



U.S. ENERGY AND CLIMATE ROADMAP · CHAPTER BRIEF

Put a Price on It: The How and Why of Pricing Carbon

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Enacting a national, market-based framework to put a price on carbon can achieve ambitious climate change goals while minimizing the cost to the American economy. The most effective climate policy will be one that establishes a national carbon price that is guided by the social cost of carbon. Critically, such a policy would incentivize other countries to reduce their emissions. The revenue collected can be used to refund low-income households and invest in clean energy R&D.

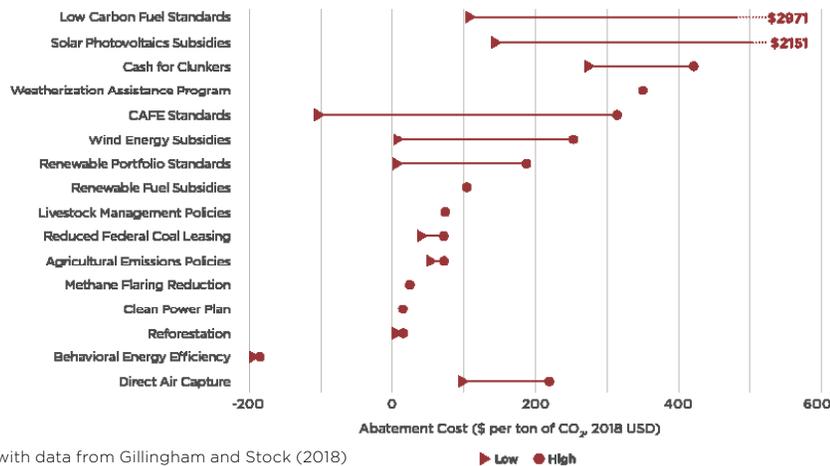
The Challenge

Cheap, reliable fossil fuels play a primary role in powering the U.S. economy and appear on track to continue dominating the global energy system for decades to come without policy changes. Though fossil fuel energy appears inexpensive to consumers, it creates severe harms to society that are not reflected in the market price, from air pollution that damages health and shortens lifespans to carbon emissions that cause climate change. As the world grows richer and energy demand increases, avoiding serious health and climate change damages will require emissions reductions on a massive scale. This underscores the critical importance of policy that makes ambitious mitigation goals attainable at a manageable cost. Currently, the United States employs a range of piecemeal policies that chip away at reducing emissions, but often in a way that makes them costly and inefficient. Carbon pricing mechanisms achieve greater efficiency by giving firms and consumers the option to choose the cheapest ways to reduce emissions.

Policy Context

Widely held by economists as the most cost-effective method to combat climate change, carbon pricing policies have been expanding rapidly around the world in recent years. As of 2019, 57 countries and localities have implemented or scheduled policies that cover about 20 percent of global emissions, according to the World Bank. Some parts of the United States have also implemented carbon pricing policies, such as the Regional Greenhouse Gas Initiative in the northeast and mid-Atlantic and a cap-and-trade program in California. A national U.S. carbon pricing policy has garnered bipartisan support in the past. In 2003, Senators John McCain and Joseph Lieberman first introduced legislation to establish a national carbon cap-and-trade system. In 2008, both presidential candidates supported a national emissions trading system. In 2009, the U.S. House of Representatives passed the Waxman-Markey bill to implement a cap-and-trade system, though the bill stalled in the Senate amidst the global financial crisis and recession. The 116th Congress showed signs of renewed interest in carbon pricing, with ten bills circulating—several with Republican co-sponsors.

Current U.S. Policy is Plecemeal and Often Expensive



Source: Authors' analysis with data from Gillingham and Stock (2018)

Recommendations

The political path to a carbon pricing approach to U.S. climate policy remains challenging, but open. Several principles could guide the development of such an approach.

- Policy that achieves the largest carbon abatement per dollar spent will play an important role in making large-scale climate mitigation attainable.** In comparison to other climate mitigation policies, putting a price on carbon could save Americans hundreds of billions of dollars every year while achieving the most carbon reductions at a given price.
- Technology and sector-specific mandates reduce the cost-effectiveness of a carbon price.** Carbon pricing minimizes costs by maximizing flexibility. When market participants can choose how to reduce emissions, they are free to choose the least costly response. Policies that mandate specific technologies and methods for reducing emissions restrict this flexibility, making it more expensive for people and companies to achieve the same emissions reductions.
- Policymakers can choose between price (tax) and quantity (cap) instruments to balance environmental and economic goals.** While carbon taxes provide greater certainty to businesses and trading delivers greater certainty about the environmental benefits, policies can take a hybrid approach. For example, trading systems can include price ceilings and price floors, while policymakers can tie the level of a carbon tax to emissions so it adjusts automatically to keep the long-run trajectory of emissions within a pre-specified range.
- The Social Cost of Carbon is an appealing benchmark for the level of a carbon tax. When the price of emissions matches the social cost, firms and consumers will undertake those actions for which the benefits outweigh the costs to society and forego those actions for which the costs to society are greater than the benefits for themselves. Thus, this approach maximizes the net benefits of climate mitigation.**
- The revenue from a carbon price could go to the Department of Energy's clean energy research and to low-income households adversely impacted.** The environmental benefits from carbon pricing are unaffected by how the revenues are used. However, because of market failures that hold back some private sector investment into clean energy, some of the money could be used to supplement government clean energy R&D. Some could also be refunded to low-income households to ensure that the policy is equitable.
- International cooperation is critical to addressing the climate change threat and it is vital that a carbon pricing policy encourage climate action in other countries.** U.S. policymakers should align goals and harmonize policy mechanisms across countries. For example, the stringency of U.S. carbon pricing can be tied to the stringency of carbon policies undertaken by other major carbon polluters through multilateral or bilateral agreements.

EPIC INSIGHT

Americans Support a Carbon Tax

EPIC/The Associated Press-NORC Center for Public Affairs Research Poll

Forty-four percent of Americans surveyed support a carbon tax, while 29 percent oppose one. When told some ways the funds might be used, support is higher. Fifty-nine percent support a carbon tax if the funds are used to support research and development for renewable energy programs. If respondents are told that the revenues will be rebated to households, support is at 49 percent.