

Reporting Greenhouse Gas Emissions

This publication is an overview of Ecology's proposed regulation for reporting greenhouse gas emissions. It is intended for those who may need to report greenhouse gas emissions.

Q: What are greenhouse gases?

A: Greenhouse gases are chemicals that contribute to climate change by trapping heat in the atmosphere. There are six internationally recognized greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Q: Where do greenhouse gases come from?

A: Greenhouse gases are released during:

- "Stationary combustion" - fuel burned to produce electricity or at manufacturing facilities (for example, using boilers).
- "Mobile combustion" - fuel burned for transportation (such as in cars, trucks, ships, trains, and planes).
- "Production processes" - the manufacturing of cement, aluminum, ammonia, etc.
- "Fugitive releases" - releases from the production, processing, transmission, storage, and use of fuels and other substances that do not pass through a stack, chimney, vent, or exhaust pipe. Examples are the release of sulfur hexafluoride from electrical equipment or hydrofluorocarbons from air conditioning units.

Q: What are direct emissions?

A: Direct emissions are greenhouse gases released directly from a source. They include stationary combustion, mobile combustion, production processes, and fugitive emissions.

Q: What are indirect emissions?

A: Indirect emissions are greenhouse gases associated with the purchase of electricity, heating, cooling, or steam. For example, producing electricity generates greenhouse gases. The power company has direct emissions from burning coal or natural gas to

WHY IT MATTERS

Greenhouse gases contribute to climate change. Washington is especially vulnerable to climate change because:

- We depend on snow pack for much of our public water supply and for hydroelectricity.
- Our nearly 3,000 miles of coastline are vulnerable to the expected rise in sea levels, threatening our coastal communities.
- Losses in coastline habitat threaten our fish and wildlife.
- Eastern Washington relies on irrigation. Drought can have a catastrophic effect on agriculture.

For general information, go to Ecology's Climate Change web site:

www.ecy.wa.gov/climatechange/

For more information about the reporting rule, go to:

www.ecy.wa.gov/programs/air/globalwarm_RegHaze/GreenHouseGasreporting_rule.html

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produce the electricity. When you purchase electricity to use in your home or business, the emissions generated to produce that electricity are considered indirect emissions for you.

Q: What does “mandatory reporting” mean?

A: Mandatory reporting means you are required by law to report.

Q: How do you know if you need to report?

A: You first need to figure out whether the direct emissions from your operations meet the *reporting thresholds* (the amount of emissions when reporting is required). If your direct emissions meet the reporting threshold, then you will need to report both your direct and indirect emissions.

Reporting thresholds:

You must report if your total annual direct greenhouse gas emissions are equal to or greater than:

- 2,500 metric tons (1 metric ton equals 2,204 pounds) from on-road motor vehicles; or
- **For 2009 emissions:** 25,000 metric tons of direct greenhouse gas emissions from any site or fleet of nonroad mobile sources used for transporting people or cargo (e.g., marine vessels, aircraft, and rail); or
- **For 2010 and future emissions:** 10,000 metric tons of direct greenhouse gas emissions from any site or fleet of nonroad mobile sources used for transporting people or cargo.

You can estimate whether you may be required to report if you know the annual fuel consumption for your stationary and/or mobile sources. The tables below and on the next page show the amount of various fuel types that would typically need to be consumed within a reporting year to reach the applicable reporting threshold.

Table 1: Fleets of on-road motor vehicles

Fuel Type	Unit of Fuel	Reporting Threshold – Metric Tons of CO₂e	Estimated Fuel Consumption to Meet Threshold
Gasoline	Gallons	2,500	280,000
Diesel	Gallons	2,500	240,000
Propane	Gallons	2,500	430,000

NOTE: If your fleet uses more than one of these fuels, you need to add the emissions from each fuel to determine if your total emissions meet the 2,500 metric tons of CO₂e reporting threshold.

Table 2: Stationary sources and mobile sources used for transporting people or cargo

Fuel Type	Unit of Fuel	2009 Reporting Threshold – Metric Tons of CO ₂ e	Estimated Fuel Consumption to Meet Threshold	2010 and Future Years Reporting Threshold – Metric Tons of CO ₂ e	Estimated Fuel Consumption to Meet Threshold
Natural Gas	Cubic feet	25,000	457,000,000	10,000	180,000,000
#2 Oil	Gallons	25,000	2,460,000	10,000	980,000
Bituminous Coal	Tons	25,000	11,100	10,000	4,400
Wood	Tons	25,000	14,400	10,000	5,700
Residual oil (#6)	Gallons	25,000	2,100,000	10,000	846,000

NOTE: If your stationary source or mobile source uses more than one of these fuels, you need to add the emissions from each fuel to determine if your total emissions meet the applicable reporting threshold.

Q: What is a carbon dioxide equivalent (CO₂e)?

A: Different greenhouse gases have different effects on the environment. Because carbon dioxide (CO₂) is the most common greenhouse gas, the others are compared to it. For example, methane traps about 21 times more heat in the atmosphere than carbon dioxide. This means one unit of methane is the equivalent of about 21 units of carbon dioxide. So, the CO₂ equivalent of methane is expressed as 21 CO₂e.

Q: I have several different sites around the state. Do the reporting thresholds apply to each site or to my operation as a whole?

A: For emissions generated in 2009, 2010, and 2011, reporting thresholds apply to each individual site. If you own or operate several emissions sites, you will only report emissions for those sites that individually meet the applicable reporting threshold.

However, beginning with emissions generated in 2012, reporting thresholds apply to the operation as a whole. If you own or operate several emissions sites, add up all of their direct emissions to determine if your operation exceeds the minimum reporting threshold.

Example 1: Company A operates five emission sites in 2009. Two of the sites are in another state. Company A is only required to look at emissions from Washington sites to determine whether it meets the reporting threshold. Looking at the 2009 emissions from the three sites in Washington, one emitted 12,000 metric tons of CO₂e, one emitted 30,000 metric tons of CO₂e, and one emitted 50,000 metric tons of CO₂e. The first site is below the 2009 reporting threshold of 25,000 metric tons and does not have to report. The other two sites each emit more than 25,000 metric tons. Company A must report the emissions from both of these sites.

Example 2: Company B operates five emission sites in 2012, all of which are located in Washington. Each emits about 2,500 metric tons of CO₂e annually. Looking at the emissions from the five sites, the company exceeds the 10,000 metric ton threshold (5 sites x 2,500 metric tons = 12,500 metric tons) and must report its total emissions from all five sites.

Mobile sources are reported as statewide fleets beginning with 2009 emissions. All mobile sources of the same type operating throughout Washington are reported together. On-road motor vehicles, marine vessels, rail equipment, and aircraft are reported as separate fleets.

Q: When do you need to report?

A: You must report each year, starting in 2010 for calendar year 2009 emissions. Reports are due by October 31 of the year after the emissions occur. For example, you must report 2009 emissions by October 31, 2010.

Q: Who will you report your greenhouses gas emissions to?

A: You must report your emissions to Ecology, using an online system to be developed by Ecology. Ecology will establish the reporting process and location for reporting in its regulation.

Q: Why is Ecology doing this?

A: The Governor's 2007 Executive Order about climate change set goals to reduce greenhouse gas emissions in Washington over the next several decades. In 2008, the Legislature passed the Greenhouse Gas Emissions Bill, requiring Ecology to adopt a mandatory greenhouse gas reporting rule. In order to meet the climate change goals, we need to determine what sources are emitting greenhouse gases and how much they are emitting. This will help us determine what actions to take to reduce greenhouse gas emissions in Washington.

Q: How much will this cost (a) the state and (b) reporting organizations?

A: We currently do not know what the cost will be to either the state or reporting organizations. The law says Ecology will establish fees in its regulation to pay for the costs of administering the reporting program. The fee for each reporting organization will be determined based on the size and complexity of the emissions source. For example, the reporting fee for a fleet of on-road motor vehicles will be lower than the reporting fee for a large, complex manufacturing facility.

Q: What are other states and the federal government doing?

A: Several other states (Arizona, California, Colorado, Nevada, New Mexico, Oregon) as well as EPA are developing regulations for reporting greenhouse gas emissions. Europe, the United Kingdom, Australia, and other nations also have reporting programs. Washington's rule is more expansive than the proposed EPA reporting rule and some of the state regulations because it includes fleets (trucks, cars, trains, planes, marine vessels) as well as energy use (indirect emissions from heating/cooling).

Q: What happens next and how can you be involved?

A: Ecology will hold workshops around the state in October 2009 to explain the reporting requirements and answer questions. Public hearings will be held in November 2009. Information about the workshops, public comment period, and public hearings will be posted on Ecology's web site (see below).

Q: Where can you get copies of the draft regulation?

A: See Ecology's web site at

http://www.ecy.wa.gov/programs/air/globalwarm_RegHaze/GreenHouseGasreporting_rule.html

Q: Who can you contact with questions?

A: If you need more information, contact Nancy Pritchett at (360) 407-6082 or

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