

The Cost of Carbon

Carbon dioxide is a powerful greenhouse gas, and human emissions of CO₂ contribute to global warming and climate change. Carbon regulation means that federal and state governments may regulate businesses and industries which emit CO₂. In effect, carbon regulation puts a price on carbon.

*While carbon regulation could take multiple forms, including a carbon tax, a cap and trade system, or a system of carbon credits, experts agree:
Carbon regulation is imminent.*



"The U.S. needs a strong, consistent and mandatory national framework to manage carbon emissions."

*-Jim Mulva, Chairman & CEO,
ConocoPhillips
February 12, 2008*

"I've seen several surveys that say 70 or 80 percent of the executives in our industry think there will be carbon regulation. In a sense, we're all building our business plans around the carbon scenario. The only issue is what the regulations will look like and when they'll be implemented."

*-- Jim Rogers, CEO
Duke Energy
April 4, 2007*

All three likely presidential candidates endorse a federal climate action plan: Both Senators Clinton and Obama support an 80 percent reduction in carbon emissions by 2050. Senator McCain was lead author of a Senate proposal to reduce carbon emissions by 65 percent by 2050.

The United States Climate Action Partnership (USCAP) is calling on the federal government to quickly enact strong national legislation to require significant reductions of greenhouse gas emissions. Members of U.S. CAP include John Deere, Caterpillar, Conoco-Phillips, Ford, Pepsi-Co, Shell, Duke Energy, and Johnson & Johnson.

Sources:

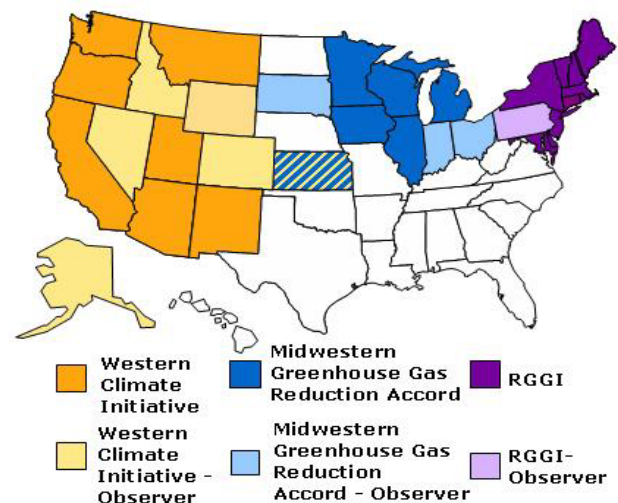
www.pewclimate.org
<http://www.us-cap.org/>
www.wri.org

"...we have decided, as have other banks, to start assessing the cost of carbon in our risk and underwriting processes as we evaluate the business models of utility sector companies. In the absence of Federal legislation, we estimate the cost will fall between \$20-\$40 per ton of carbon dioxide."

*-Ken Lewis, Chairman & CEO,
Bank of America
February 12, 2008*

"A rational set of carbon principles to help guide energy investment strategy is vital to our nation's energy and economic future."

*-Michael G. Morris, Chairman, President & CEO
American Electric Power
February 4, 2008*



In the absence of federal carbon regulation, many states have agreed to greenhouse gas reduction programs, including a regional cap and trade system outlined by 6 Midwestern Governors.

What will carbon regulation look like?

Carbon Tax

A carbon tax puts a price on a ton of carbon dioxide. It taxes fossil fuel sources proportionate to the amount of carbon that they emit when being burned. When coal is burned, it emits more carbon than other fuels and would be taxed accordingly. When natural gas is burned, it emits less carbon and therefore incurs less tax.

Any tax-levying entity (federal government, state, cities, etc.) can conceivably implement a carbon tax (most likely at the wholesale level, like a gasoline tax). Ideally a carbon tax should be revenue-neutral, and it should be implemented gradually over time. A carbon tax can be implemented along with a cap and trade system, or it can stand alone.

Cap and Trade System

A government sets a cap on the total amount of carbon dioxide or other greenhouse gases that a nation is allowed to emit in one year. Ideally, the cap is also lowered over time, to give businesses a chance to adjust to restrictions and allow for improvement in technologies.

The government then issues or auctions permits to businesses, allowing them to emit a certain amount of those pollutants. The total amount of permits issued cannot exceed the cap. Businesses who don't emit a lot of greenhouse gases could then trade (sell) their permits to businesses that do.

Carbon credits

Under this scenario of carbon regulation, businesses will be able to receive carbon credits for pursuing practices that reduce greenhouse gases and help stave off global warming and climate change. These practices are also known as carbon offsets.

Carbon credits are especially important for agriculture, because certain land use practices help to sequester carbon in the soil. Under the right regulatory structure, farmers could get carbon credits for no-till agriculture, CRP lands, and other practices. Credits can be traded on a carbon market.

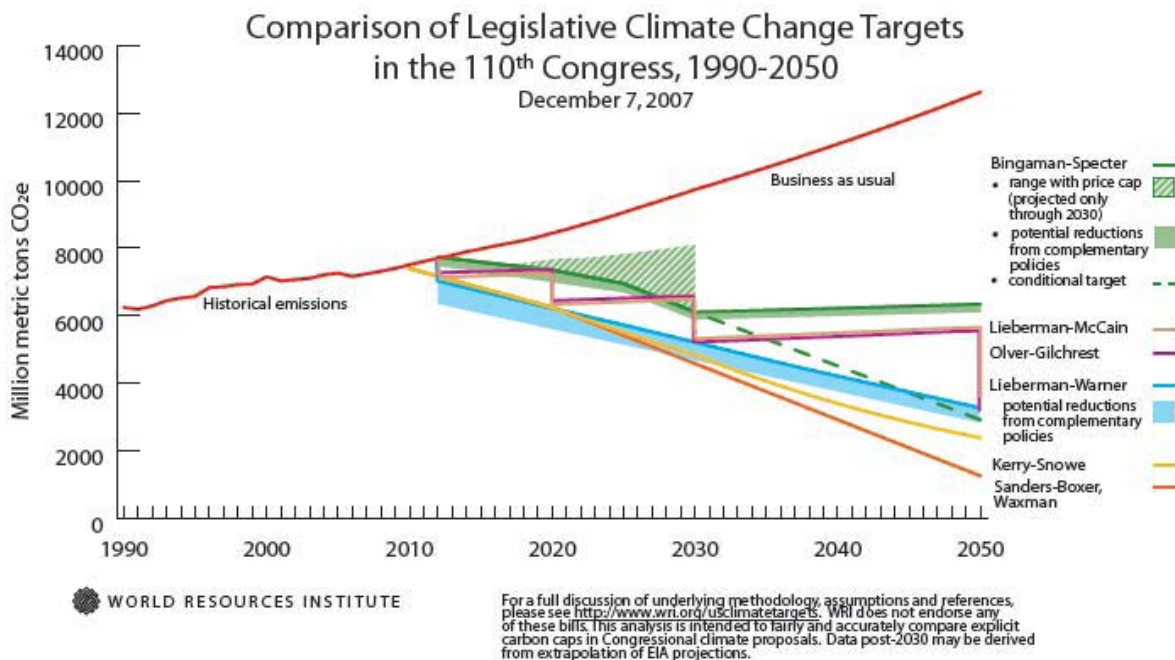


Figure 1. This comparison of recent carbon regulation legislation shows the various bills introduced in the U.S. 110th Congress, and their greenhouse gas reduction targets through 2050.