

# Emissions Standards

## Description:

State emissions standards establish limits on greenhouse gas (GHG) pollution by statute, executive order, or through regional initiatives. A state or a group of states might require a certain percentage reduction in carbon emissions by a specified target date relative to a baseline year, for example, Washington state [requires](#) a 50% reduction from 1990 emissions levels by 2050. Other states' GHG targets are set through executive action, such as New Mexico's [goal](#) of reducing emissions 45% below 2005 levels by 2030. There are various approaches to implementing GHG reductions targets. Some state programs focus on GHG emission reductions from certain sectors of the energy industry, such as the electricity generation sector, while other programs seek to reduce emissions economy-wide. Emissions policies can utilize carbon pricing tools, establish a portfolio emissions standard structured in steps (increased reductions over time) and implemented through the integrated resource planning (IRP) process at the utility commission, or establish a maximum allowable rate of emissions per-electricity generation unit, for state commission approval. Emissions standards can also target other types of GHGs beyond carbon dioxide, such as methane or fluorinated gasses.

## Discussion of the Policy:

Emission standards are designed to drive emission reductions, either by establishing carbon performance standards or by implementing market-based instruments to incentivize emission reductions through policies like cap and trade or a carbon tax. Under cap and trade, GHG reductions are achieved by distributing a finite ("capped") number of annual emission allowances that decreases incrementally until the target is met. One of the advantages of a cap and trade program is that it does not mandate carbon reductions from specific facilities, but rather is designed to reduce emissions in the most efficient manner possible across the economy.

Economic efficiency is achieved by allowing affected entities to buy and sell emissions allowances. Firms more capable of efficiently reducing their emissions might retain unused carbon allowances, and will sell those allowances to firms that cannot efficiently achieve emissions reductions. Since a dollar value is assigned to GHGs, higher-emitting facilities are incentivized to reduce carbon emissions, because firms will be required to purchase carbon credits once their initial allocation is expended. Proceeds are used to provide funding to support such things as energy efficiency measures, renewable energy projects, and advanced transportation initiatives; hence, cap and trade is also known as "cap and invest." Cap and trade programs can also spur technological innovation at emitting facilities, as carbon performance standards do, but carbon markets do not inherently require technology changes.

Carbon taxes, a tax on the release of carbon dioxide or the carbon-intensity of commodities, are an alternative carbon-pricing tool. This tax creates a market price signal encouraging the reduction of GHG emissions from various sources. No state has yet established a carbon tax (Washington failed to adopt a carbon tax via ballot measure in 2016 and 2018). At the national level, a [carbon fee and dividend bill](#) was introduced in the House in 2019, which would redistribute carbon tax revenue to households in the form of rebates. Both cap and trade programs and carbon taxes can be effective ways in which to establish a price on carbon.

In addition to carbon pricing policies, an emissions performance standard may also take the form of a portfolio-wide maximum level of allowable emissions for a specific industry. To control utility sector emissions, this can be implemented through the IRP process, where a utility would propose a mix of generation investments that would be required to meet a declining rate of emissions over time. Approval of a resource plan would be contingent on the utility demonstrating that the portfolio of resources would meet emissions standards. Recently, states have been requiring regulatory commissions to consider the social cost of carbon while making resource approval determinations. In 2019, Colorado enacted [legislation](#) directing the utilities commission to require that utilities include the social cost of carbon (valued at \$46/ton) in their resource planning scenarios.

States might also elect to join a new or existing regional greenhouse gas initiative (see example state programs below). Alternatively, states may want to associate with a voluntary compliance mechanism that does not

require a formal commitment within a specific region, but establishes a platform for linkages between states. For example, an MOU among states may be sufficient to establish a tracking regime and the linkages necessary to allow a state to use a regional market.

## Example State Programs:

California and nine states in the northeast (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont) currently have active cap and trade programs.

- [The Regional Greenhouse Gas Initiative \(RGGI\)](#) - RGGI is a multi-state agreement, which establishes a framework and set of goals for the program. The Initiative was developed to allow flexibility for both compliance and expansion of the program to new signatories. The program is directed by a third party organization, RGGI, Inc., a non-profit created to support development and implementation of RGGI. The U.S. Environmental Protection Agency (EPA) also plays a role in credit trading and compliance enforcement as an independent monitor. The initiative is widely regarded as having achieved significant emissions reductions without increasing electric rates or affecting system reliability. Revenues from RGGI carbon auctions are redirected toward funding energy efficiency and renewable energy programs.
- [Western Climate Initiative \(WCI\)](#) - WCI was created in 2007 as a collaborative effort between seven Western states and four Canadian provinces to design a regional, economy-wide cap-and-trade program to reduce regional GHG emissions to 15 percent below 2005 emissions by 2020. As of 2019, California, Quebec, and Nova Scotia are implementing the program as participating members.
- [California's Cap-and-Trade Program](#) - California passed [Assembly Bill 32](#) in 2006 which required the state to reduce greenhouse gas emissions to 1990 levels by 2020. The bill established several programs to aid the state in reaching its goal. One such program is a cap and trade program, which sets a statewide limit on sources responsible for 85% of California's GHG emissions. January 1, 2015 marked the beginning of the state's compliance obligation for transportation fuels, natural gas, and other fuels.

## Key Components:

- An emissions baseline, reduction percentage target, and a final compliance date. Standards can also include interim target dates.
- A list of generating units, or sectors required to participate in the program.
- A process for unaffected entities to join the market voluntarily.
- A process to distribute allowances, such as direct allocations and/or auctions.
- A clear structure for the collection and distribution of revenues derived from the sale of allowances, if applicable. May include measures to finance clean energy projects or job creation programs in clean energy.
- Annual percentage, or mass-based reductions of allowances over a period of time.
- Evaluation, measurement, and verification requirements.
- An enforcement mechanism to ensure compliance either through the issuance of penalties, injunctions, or some other enforcement action.
- A market portal designed for participating entities to buy and trade allowances.
- A third party market program monitor to ensure the market is functioning properly.
- States can reserve a specific number of allowances for certain energy sectors, for example 20% of the emissions reductions shall be met through energy efficiency.

## More Information:

- Center for Climate and Energy Solutions, U.S. State Greenhouse Gas Emissions Reductions Targets: <https://www.c2es.org/document/greenhouse-gas-emissions-targets/>
- Center for Climate and Energy Solutions, U.S. State Carbon Pricing Policies: <https://www.c2es.org/document/us-state-carbon-pricing-policies/>
- The Climate Group: <https://www.theclimategroup.org/>
- The Transportation and Climate Initiative: <https://www.transportationandclimate.org/>
- United States Climate Alliance: <https://www.usclimatealliance.org/>
- Union of Concerned Scientists, Carbon Pricing 101: <https://www.ucsusa.org/global-warming/reduce-emissions/cap-trade-carbon-tax>