

## Carbon Tax vs. Cap & Trade

At this point a few words about the two most prominent energy policy schemes are in order.

1. Carbon Tax: A fuel is taxed based on how much carbon it contains. The effect would be to increase the cost of using the fuel: the more carbon-rich the fuel (coal and oil), the bigger the increase. The increased price would drive down demand for all fuels, but carbon-rich ones especially. The price increase would not flow to the fuel's producer, however, it would flow to the government. So it would not encourage development of more carbon-rich fuel reserves. On the other hand, the increased price of carbon-rich fuels would advantage carbon-lean fuels (everything but coal and oil), and the advantage *would* flow down to those producers, stimulating development of carbon-lean reserves. In addition, the increased price would depress demand, encourage efficiency, and encourage conservation. It would also provide funds to the government that could be used for appropriate purposes. One possible use would be to make the tax revenue neutral by providing dividend payments or tax reductions to individuals. A carbon tax would be relatively simple and easy to administer, and it would be easily applicable across all fuels and all uses. Its disadvantages would be that it is a tax, which is an anathema to some people. It would be regressive unless it was ameliorated, and it would work only through negative incentives. It would be a stick without a carrot.<sup>i</sup>

2. Cap-and-Trade. For each unit of pollution emitted, the emitter must purchase a credit from the government. If the emitter is successful in reducing emissions, the excess credits may be sold to other emitters who have not been successful. The government sets a cap on total emissions and prints only that many credits. In effect, all emissions are taxed by the auction price of the credit. Thus, a cap-and-trade system has many of the same effects that a tax does. But by selling excess credits, companies that reduce emissions the most receive an economic benefit for doing so, while companies that don't are penalized. In addition, because it employs market systems, the program feels less like a tax to some, even though it is one. The downside of such a system involves the difficulty of establishing a proper initial cap, and the political difficulty of steadily reducing it. If the cap is too generous, it will not effectively reduce pollution. In addition, groups that don't pollute to begin with can sell their credits to those who do, and emissions are not reduced.<sup>ii</sup> Further, resistance to the 2007 increase in the automobile Corporate Average Fuel Economy requirement should serve as a warning about the difficulty of any system that requires political will for such ratcheting up or down. The European Union Emission Trading Scheme<sup>iii</sup> and the U.S. Acid Rain Program<sup>iv</sup> are examples of currently operating cap-and-trade systems. While the European system has been controversial (they gave the credits away instead of auctioning them), most analysts judge the U.S. system to be generally successful.

3. Another difference between these two types of programs needs to be highlighted. The carbon tax model taxes the carbon in the fuel that is consumed, and there are only a few types of fuel. It would apply to everybody. This is more comprehensive yet simpler to administer. The cap-and-trade program applies to what comes out the smokestack, not what goes in. Even though the program would apply only to large emitter sources, there are thousands, and each is unique, making the program more complex and vulnerable to abuse. How do you monitor if a source emits more than it has credits for? On the other hand, it is a system that can be easily applied to any problematic emission, such as SO<sub>2</sub>, NO<sub>x</sub>, or mercury.

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<sup>i</sup> Carbon Tax Center. <http://www.carbontax.org>.

<sup>ii</sup> *Emissions trading*. Wikipedia. [http://en.wikipedia.org/wiki/Emissions\\_trading](http://en.wikipedia.org/wiki/Emissions_trading). Viewed online 11/5/07.

<sup>iii</sup> *European Union emission trading scheme*. Wikipedia.

[http://en.wikipedia.org/wiki/European\\_Union\\_Emission\\_Trading\\_Scheme](http://en.wikipedia.org/wiki/European_Union_Emission_Trading_Scheme). Viewed online 11/5/07.

<sup>iv</sup> *Acid rain program*. Wikipedia. [http://en.wikipedia.org/wiki/Acid\\_Rain\\_Program](http://en.wikipedia.org/wiki/Acid_Rain_Program). Viewed online 11/5/07.