



## **Policy Proposal: Tax Carbon to Combat Climate Change**

**Garth Heutel**, Georgia State University

### **Policy Challenge: Addressing Climate Change is Costly**

Climate change is a pressing problem with both worldwide and local implications. Global temperatures are already almost one degree Celsius higher due to human emissions of greenhouse gases, and they continue to climb. Without addressing this problem, warming may have devastating effects on the economy, the planet, and on human well-being. Measures of the effects of climate change come in at the trillions of dollars, and they include increases in sea levels, reductions in agricultural productivity, and increases in violent crime and conflict. Addressing climate change, though, is also costly. Our economy is based on an energy infrastructure that burns fossil fuels emitting greenhouse gases, and weaning us off these fuels is a formidable challenge. Thus, policies to address climate change by reducing greenhouse gas emissions ought to be carefully designed to reach their goals at as low of a cost as possible. Cost-effectively reducing emissions leaves more of society's resources to be spent on other pressing needs, like education or health care. Furthermore, achieving emissions reductions at low cost will dampen political and economic opposition to climate policies. The current status of climate policy is a hodge-podge of different rules and regulations, including fuel economy standards for cars and renewable electricity requirements for electricity producers. Though these policies may reduce emissions, they are unlikely to do so cost-effectively, costing society more than is necessary to achieve our environmental goals.

### **Policy Solution: Institute a Tax on Carbon to Reduce Emissions**

A carbon tax offers the most clear-cut policy solution for reducing emissions of carbon dioxide, the most prominent greenhouse gas, in a cost-effective manner. A carbon tax can be levied on producers or consumers of carbon-emitting products. This includes the fossil fuels burned by automobiles (gasoline and diesel) and by electricity generators (coal and natural gas). By increasing the price of these products, both consumers and producers have an incentive to reduce their use and to find the most cost-effective means of doing so. The carbon tax provides an incentive for innovation, reducing the costs of meeting emissions reduction goals by developing and deploying new technologies like solar or wind power.

Unlike the current set of environmental policies, which are mainly command-and-control, top-down regulations, a carbon tax is a proven market-based solution that will achieve environmental goals in a cost-effective manner. Though climate change is a global problem, and a global solution is preferable, even sub-global jurisdictions can institute carbon pricing policies to successfully reduce their emissions. Perhaps the most notable example of a successfully implemented carbon tax is the one in British Columbia. Since 2008, British Columbia has seen its economy grow while its carbon emissions have dropped thanks to the tax. Other successful carbon pricing policies include the European Union's emissions trading system and the Regional Greenhouse Gas Initiative involving several northeastern US states. While both of these policies are a cap-and-trade market rather than a carbon tax, their success demonstrates the value of placing a price on carbon in achieving emissions reductions cost-effectively. They demonstrate that at any level of government – local, state, or national – a carbon tax can be a viable policy solution.

The benefits of a carbon tax would be the reduction in emissions of the greenhouse gas carbon dioxide, which by combating the increase in temperatures from climate change would increase economic output and human well-being. Climate change is especially expected to impact low-income communities, so many of these communities stand to benefit greatly from a reduction in carbon emissions. The policy will not, of course, be costless. A carbon tax will raise the price of many goods and services, especially carbon-intensive goods like gasoline and electricity. However, two features of the policy can help ameliorate these negative effects. First, as mentioned earlier, the carbon tax yields a cost-effective reduction in pollution. Other policies, like technology mandates, also have costs, and in fact those other policies' costs are higher than the costs of a carbon tax. Second, unlike some other policies, a carbon tax yields government revenue, which can be used

to offset costs a number of ways. For example, carbon tax revenue could be used to offset other taxes, or it could be directly returned to households. While it is unlikely that any environmental policy can be designed that will face no political opposition, a case can be made that a carbon tax ought to be one of the most politically palatable policy tools given its low cost and ability to offset those who are burdened.