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Cap and Fade

By JAMES HANSEN   DEC. 6, 2009

AT the international climate talks in Copenhagen, President Obama is expected to announce that the United States wants to reduce its greenhouse gas emissions to about 17 percent below 2005 levels by 2020 and 83 percent by 2050. But at the heart of his plan is cap and trade, a market-based approach that has been widely praised but does little to slow global warming or reduce our dependence on fossil fuels. It merely allows polluters and Wall Street traders to fleece the public out of billions of dollars.

Supporters of cap and trade point to the 1990 Clean Air Act amendments that capped sulfur dioxide and nitrogen oxide emissions from coal-burning power plants — the main pollutants in acid rain — at levels below what they were in 1980. This legislation allowed power plants that reduced emissions to levels below the cap to sell the credit for these excess reductions to other utilities whose emissions were too high, thus giving plant owners a financial incentive to cut back their pollution. Sulfur emissions have been reduced by 43 percent in the two decades since. Great success? Hardly.

Because cap and trade is enforced through the selling and trading of permits, it actually perpetuates the pollution it is supposed to eliminate. If every polluter's

emissions fell below the incrementally lowered cap, then the price of pollution credits would collapse and the economic rationale to keep reducing pollution would disappear.

Worse yet, polluters' lobbyists ensured that the clean air amendments allowed existing power plants to be "grandfathered," avoiding many pollution regulations. These old plants would soon be retired anyway, the utilities claimed. That's hardly been the case: Two-thirds of today's coal-fired power plants were constructed before 1975.

Cap and trade also did little to improve public health. Coal emissions are still significant contributing factors in four of the five leading causes of mortality in the United States — and mercury, arsenic and various coal pollutants also cause birth defects, asthma and other ailments.

Yet cap-and-trade schemes are still being pursued in Copenhagen and Washington. (Though I head the NASA Goddard Institute for Space Studies, I'm speaking only for myself.)

To compound matters, the Congressional carbon cap would also encourage "offsets" — alternatives to emission reductions, like planting trees on degraded land or avoiding deforestation in Brazil. Caps would be raised by the offset amount, even if such offsets are imaginary or unverifiable. Stopping deforestation in one area does not reduce demand for lumber or food-growing land, so deforestation simply moves elsewhere.

Once again, lobbyists are providing the real leadership on climate change legislation. Under the proposed law, some permits to pollute would be handed out free; and much of the money actually collected from permits would be used to pay for boondoggles like "clean coal" research. The House and Senate energy bills would only assure continued coal use, making it implausible that carbon dioxide emissions would decline sharply.

If that isn't bad enough, Wall Street is poised to make billions of dollars in the "trade" part of cap-and-trade. The market for trading permits to emit carbon

appears likely to be loosely regulated, to be open to speculators and to include derivatives. All the profits of this pollution trading system would be extracted from the public via increased energy prices.

There is a better alternative, one that would be more efficient and less costly than cap and trade: "fee and dividend." Under this approach, a gradually rising carbon fee would be collected at the mine or port of entry for each fossil fuel (coal, oil and gas). The fee would be uniform, a certain number of dollars per ton of carbon dioxide in the fuel. The public would not directly pay any fee, but the price of goods would rise in proportion to how much carbon-emitting fuel is used in their production.

All of the collected fees would then be distributed to the public. Prudent people would use their dividend wisely, adjusting their lifestyle, choice of vehicle and so on. Those who do better than average in choosing less-polluting goods would receive more in the dividend than they pay in added costs.

For example, when the fee reached $115 per ton of carbon dioxide it would add $1 per gallon to the price of gasoline and 5 to 6 cents per kilowatt-hour to the price of electricity. Given the amount of oil, gas and coal used in the United States in 2007, that carbon fee would yield about $600 billion per year. The resulting dividend for each adult American would be as much as $3,000 per year. As the fee rose, tipping points would be reached at which various carbon-free energies and carbon-saving technologies would become cheaper than fossil fuels plus their fees. As time goes on, fossil fuel use would collapse.

Still need more convincing? Consider the perverse effect cap and trade has on altruistic actions. Say you decide to buy a small, high-efficiency car. That reduces your emissions, but not your country's. Instead it allows somebody else to buy a bigger S.U.V. — because the total emissions are set by the cap.

In a fee-and-dividend system, every action to reduce emissions — and to keep reducing emissions — would be rewarded. Indeed, knowing that you were saving money by buying a small car might inspire your neighbor to follow suit. Popular

demand for efficient vehicles could drive gas guzzlers off the market. Such snowballing effects could speed us toward a pollution-free world.

The plans in Copenhagen and Washington have not been finalized. It is not too late to trade cap and trade for an approach that actually works.

James Hansen is the author of the forthcoming "Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity."

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