

# Sightline Institute

## Three Major Contenders for Carbon Pricing

|                    | Carbon Tax  | Cap Trade (With Auctioning)  | Cap & Trade – with grandfathered credits   |
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| <b>Description</b> | A fee on greenhouse gas emissions is levied, based on the amount of CO <sub>2</sub> , or equivalent, is emitted. The fee can be phased in, ratcheted up to improve effectiveness, or reduced as needed.   | The government sets a firm cap on total annual CO <sub>2</sub> emissions, and--instead of handing out carbon credits for free--it holds regularly scheduled auctions where major emitters, such as utilities or refineries, can purchase credits for their emissions. Emitters with low-cost reduction options have an incentive to reduce their emissions and sell any excess credits they may have purchased. On the other hand, emitters with higher-cost emissions reduction choices will buy additional credits rather than reducing their emissions.   | As with auctioned cap and trade, the government sets a firm cap on total annual CO <sub>2</sub> emissions. However, in a grandfathering system the government then awards or allocates emissions credits for free to emitters based on their historical or expected emissions. The credits can be used by owner, or sold to other emitters. The financial incentives for trading credits works the same as in cap and auction, outlined above. (Note that there is not necessarily a bright line between the auction and grandfathering flavors of cap and trade; many current proposals are a hybrid.)  |
| <b>Pros</b>        | <p><b>Predictable costs:</b> Relatively stable price signal can help businesses and consumers plan energy spending and provide greater certainty for those efficiency investments that have large up-front costs.</p> <p><b>Fast implementation:</b> Rules are fairly straightforward, and can be implemented using existing tax collection and enforcement infrastructure.</p> <p><b>Full coverage:</b> An “upstream tax” – one that’s levied where fuels enter the economy at the mine, wellhead, tanker or pipeline -- could cover 90 percent of CO<sub>2</sub> emissions from fossil fuels.</p> <p><b>Revenue source:</b> As with cap and auction, the program revenue (the tax receipts) could be used to ease burdens on the poor and middle class, offset unpopular taxes, reduce compliance costs, finance rapid reductions, or aid industry.</p> | <p><b>Real reductions:</b> The cap, which will shrink over time, guarantees that specific emissions reductions targets will be met.</p> <p><b>Brings in revenues:</b> Auctioned cap and trade brings in revenues that can be used to ease the burden on those with lower incomes (thereby reducing or eliminating the program's regressivity), reduce the program's compliance costs, or finance more rapid emissions reductions.</p> <p><b>Promotes best buys first:</b> Auctioned cap and trade activates the power of the market to seek out the cheapest and most efficient reductions first: In this system, when reducing emissions is cheaper than the cost of the permits, emitters will make reductions in their emissions.</p> <p><b>It tips the playing field away</b> from big historic polluters and toward leaner and cleaner companies.</p> | <p><b>Real reductions:</b> The cap, which will shrink over time, guarantees that specific emissions reductions targets will be met.</p> <p><b>Familiar and tested:</b> Grandfathered cap and trade systems are underway for sulfur dioxide and nitrogen oxides in the U.S, and CO<sub>2</sub> in the European Union. The U.S sulfur dioxide program has been very successful.</p> <p><b>Competitive edge:</b> Granting emissions credits for free can help industries remain competitive with companies in regions without CO<sub>2</sub> caps.</p> <p><b>Smooth transition:</b> Existing major emitters don’t have to scramble to buy credits.</p> <p><b>Promotes best buys first:</b> As in auctioned cap and trade, the cheapest and easiest reductions will typically be made first.</p> |
| <b>Cons</b>        | <b>No guarantees:</b> Emissions may not decline if people are willing to  | <b>Price volatility:</b> Some market-based emissions trading   | <b>Price volatility:</b> Some market-based emissions trading   |

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|  | <p>pay higher costs, as has been the case with gasoline and diesel. Note, however, that even a modest tax on CO<sub>2</sub> is likely to discourage coal-fired power.</p> <p><b>The “T Word”:</b> Taxes are thought to be toxic to voters, and it could be difficult to maintain taxes or to ratchet them upward if further emissions reductions are needed.</p>  | <p>systems have experienced large price swings, though there are ways to reduce volatility.</p> <p><b>Complexity and delay:</b> Complex new rules could foster delay, political wrangling among special interests, and difficulties with enforcement.</p> <p><b>Geographic scope</b> – The program's market efficiencies are probably better realized at a regional or national level, such as the Western Climate Initiative.</p>   | <p>systems have experienced huge price swings as a result of over-allocating allowances.</p> <p><b>Complexity and delay:</b> Complex new rules could foster delay, political wrangling among special interests, and difficulties with enforcement.</p> <p><b>Geographic scope:</b> The program's market efficiencies are probably better realized at a regional or national level, such as the <a href="#">Western Climate Initiative</a>.</p> <p><b>Windfall profits:</b> Granting free credits means conferring a windfall to polluters (because the credits are a valuable fungible commodity), which likely will not be passed on to consumers. (A useful analogy is giving Exxon <a href="#">free World series tickets</a>.)</p> <p><b>Inherently regressive:</b> A grandfathered system provides no revenue to help cushion the program's effects on the poor and middle class, or to finance other objectives to support reducing emissions.</p> |
| <p><b>Supporters and prospects</b></p> | <p><a href="#">Sweden</a>, Norway, <a href="#">Finland</a>, Denmark, the Netherlands and, more recently, <a href="#">Quebec</a> levy carbon taxes. Many economists, such as William <a href="#">Nordhaus</a> (Yale University), Charles Komanoff (<a href="#">Carbon Tax Center</a>), <a href="#">Kenneth Green</a> (American Enterprise Institute), <a href="#">Ian Parry</a> (Resources For the Future), and Greg Mankiw (Harvard University), favor carbon taxes, as does <a href="#">New York City Mayor Bloomberg</a>. See the <a href="#">Carbon Tax Center</a> for other supporters.</p> | <p>The European Union plans to auction more allowances. The Regional Greenhouse Gas Initiative among northeastern states will auction at least 25 percent of its allowances; Massachusetts, among others states, plans to auction 100 percent of their credits. Hydro and nuclear utilities may support cap and auction. Support from Natural Resources Defense Council, Congressional Budget Office, economist Larry Goulder (Stanford University), among many others. Most environmental groups and many economists support cap and auction.</p> | <p><a href="#">The European Union</a> has a grandfathered cap and trade system. <a href="#">The Northeast Regional Greenhouse Gas Initiative</a> includes at least some grandfathering. Many proposed cap-and-trade bills include at least partial grandfathering. The <a href="#">U.S Climate Action Partnership</a> (British Petroleum, General Motors, General Electric, Environmental Defense, World Resources Institute, and many others) favors grandfathering.</p>   |