

Emission Standards

Description:

Some states have created programs that drive greenhouse gas emission reductions either in certain sectors of the energy industry such as electricity generation, or economy-wide, through the application of cap and trade programs. For example, under a cap and trade construct, a state, or a group of states might require a certain percentage reduction in carbon emissions from 1990 levels by 2050. This reduction will be achieved by the distribution of annual emission allowances that decrease to the point the standard is met in 2050. Other states may establish a portfolio emissions standard that reduces over time and implement it through the Integrated Resource Planning (IRP) process at the utility commission, or establish a maximum allowable rate of emissions per unit for commission approval.

Discussion of the Policy:

Emission standards are designed to drive emission reductions either by carbon performance standards or by creating a market that spurs emission reductions through policies like cap and trade or a carbon tax. 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 economically efficient manner possible.

This is achieved by allowing affected entities to buy and sell allowances. Where those firms that can more efficiently reduce their emissions will do so and then can sell their allowances to those firms that cannot. These programs may also spur technology changes, as carbon performance standards do, but they do not inherently require them.

An emissions performance standard may also take the form of a portfolio wide maximum level of emissions that is allowable. This could be implemented through the public utilities commission 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 demonstrating that the portfolio of resources would meet emissions standards.

Alternatively, a carbon tax can also be used. A carbon tax is a tax on the release of CO₂. This tax creates a market price signal that encourages the reduction of GHG emissions from various fossil fuel sources. Both cap and trade programs and a carbon tax can be effective ways in which to establish a price on carbon.

States might also elect to join a new or existing regional greenhouse gas initiative like the two discussed below. Alternatively, states may want to associate with a voluntary compliance mechanism that doesn't 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.

1. [The Regional Greenhouse Gas Initiative \(RGGI\)](#) - RGGI came about through a multi-state agreement, which established 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. 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 raising electricity costs or impacting system reliability.

2. [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. At present, California and Quebec are implementing the program and linked their systems on January 1, 2014.
3. [California's Cap-and-Trade Program](#) - California passed AB32 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 was a cap and trade program, which set a state-wide limit on sources responsible for 85% of CA'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:

The design of a carbon emission standard will vary, however they tend to have the following components:

- An emissions baseline, reduction percentage target, and an end compliance date.
- A listing of generating units, or sectors required to participate in the program.
- A process for unaffected entities to voluntarily join the market.
- 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.
- Annual percentage, or mass-based reductions of allowances over a period of time.
- Evaluation, Measurement, and Verification requirements (EM&V).
- 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 may reserve a specific number of allowances for certain energy sectors, for example 20% of the emissions reductions shall be met from energy efficiency.

More Information:

- Center for Climate and Energy Solutions, U.S. Climate Policy Maps:
<http://www.c2es.org/us-states-regions/policy-maps>
- The Climate Group, Compact of States and Regions webpage:
<http://www.theclimategroup.org/what-we-do/programs/compact-of-states-and-regions/>