Nuts and Bolts of Cap and Trade

Steve Weiss, Senior Policy Associate for the NW Energy Coalition, interviewed by Jay Hutchins.

Sockeye: Steve, help us explain cap and trade of carbon emissions to our readers.

Weiss: A cap and trade system caps carbon emission at certain levels through government-issued, or auctioned, tradable permits or allowances that large industries and utilities must have in order to emit greenhouse gases such as CO2. The idea is to create an artificial shortage of these tradable permits.

Sockeye: Per year?

Weiss: Yes, if society emits a million tons of carbon in a year there would be, perhaps, 950,000 permits. The idea would be to reduce emissions by 5 percent, which gives producers of emissions incentive to invest in ways of reducing pollution. Every few years the amount of permits would be reduced.

Initially, these permits covering 95 percent of emissions can be given away on the basis of historic emissions. These can also be auctioned or some combination of both—auctions are supported by most economists. The whole process creates a market making permits valuable, so at the end of the year permits that you don't have to turn in can be sold to someone else who needs them because they were less efficient or increased their production. This creates a lot of incentive to reduce emissions.

Sockeye: Caps are lowered over time by reducing the amount of permits available?

Weiss: That's right, and the method of allocation chosen can make a big difference in how impacts are spread throughout the economy. However, in all cases the main effect is to make carbon emissions costly, thereby allowing technology and market forces to make energy production more efficient and even less expensive. Those who embrace new technologies that reduce emissions or use less energy will face lower costs and be more competitive than those who fail to do so.

Sockeye: But, what if they have to compete with suppliers outside the system?

Weiss: Industries that cannot pass on increased costs due to having competitors in other states and countries not covered by the system could be losers. If customers can buy, say cement, from someone outside of the cap and trade, perhaps from China, it would be cheaper, thus threatening businesses inside the system.

One answer is for the government to put an import tariff on foreign goods from countries without carbon regulation equal to their carbon content. Of course, regional systems set up by states or organizations such as the Western Climate Intitiatve, don't have the authority to set tariffs, but they may use some auction revenues to help companies facing serious outside competition.

Sockeye: What about the overall cost to consumers, especially before the market in permits imposes change on the system?

Weiss: Prices will go up reflecting the carbon-content of the product, but that's the whole idea, to give consumers that price signal. But how much they rise depends on how low the cap is initially set. More importantly, if there is revenue from permits auctioned by the government, this money can be used to offset permit costs for industries that face foreign competition, retraining workers from older, inefficient companies, and helping low-income citizens who are most vulnerable to higher bills. This revenue can also be used to introduce efficient technology, renewable resources, and conservation, which can substantially mitigate costs to consumers. Such expenditures reduce emissions and reduce costs overall.

Sockeye: I understand that some people are arguing that a portion of the auction money ought to be used to reduce other taxes instead of invested in emissions reducing strategies.

Weiss: That idea would use cap and trade to create certainty in the lowering of emissions but the auction revenue would offset other taxes and not be invested in green initiatives. In, essence, instead of taxing income (income tax) or consumption (sales tax), we would shift taxes and put them on emissions. This could utilize market signals for reducing carbon while not increasing overall costs to consumers.

Sockeye: So, this is a hybrid approach that combines elements of a straight carbon tax, such as tax shifting, with the certainty of reducing emissions that comes with cap and trade?

Weiss: That is right. A straight carbon tax sets one price for emissions, rather than relying on markets to do so. This provides some cost certainty for investors and planners, but without a market pricing mechanism a carbon tax provides no certainty that emission reductions will actually occur.

Sockeye: Because with a straight tax people can plan and accept current levels of emissions as a cost of doing business?

Weiss: That's right, with a tax, people may simply adjust to higher costs and do not reduce emissions very much.

Sockeye: So, the point is that the appeal of tax shifting can be incorporated into cap and trade?

Weiss: That is correct.

Sockeye: Let's shift to another topic. I hear a lot about gaming a cap and trade system, but don't hear good examples?

Weiss: Well as permits rise in price, it may be cheaper for people with permits to stop producing and just sell permits. But this can only happen if permits are given away for free. That's one big reason most economists favor auctioning the permits. There could also be hording of permits to raise prices, but rules can also be developed to guard against that.

Sockeye: By hording you mean, cornering the market on permits?

Weiss: Right, but there is no shortage of viable strategies available that industry can use to limit emissions, so hording wouldn't make much sense, if the market is set up properly.

Sockeye: Are there other ways to game the system?

Weiss: Oh yea. When you auction the permits then the state has all this revenue and the lobbying starts. Industries line up to get some of it back in the form of tax breaks and waivers. It's called sausage making. When this part of the process starts it's not going to be pretty.

Sockeye: I know there were problems with gaming in Europe where they signed the Kyoto Protocols.

Weiss: The permits were given away and not auctioned and industries had cleverly overestimated their historic emissions. Those industries simply got a windfall. Also, because there were too many permits at first, the price fell, so there was little incentive to become efficient and little revenue for government to use either. An auction would have been better, perhaps with a minimum price.

Sockeye: What about a recession, will that affect the cost of permits?

Weiss: Yes, if estimates are based on more robust years the price for permits will fall dramatically during a recession. But so will emissions. Again, a minimum price can stabilize the price of permits.

Sockeye: Isn't it a little disingenuous to claim, as many people do, that carbon trading will be as effective as cap and trade was for the sulphur dioxide that caused acid rain?

[The EPA's Acid Rain Program, reduced sulphur-dioxide emissions in power plants burning sulfur-containing coal or oil by 33 percent between 1983 and 2002.]

Weiss: It's hard to say. That program covered only a finite, limited group of mainly coal-fired power plants. There was no foreign source of electricity, monitoring was easy, and new technology was coming on-line to reduce the emissions. So generally it was a smaller, less complicated issue—but it did work very well, reducing emissions at a cost much less than had been anticipated.

I think a carbon cap and trade mechanism will be more difficult to implement, because it will have to be much more complicated, and of course this allows for more politics. But the principle is still the same: Put a price on greenhouse gas emissions to incentivize efficiency, technological advances, and, frankly, less waste.

Sockeye: Will cap and trade-or a carbon tax-do the job? Will emissions be reduced?

Weiss: Price signals created by either a carbon tax or a cap and trade mechanism are only a means to an end. They give people incentive while raising money to take action. Actual reductions come from new efficiency technologies, renewables, and reduced waste. There are other policies that do that directly such as better building codes, appliance and equipment standards; vehicle CAFÉ (mileage) standards, mass transit, and many others.

Sockeye: Thanks Steve.

[An excellent argument for a carbon tax can be found at carbontax.org]