

Covered Sectors and Greenhouse Gases

Proposed Regional Cap-and-Trade Program

A design for a regional market-based climate program that reduces global warming pollution to promote a thriving economy and protect public health

Sectors of the economy covered by the program

The cap-and-trade program designed by the Western Climate Initiative (WCI) jurisdictions will include about one-third of Washington State's emissions and about one-half of the emissions in the region when the program starts in 2012. By 2015, the program will expand to include about 90 percent of the emissions in the state and in the region.

The sectors covered in 2012 are:

- Electricity generation. This includes emissions from electricity generated outside the WCI jurisdictions (or generated by a federal entity or on tribal lands) that are delivered to a WCI jurisdiction for consumption in that jurisdiction. This does not include electricity that is transmitted through a WCI jurisdiction but not consumed.
- Combustion of fuels at industrial and commercial sources that emit over 25,000 metric tons of carbon dioxide equivalent (CO₂e).
- Industrial process emissions from sources that emit over 25,000 metric tons CO₂e.¹

The sectors covered in 2015 are emissions associated with the combustion of:

- Transportation fuels such as gasoline and diesel.
- Residential and commercial fuels such as natural gas and propane.
- Industrial fuels such as natural gas and propane used at facilities below the coverage threshold.

Greenhouse gas emissions included in the program

Emissions from six primary greenhouse gases are included in the cap-and-trade program:

- **Carbon dioxide (CO₂).** The largest contributor to human-induced global warming; emitted mostly from burning fossil fuels such as natural gas, gasoline, and coal.
- **Methane (CH₄).** Most emissions result from livestock and landfills.
- **Nitrous oxide (N₂O).** Emitted from agriculture activities and gasoline use.
- **Hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).** Mostly used in refrigeration and air conditioning.
- **Sulfur hexafluoride (SF₆).** Used primarily in the electricity distribution network.

Types of facilities and entities covered by the program

The mandatory cap-and-trade program will cover facilities that emit 25,000 metric tons of CO₂e per year or more. Entities that deliver transportation, residential and commercial fuels, as well as industrial fuels to users below the threshold will also be covered after 2015. In Washington, Ecology estimates the program will cover about 100 facilities and entities and about 20 electricity generation facilities. Reporting of GHG emissions in Washington State will be required starting in 2010 for 2009 emissions. Here is a sample of the types of facilities and entities that may be covered by the program:

- Coal-fired power plants
- Natural gas power plants
- Natural gas pipelines
- Petroleum refineries
- Fabricated metal production
- Semiconductor manufacturing
- Wood product manufacturing
- Iron and steel production
- Flat glass manufacturing
- Cement manufacturing
- Food processing and canning
- Paper and pulp mills
- Aerospace and airplane manufacturing
- Aluminum production
- Fuel distributor

The table below shows how much fuel combusted per year would generate at least 25,000 metric tons of CO₂e.

Type of Gas	Amount of fuel burned per year
Natural Gas	4.6 million cubic feet or 4.7 million therms
#2 Oil	2.5 million gallons
Residual Oil #6	2.3 million gallons
Liquefied Petroleum Gas (LPG)	4.7 million gallons
Pet Coke	2 million gallons
Sub-bituminous Coal	16 thousand tons
Bituminous Coal	11 thousand tons
Waste Tires	9 thousand tons

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¹ Process emissions are emissions of greenhouse gases as a by-product of chemical reactions in processes such as cement manufacturing, not from combustion of fossil fuels.

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