

Greenhouse Gas Regulations for Stationary Sources: A Side by Side Comparison

RULE	Mandatory Reporting of Greenhouse Gases Rule (MRR)	Greenhouse Gas (GHG) Tailoring Rule
Administrator	US Environmental Protection Agency (EPA)	Air Pollution Control Division (APCD), Colorado Department of Public Health and Environment
Intention of Rule	Reporting of actual GHG emissions to EPA -No control requirements -No emissions limitations -No applicable requirements -No permitting requirements	Permitting potential to emit of GHG at “large” sources -Potential for PSD Review / BACT limits -Title V Operating Permits required -Synthetic minor source permitting available -No minor source permitting -No minor source reporting
Affected Sources	See the List of Subparts, below, for a list of the sources required to report GHG emissions as of March 1, 2011.	All “stationary sources” with emissions of pollutants “subject to regulation” greater than 100 tpy or 100/250 tpy
Emission aggregation	Varies per the source category, definition of “facility”	Definition of “stationary source”
Emission Units	Metric Ton per Year (mtpy)	Short Ton per Year (tpy)
Carbon Dioxide Equivalent - Calculation	<p><i>Carbon dioxide equivalent or CO₂e</i> means the number of metric tons of CO₂ emissions with the same global warming potential as one metric ton of another greenhouse gas, and is calculated using Equation A–1 of this subpart.</p> $CO_2e = \sum GHG_i \times GWP_i \text{ (Eq. A-1)}$ <p>Where: CO₂e = Carbon dioxide equivalent, metric tons/year. GHG_i = Mass emissions of each greenhouse gas listed in Table A–1 of this subpart, metric tons/year. GWP_i = Global warming potential for each greenhouse gas from Table A–1 of this subpart. n = The number of greenhouse gases emitted.</p> <p>40 C.F.R. Part 98, Subpart A, Table A-1: Global Warming Potentials (74 FR 56395-56396) http://www.cdphe.state.co.us/climate/TableA-1.pdf</p>	<p><i>Carbon dioxide equivalent</i> means a metric used to compare the emissions from various GHG classes based upon their global warming potential (GWP). The CO₂e is determined by multiplying the mass amount of emissions (tons per year), for each GHG constituent by that gas’s GWP, and summing the resultant values to determine CO₂e (tons per year). The applicable GWPs codified in 40 CFR Part 98, Subpart A, Table A-1 – Global Warming Potentials are hereby incorporated by reference as in effect as of October 30, 2009, but not including later amendments.</p> <p>40 C.F.R. Part 98, Subpart A, Table A-1: Global Warming Potentials (74 FR 56395-56396) http://www.cdphe.state.co.us/climate/TableA-1.pdf</p>

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Thresholds	25,000 mtpy of CO ₂ e (for certain source categories) All-in for others Proposed Amendments: July 20, 2010		Title V – major source	100,000 tpy of CO ₂ e and 100 tpy of GHG
			PSD – major stationary source	100,000 tpy of CO ₂ e and 100/250 tpy of GHG
			PSD – significance level	75,000 tpy of CO ₂ e and 0 tpy of GHG
Effective Date	Published: October 30, 2009 Effective: December 29, 2009 Proposed Amendments: July 20, 2010		Published: June 3, 2010 Effective: January 2, 2011	
Schedule	First year of data collection: January – December 2010 Emissions Report due March 31 of each year		Step 1 – January 2, 2011	“anyway” sources
			Step 2 – July 1, 2011	“major sources” and “major stationary sources”
Affected Federal and State Programs	Greenhouse Gas Reporting Program (EPA only) *Electronic reporting directly to EPA (e-GGRT)		Prevention of Significant Deterioration (PSD) and Title V Operating Permit (OP) Programs (both EPA and APCD) *Reporting on EPA or APCD approved forms	
Greenhouse Gases (GHG) Included	CO ₂	Carbon Dioxide	CO ₂	Carbon Dioxide
	CH ₄	Methane	CH ₄	Methane
	N ₂ O	Nitrous oxide	N ₂ O	Nitrous oxide
	HFCs	Hydrofluorocarbons	HFCs	Hydrofluorocarbons
	PFCs	Perfluorocarbons	PFCs	Perfluorocarbons
	SF ₆	Sulfur hexafluoride	SF ₆	Sulfur hexafluoride
Reference	40 C.F.R. Part 98 74 Fed. Reg. No. 209, 56374-56508 http://edocket.access.gpo.gov/2010/pdf/2010-18354.pdf http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf		40 C.F.R. Parts 51, 52, 70, 71 75 Fed. Reg. No. 106, 31514-31608 http://www.gpo.gov/fdsys/pkg/FR-2010-06-03/pdf/2010-11974.pdf#page=1 AQCC Regulation Number 3, Parts A, B, C, and D http://www.cdphe.state.co.us/regulations/airregs/5CCR1001-5.pdf	

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List of Subparts 40 C.F.R. Part 98 – Mandatory Reporting of Greenhouse Gases (GHG) Rule

Title	Subpart	Title	Subpart
General Provisions	A	Petrochemical Production	X
Reserved	B	Petroleum Refineries	Y
General Stationary Fuel Combustion Sources	C	Phosphoric Acid Production	Z
Electricity Generation	D	Pulp and Paper Manufacturing	AA
Adipic Acid Production	E	Silicone Carbide Production	BB
Aluminum Production	F	Soda Ash Manufacturing	CC
Ammonia Manufacturing	G	Use of Electric Transmission and Distribution Equipment	DD
Cement Production	H	Titanium Dioxide Productions	EE
Electronics Manufacturing	I	Underground Coal Mines	FF
Ethanol Production	J	Zinc Production	GG
Ferroalloy Production	K	Municipal Solid Waste Landfills	HH
Fluorinated Gas Production	L	Industrial Wastewater Treatment	II
Food Processing	M	Manure Management	JJ
Glass Production	N	Suppliers of Coal	KK
HCFC-22 Production and HFC-23 Destruction	O	Suppliers of Coal-based Liquid Fuels	LL
Hydrogen Production	P	Suppliers of Petroleum Products	MM
Iron and Steel Production	Q	Suppliers of Natural Gas and Natural Gas Liquids	NN
Lead Production	R	Suppliers of Industrial Greenhouse Gases	OO
Lime Manufacturing	S	Suppliers of Carbon Dioxide	PP
Magnesium Production	T	Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foam	QQ
Miscellaneous Uses of carbonate	U	Carbon Dioxide Injection and Geologic Sequestration	RR
Nitric Acid Production	V	Manufacture of Electric Transmission and Distribution Equipment	SS
Petroleum and Natural Gas Systems	W	Industrial landfills	TT

For more information, visit <http://www.epa.gov/climatechange/emissions/subpart.html>.