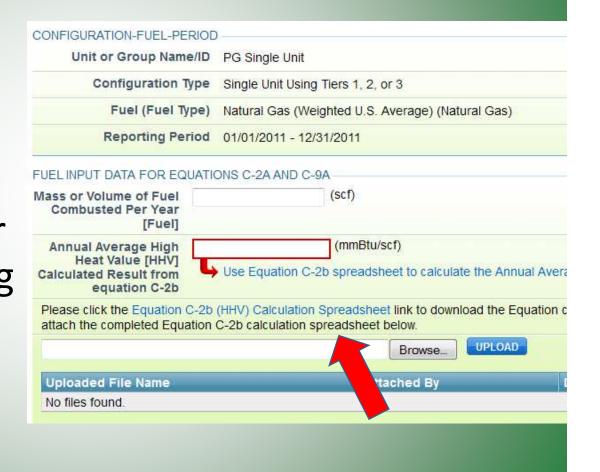
	CONFIGURATION-LEVEL EMISSIONS	INFORMATION		
\langle	Total Biogenic CO ₂ Emissions (metric tons)	Total CO ₂ Emissions from Sorbent Usage (metric tons)	Status ¹	
			Incomplete	OPEN

CONFIGURATION Include all fuels Unit or Group Name/ID PG Boiler #3 Configuration Type Single Unit Using Tiers 1, 2, or 3 for the UAL CO2 FOR ALL FUELS Total annual biogenic CO2 (metric tons) configuration in mass emissions (must equal the sum of calculated annual biogenic CO₂) total SORBENT EMISSIONS Annual CO₂ emissions from (metric tons) sorbent CANCEL SAVE



Uploading Required Supporting Data

- ARB requires reporting of specified additional data that may have been deferred for U.S. EPA reporting
- Complete and upload required spreadsheets provided in tool





Data Validation

- Tool provides data validation
- Most messages must be cleared before report submittal
- Clicking on message brings you to where the issue occurred

ARB Test Facility - TEST ONLY - Production Site (2011) 95115, 95112 (Subpart C) - Stationary Fuel Combustion Subpart Overview - Validation Report

SUBPART C VALIDATION REPORT

This report contains a complete set of validation messages for all data required by this Subpart. For additional information about Validation Reports, please use the Cal e-GGRT Help link(s) provided.

Print-friendly version

FACILITY-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Message ³
No facility level validation	n message	PS.

CONFIGURATION-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Unit Name	Message ³
Data Completeness	C125	PG Single Unit	Annual carbon dioxide emissions from combustion of all biomass fuels combined (if any of the units burn fossil AND biomass). This data element is required.
Data Completeness	C128	PG Single Unit	Annual carbon dioxide emissions from sorbent. This data element is required.

FUEL-LEVEL VALIDATION MESSAGES

Validation Type ¹	1D ²	Unit Name	Fuel Name	Message ³
Data Completeness	C146	PG Single	Natural Gas (Weighted	Annual carbon dioxide emissions from combustion of
		Unit	U.S. Average)	the specified fuel. This data element is required.

← Subpart Overview

¹ Validation Types: Cal e-GGRT generates a variety of validation types, defined below:

- Data Completeness: data required for reporting is missing or incomplete.
- Data Quality: data is outside of the range of expected values. The value you have provided is outside the ARB
 estimated range for this data element. Please double check this value and revise, if necessary. If you believe it to
 be correct, please submit the value as is.
- Screen Error: a data value or combination of data values prevents Cal e-GGRT from continuing to the next page. Typically, this will not appear on the Validation Report, but instead will be displayed on the data entry page at the time the error was created.



Reporting Electricity Generating Unit



Electricity Generation Reporting

- Section 95112 includes reporting requirements for electricity/thermal generation information. It does not have a counterpart subpart in 40 CFR Part 98.
- Data fields for section 95112 can be found in Subparts A, C, and D.
 - Facility-level energy input-output and energy disposition → Subpart A
 - Unit-Level fuels, emissions, and basic information:
 - Non-Part-75 EGU → Subpart C
 - Part 75 EGU → Subpart D



Facility with Electricity Generating Units

Subpart A:

- General information about the electricity generating facility
- Upload a simplified block diagram (pdf preferred)
- Facility-level energy input-output
- Energy disposition

ELECTRICITY GENERATION					
Does this facility have the capacity to generate	Yes No				
electricity?					
ELECTRICITY GENERATING UNIT					
	BASIC INFORMATION	Separate each ID with a comma if more than one.			
CEC ID (if applicable)		Separate each ID with a comma n more than one.			
EIA ID (if applicable)		Separate each ID with a comma if more than one.			
FERC QFID (if applicable)	Separate each ID with a comma if more than on				
Total Facility Nameplate Generating Capacity:	MW				
Facility Type	Select	-			
Facility's Energy Disposition	Select 🗸				
		Browse			
+ ADD Retail Provider/Market	ELECTRICITY (IF APPLICABLE)	Browse			
		Browse			
+ ADD Retail Provider/Market		Browse			
ADD Retail Provider/Market ADD End-User Disposition Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system	ter Disposition				
ADD Retail Provider/Market ADD End-User Disposition Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system	ter Disposition				
ADD Retail Provider/Market ADD End-User Disposition Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system DISPOSITION OF GENERATED T ADD End-User Disposition	ter Disposition				
ADD Retail Provider/Market ADD End-User Disposition Generated electricity used for other on-site industrial processes that are not in support of or a part of the power generation system DISPOSITION OF GENERATED T ADD End-User Disposition	Iter Disposition				



Electricity Generating Units

Subparts C & D:

- Additional data required for EGUs
- Only appears if selected
- Report only applicable fields
- See regulation for full requirements

ELECTRICITY GENERATING	G UNITS		
Does this Configuration have the capacity to generate	Yes	©No	
electricity?			
ELECTRICITY GENERATING	G UNITS	BASIC INFORM	ATION
Nameplate Generating Capacity	MW		
Prime Mover Technology	Select		
Type of Thermal Energy Generation	Select •		
ENERGY GENERATION INF	ORMATI	N	
Gross Generation			MWh
Net Generation			MWh
Total Gross Thermal Output (for Cogeneration or	mmBtu		
Bigeneration) OTHER ENERGY INPUTS D	ATA		
Other Steam Used for Acid Rain Program EGU [95112(b)(8)]	mmBtu		
SUPPLEMENTAL FIRING IN	FORMAT	ION (95111(b)(7), IF APPLICABLE)
Fuel Type	Select ·		
Annual Mass or Volume of Fuel Combusted	1	(short tons, scf, or gallons)	
GEOTHERMAL AND HYDRO	DGEN FL	IEL CELL INFO	RMATION (IF APPLICABLE)
Geothermal Steam Utilized			mmBtu
			eedstock consumption by fuel type in the text box below and the units h fuel, also include the name of the fuel provider and customer
Hydrogen Fuel Cell Fuel Utilized			



Subpart D Units

- Overall functionality closely mirrors the reporting configurations in Subpart C
- Fuels and emissions data fields are mostly the same as in U.S. EPA's e-GGRT
- The only major difference is in how the CO₂ emissions number is entered. Users have to hand-typed the CO₂ number into Subpart D.
- Section 95112 data fields are identical to those in Subpart C



Key Reporting Dates

- See **Key Dates** webpage for specific dates applicable to reporting year
- http://www.arb.ca.gov/cc/reporting/ghgrep/ghg-rep-dates.htm
- Actual Reporting Dates may differ from dates specified in the regulation if the specified dates fall on a Saturday, Sunday, or Holiday
- Key Dates page is updated annually with required submission dates



GHG Reporting Contacts

Subject Matter	Contact
GHG Mandatory Reporting (General)	Dave Edwards, Manager 916.323.4887
Reporting Requirements, Stationary Combustion, Other Sectors (cement, glass, pulp and paper, etc.)	Patrick Gaffney 916.322.7303
Reporting Tool Registration and General Questions	<u>Karen Lutter</u> 916.322.8620
Electricity Generation and Cogeneration Facilities	<u>Anny Huang</u> 916.323.8475
Electricity Retail Providers and Electricity Marketers	Wade McCartney 916.327.0822
Fuel and CO2 Suppliers - Transportation Fuels, Natural Gas, LPG, CO2	Byard Mosher 916.323.1185
Petroleum Refineries, Hydrogen Plants, Oil & Gas Production	Byard Mosher 916.323.1185
Greenhouse Gas Report Verification	<u>Renee Lawver</u> , Manager 916.322.7062
Chief – Greenhouse Gas Emission Inventory Branch	Richard Bode Chief 916.323-8413 33

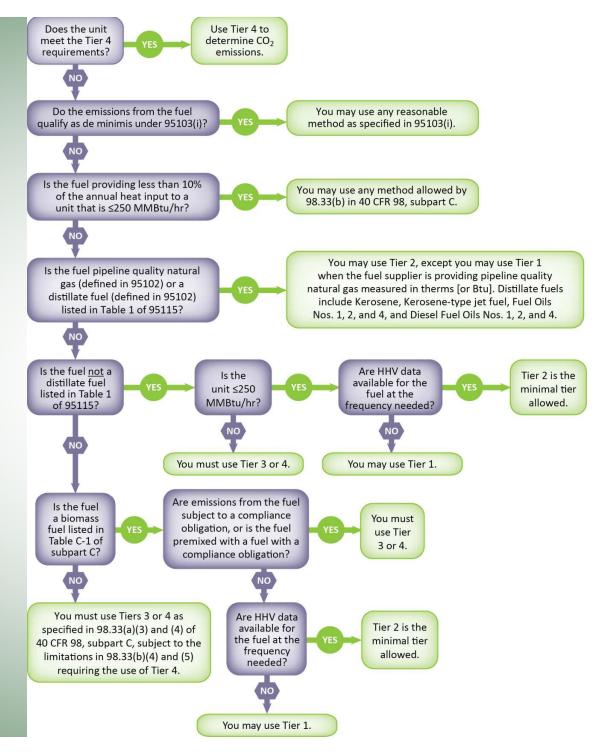


For More Information

- GHG Reporting Website
 - <u>http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm</u>
- See website for:
 - Regulation reporting guidance and fact sheets
 - Reporting tool information
 - "Clean" copy of the regulation (no underline/strikeout)
- Email reporting tool questions to: <u>ghgreport@arb.ca.gov</u>

Reference

- Selecting a Subpart C Tier
- Facilities that qualify for • abbreviated reporting under §95103(a) may use any method in 40 CFR 98.33(a) to calculated GHG emissions. For 2012 (and later) emissions reported in 2013 (and later), facilities must follow the tier selection shown here. For 2011 emissions data reported in 2012, reporters may use the methods allowed by 40 CFR 98, subpart C (see §95103(h)), and are not required to follow §95115(a) and (c).





Acknowledgement

- Components of this slide presentation were taken or adapted from the U.S. EPA training program titled "e-GGRT Training Webinar on Reporting GHG Data for Subparts C&D" David Jacobson, U.S. EPA, GHGRP
- Full EPA slides are available here: http://www.epa.gov/climatechange/emissions/training.html