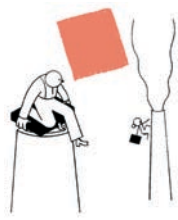



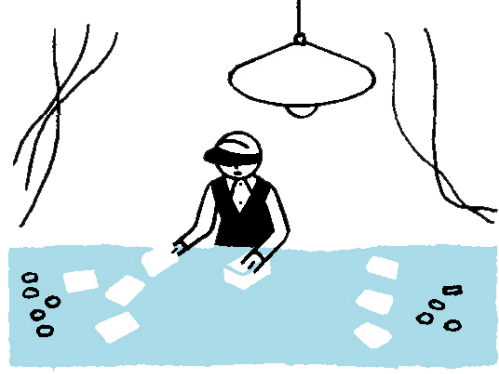
Cap and Trade How It Works



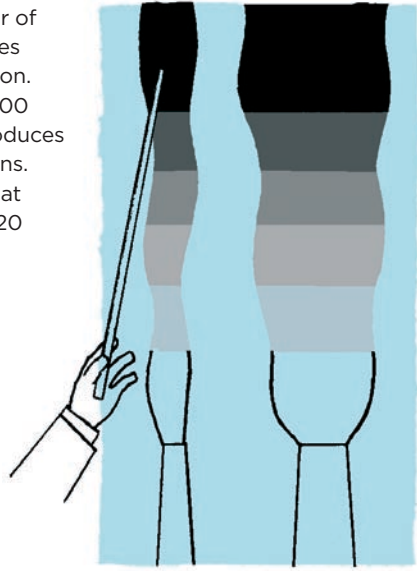
A CAP-AND-TRADE SYSTEM COMBINES A REGULATORY TOOL (the capping part, which requires permits, often called allowances) with a marketplace one (the trading part). The goal is to reduce the emissions of a particular kind of pollutant. In the recent past, this approach has succeeded in dramatically lowering sulfur dioxide emissions and the acid rain they produce. Today the European Union has a similar plan in place to curb greenhouse gases, and some U.S. states are considering plans as well. Businesses like cap and trade because it offers flexibility in meeting their reduction targets. It's also popular because of what it's not: a carbon tax. Whatever the merits of such a proposal, higher taxes are politically radioactive. Another attribute of cap and trade for greenhouse gases is clear: Since climate change is a global concern, pollution cuts anywhere will contribute to solving the problem. Just as there are many sources of carbon pollution—from power plants to cars and homes—there are also variations on a cap-and-trade plan for decreasing it. Here's a simplified but representative explanation, using electric utilities as a test case.



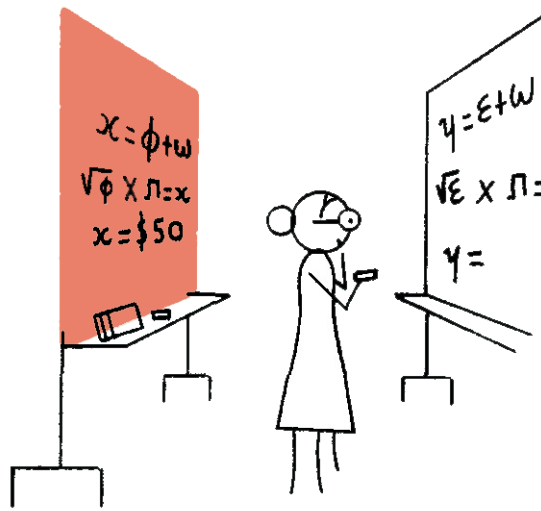
1. First Congress would come up with a mandatory emissions cap, setting a limit on the amount of greenhouse gases a group of polluters is allowed to emit collectively. Since the aim of cap and trade is to bring down the total emissions produced, the cap would be lower (say, 20 percent over a period of years) than the total amount of pollution currently being created by the group. In successive years, as reductions are achieved, the cap can be dropped even further to reach a longer-term goal.



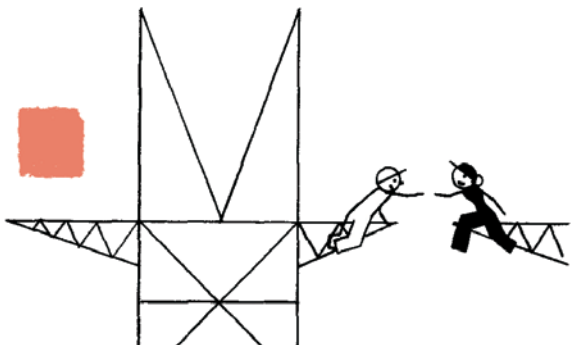
2. A regulator—probably the Environmental Protection Agency—then divides the emissions allowed under the cap into a limited number of credits (or allowances), each the equivalent of, say, a ton of pollution. These credits are distributed to members of the group, possibly through an auction. Their scarcity establishes their value; companies can then decide which option (buying or selling credits) would provide them with the greatest economic benefit.



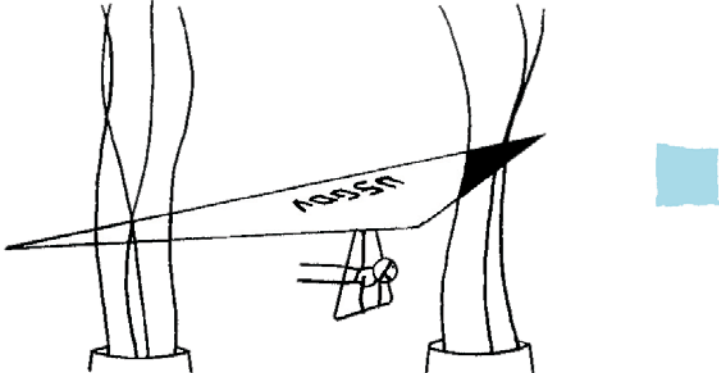
3. Consider this example, using a pair of utilities to represent two companies producing greenhouse-gas pollution. Under current conditions, Utility 1 emits 1,200 tons of greenhouse gases, and Utility 2 produces 800 tons, for a combined total of 2,000 tons. The regulator sets the cap for this “group” at 1,600 tons of greenhouse-gas emissions, a 20 percent cut from current levels.



4. It will cost Utility 1 \$50/ton to lower its emissions. Utility 2's cuts, for any number of reasons, will cost \$30/ton. If each utility were simply required to pare its emissions by 20 percent, Utility 1's cuts would cost \$12,000 (240 tons at \$50/ton); Utility 2's would cost \$4,800 (160 tons at \$30/ton). But by trading pollution credits in a special marketplace, both utilities could save money.



5. Using this approach, Utility 1, instead of making all of its required cuts, decides to buy 100 pollution credits at market value, say \$40/ton (\$4,000). Since Utility 2 can meet its own emissions requirements and more, it decides to sell 100 pollution credits at \$40 each (also \$4,000). As a result, Utility 1's costs would be \$7,000 (140 tons at \$50/ton) plus the \$4,000 it paid for 100 credits, for a total of \$11,000 (a \$1,000 savings). Utility 2 would cut its 160 tons plus the 100 tons it sold. At \$30/ton, its cost is \$7,800. But include the \$4,000 it got for the 100 credits and the total drops to \$3,800 (also a \$1,000 savings). The smaller cap is thus met in a way that shrinks the bill for utilities and, ultimately, consumers. The real winner: the global environment.



6. The final step is to quickly and effectively monitor compliance. If the utilities are not living up to the terms of the agreement, penalties must be swift and strong enough to ensure compliance. In the acid rain program, the non-complying facility is assessed a penalty two to four times higher than the price of a credit. Emissions from utilities or refineries can be tracked easily, since monitors can be placed right in their smokestacks.