

Carbon Tax & 100% Dividend vs. Tax & Trade*

Testimony of

James E. Hansen
4273 Durham Road, Kintnersville, PA

to

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*'Tax and Trade' is pseudonymously and sometimes disingenuously termed 'Cap & Trade'

Opening Oral Statement

We have a planet in peril. The President recognizes this. The situation is clear.

Evidence from Earth's history and ongoing climate changes reveal that the dangerous level of atmospheric carbon dioxide is much less than once believed. The safe level is no higher than 350 parts per million, probably less, and we just passed 385 ppm.

Climate change threatens everyone, especially our children and grandchildren, the young and the unborn, who will bear the full brunt through no fault of their own.

It is clear that we cannot burn all fossil fuels, releasing the waste products into the air, without handing our children a situation in which amplifying feedbacks begin to run out of their control, with severe consequences for nature and humanity.

We must face the truth. We cannot burn all of the coal, let alone unconventional fossil fuels, such as oil shale, unless the combustion products are all captured and disposed of, which is implausible.

The Obama administration has taken steps that may lead to improved vehicle efficiencies and reduced coal use. These actions are necessary and important. But they will be effective only if we address the root cause of the problem.

The root cause is our failure to make polluting fossil fuel energy more expensive than clean energy. We must put a price, a rising price, on carbon emissions.

There are two competing ways to achieve that price:

One is Tax & 100% Dividend – tax carbon emissions, but give all of the money back to the public on a per capita basis.

For example, let's start with a tax large enough to affect purchasing decisions: a carbon tax that adds \$1 to the price of a gallon of gas. That's a carbon price of about \$115 per ton of CO₂. That tax rate yields \$670B per year. We return 100% of that money to the public. Each adult legal resident gets one share, which is \$3000 per year, \$250 per month deposited in their bank account. Half shares for each child up to a maximum of two children per family. So a tax rate of \$115 per ton yields a dividend of \$9000 per year for a family with two children, \$750 per month. The family with carbon footprint less than average makes money – their dividend exceeds their tax. This tax gives a strong incentive to replace inefficient infrastructure. It spurs the economy. It spurs innovation.

This path can take us to the era beyond fossil fuels, leave most remaining coal in the ground, and avoid the need to go to extreme environments to find every drop of oil. We must move beyond fossil fuels anyhow. Why not do it sooner, for the benefit of our children? Not to do so, knowing the consequences, is immoral.

The tax rate likely must increase in time, but when gas hits \$4 per gallon again most of that \$4 will stay in the United States, as dividends. Our vehicles will not need as many gallons. We will be well on the way to energy independence.

The alternative to carbon tax and 100% dividend is Tax & Trade, foisted on the public under the pseudonym 'Cap & Trade'. A 'cap' increases the price of energy, as a tax does. It is wrong and disingenuous to try to hide the fact that Cap is a tax.

Other characteristics of the "cap" approach: (1) unpredictable price volatility, (2) it makes millionaires on Wall Street and other trading floors at public expense, (3) it is an invitation to blackmail by utilities that threaten "blackout coming" to gain increased emission permits, (4) it has overhead costs and complexities, inviting lobbyists and delaying implementation.

The biggest problem with Cap Tax is that it will not solve the problem. The public will soon learn that it is a tax. And because there is no dividend, the public will revolt before the Cap Tax is large enough to transform society. There is no way that the Cap Tax can get us back to 350 ppm CO₂.

We need a tax with 100% dividend to transform our energy systems and rapidly move us beyond fossil fuels. For the sake of our children and grandchildren, we cannot let the special interests win this fight.

Submitted Testimony

Our planet is in peril¹. Climate disruption threatens everyone, but especially the young and the unborn, who will bear the full brunt through no fault of their own. Recent science makes it clear that if we continue to burn most of the fossil fuels we will leave our children a deteriorating situation out of their control.

One scientific conclusion is crystal clear¹: we cannot burn all of the fossil fuels without setting in motion a process of climate disruption that threatens the very existence of many species on our planet. This potential injustice is not limited to the innocent species we exterminate. The greatest injustice is to our own species² – our children, grandchildren and the unborn, and people who live with nature, who we may call ‘undeveloped’, indigenous people who want only to live their lives without bearing burdens that we create.

The President deserves credit for recognizing that our planet is in peril, and his administration deserves credit for initial steps that may lead to increased vehicle fuel efficiencies and constraints on coal emissions. These steps are important. Greater fuel efficiency, e.g., is essential. But it must be recognized that these steps address the symptoms of the problem, not the root cause. Moreover, these steps will fail if the root cause is not addressed.

The root cause is our failure to make polluting fossil-fuel energy more expensive than clean energy. Instead we subsidize fossil fuels!

We must put a price on carbon emissions, a rising price. If we do this promptly we can stabilize the atmosphere and climate, with healthier air, improved agricultural productivity, clean water, an ocean providing fish that are safe to eat, with a reversal of the trend toward increased birth defects and other consequences of fossil fuel pollution in our air and water.

Fossil fuels are finite. We must find clean energies to replace them. Why not do that sooner, rather than digging for every scrap of carbon, and in the process destroying the future of our children and grandchildren?

The reason “why not” is this: the fossil fuel industry has enormous power over our governments, through their lobbying and “campaign” contributions. Yet you and other leaders are elected to represent the public. The public expects you to look out after their children, to preserve creation, our children’s heritage. Instead we are robbing money from our children’s pockets and piggybanks, borrowing money from our children to fund subsidies for the fossil fuel industry.

This selfishness is not limited to America. I wrote to government leaders of several countries that are believed to be among the “greenest”, one of them led by a physicist. I thought they would understand the clear scientific rationale that we must phase out coal use and move beyond fossil fuels, if we are to preserve a planet resembling the one we inherited from our elders. But I learned that the fossil fuel industries in those countries have enormous power, as they do here. Those governments are not green – they are black, coal black.

¹ Clarification of the climate threat could usefully be obtained by requesting a report from the National Academy of Sciences. The Academy, established by Abraham Lincoln for the purpose of advising the President and Congress on important technical matters, is widely recognized as the most authoritative scientific body in the world.

² The Sword of Damocles: http://www.columbia.edu/~jeh1/mailings/2009/20090215_Damocles.pdf

Carbon Tax and 100% Dividend

If we continue to subsidize fossil fuels and do not impose a carbon price, our automobile manufacturers will likely fail – they are being instructed to build fuel-efficient vehicles, which will be in limited demand as long as fossil fuels do not have to pay their true costs. Similarly, “renewable energy portfolios” for utilities will rip off the public (rate-payers), with marginal benefit for the environment. Energy-inefficient buildings will continue to be built. And so on.

The most honest effective way to achieve a carbon price capable of driving our economy and our society to the clean world of the future is “Carbon Tax with 100% Dividend”³. For example, a carbon price equivalent to \$1/gallon of gasoline (about \$115 per ton of CO₂), for 2007 rates of fossil fuel use in the United States, generates \$670B. If we give one share to each legal resident age 22 and over, one half-share to college age youth (18-21), one half-share to the parents of each child up to two children per family, that yields about 224 million shares in 2007 (this could be off by ~10%; I could not find optimum census data). So the 100% Dividend for a \$1/gallon tax rate (\$115 per ton of CO₂) is:

Single share: \$3000/year (\$250 per month, deposited monthly in bank account⁴)

Family with 2 children: \$9000/year (\$750 per month, deposited monthly in bank account)

The tax rate and dividend should increase with time.⁵ This approach would reduce demand for fossil fuels, driving down the price of fossil fuels on the open market. The next time the price of gasoline reaches \$4/gallon most of that \$4 should be tax, with 100% of that tax returned to the public as dividend. Instead of our money going to the Middle East and other foreign places, most of it would stay at home.⁶

This tax, and the knowledge that it would continue to increase in the future, would spur innovations in energy efficiency and carbon-free energy sources. The dividend would put money in the hands of the public, allowing them to purchase vehicles and other products that reduce their carbon footprint and thus their taxes. The person doing better than average would obtain more from the dividend than paid in the tax. The tax would affect building designs and serve as an effective enforcer of energy efficient building codes that are now widely ignored. The need to replace inefficient infrastructure would spur the economy. Tax and 100% dividend can drive innovation and economic growth with a snowballing effect. Carbon emissions will plummet far faster than alternative top-down regulations. Our infrastructure will be modernized for the clean

³ http://www.columbia.edu/~jeh1/mailings/2008/20080604_TaxAndDividend.pdf

⁴ Peter Barnes points out that dividends could be paid to people without bank accounts by wiring money to their debit cards

⁵ The tax rate should increase until fossil fuel energy is not competitive with clean energy. The tax gathered, and thus the dividend, will initially increase as more clean energy enters the mix. But the dividend will eventually go down, as clean energy becomes ascendant. That is okay, because, as a result of competition, economies of scale and innovation, clean energy prices will fall. In addition, increased energy efficiency and conservation will reduce energy use per person.

⁶ Two years ago I sat next to the Saudi Arabian Ambassador to the United States at a dinner. He became upset, politely, when I mentioned this concept of a carbon tax. Clearly, he understood the implications. He did not seem too concerned that it would be adopted – he probably took it for granted that fossil fuel special interests could overcome any wisdom of our law-makers.

energy future. There will be no need to go to the most extreme environments on Earth for the last drop of fossil fuel, to squeeze oil from tar shale, or develop other unconventional fossil fuels.

A tax on coal, oil and gas is simple. It can be collected easily and reliably at the first point of sale, at the mine or oil well, or at the port of entry. This approach also implies the fastest most effective way to international agreements. A proportionate duty should be applied to any imported products whose manufacture produced carbon emissions. The system could impose presumptive border taxes, allowing individual firms to prove that a lower rate should apply.⁷

A carbon tax will raise energy prices, but lower and middle income people, especially, will find ways to reduce carbon emissions so as to come out ahead. Effects will permeate society. Food requiring lots of carbon emissions to produce and transport will become more expensive and vice versa. There will be a growing incentive for life style changes needed for sustainable living.

One may ask: is there sufficient technology today, and just around the corner if the economic incentive exists, to allow phase out of coal emissions in the near term and other fossil fuels on a longer time scale? The answer is a clear “yes”, as discussed in a workshop report⁸ (this report is a draft – criticisms would be welcomed). Indeed, Stoft⁹ shows that ‘Tax & Dividend’ supports and makes more effective appliance efficiency standards and renewable portfolio standards. However, in order for energy efficiency and non-fossil energies to rapidly supplant fossil fuels, the carbon price should be substantial and rising.

Tax & Trade (a.k.a., ‘Cap & Trade’, pseudonymously and sometimes disingenuously)

‘Cap & Trade’ increases costs to the public as does ‘Tax & Dividend’, but without the dividend. Thus it should be termed ‘Tax & Trade’.¹⁰ Part of the reason for the pseudonym is to avoid the stigma of a tax, under the presumption that the public is too gullible to figure it out. Other parties support ‘Cap & Trade’ because they hope to profit – it is a give-away to special interests, who feel, based on extensive empirical evidence, that they will be able to manipulate the program through their lobbyists. Except for its stealth approach to taxing the public, and its attraction to special interests, ‘Cap & Trade’ seems to have little merit.

Of course the proponents of ‘Cap & Trade’ are not all special interests and their lobbyists, or people who hope to make millions on Wall Street from price volatility and manipulations. That is surely right. Many, without looking closely at the details, assume that the successful ‘Cap & Trade’ used to help solve the acid rain problem, might be a good model for the climate problem. Acid rain was much simpler, partly because it was a program that required existing facilities to employ a relatively simple low-cost solution. Unlike climate change, the acid rain problem did not require massive investments in new infrastructure and innovation. Instead it required a group

⁷ Metcalf-Weisback-Design of a Carbon Tax

⁸ P. Kharecha et al. http://www.columbia.edu/~jeh1/2009/ECWorkshop_report.pdf

⁹ S.E. Stoft <http://stoft.com/ebooks/cap-secrets.pdf>

¹⁰ Much of the support for Cap & Trade stems from the desire to avoid the term “tax” and create a real “cap” or declining limit on emissions. However, as shown in the European Emissions Trading Scheme and the Los Angeles RECLAIM program, among others, weaknesses in the cap-and-trade concept make it inapplicable to the climate crisis. Specifically, over-allocation of credits, lack of accurate measurement, fraudulent outside offsets, and the failure to create true incentives for early investments in clean energy technology and infrastructure will doom the prospects for real emissions reductions.

of existing facilities, with accurate emissions measurement, to make minor burner modifications and use readily available low-cost low sulfur coal. A few new rail lines were built and some facilities purchased more efficient scrubbers.¹¹

Caps have not generally been applied at the mine or well-head, rather further downstream. Proponents of ‘caps’ say they will try to push them upstream. That would open up consequences that now should be unacceptable to Americans: volatility, manipulation, and trading floor millionaires. Where would the millions come from – the common person, of course, the rate payer, the public.

The abject failure of Cap & Trade was illuminated for all to see by the Kyoto Protocol, the granddaddy of all Cap & Trade schemes. Even countries that accepted the toughest emission reduction targets, such as Japan, saw their emissions actually increase. The problem is the inevitable loopholes in such complex approaches, which take years to negotiate and implement.

The Congressional Budget Office¹² provides a comparison of carbon taxes to cap-and-trade. That report concludes that a given emission reduction could be achieved at a fraction of the cost via a carbon tax, as opposed to cap-and-trade. Another useful comparison is also available.¹³

The worst thing about cap-and-trade, from a climate standpoint, is that it will surely be inadequate to achieve the sharp reduction of emissions that is needed. Thus cap-and-trade would practically guarantee disastrous climate change for our children and grandchildren.¹⁴

The only solution to the climate problem is to leave much of the fossil fuels in the ground. That requires a high enough carbon price that we move on to our energy future beyond fossil fuels.

Summary

The honest approach, the effective approach, for solving the global warming problem would be a tax with 100% dividend. The public is not stupid. They will understand that the hooks and eyes of a less comprehensive more dissembling approach will be put there for some reason other than saving the future for their children.

One of the biggest advantages of the Tax and Dividend approach is its simplicity, which would allow it to be introduced quickly. The Kyoto-like Cap & Trade is notoriously slow to negotiate and implement, as well as being ineffective in the end. A related point is that an effective international accord could be implemented with only a few of the major economies. Import duties on countries not imposing a comparable tax would surely bring broad rapid compliance.

¹¹ <http://www.carbontax.org/blogarchives/2009/02/21/what-worked-for-acid-rain-won%e2%80%99t-work-for-climate-change/>

¹² Congressional Budget Office, “Policy Options for Reducing CO2 Emissions,” February 2008, <http://www.cbo.gov/ftpdocs/89xx/doc8934/02-12-Carbon.pdf>

¹³ L. Williams and A. Zabel, <http://www.carbonfees.org/home/Cap-and-TradeVsCarbonFees.pdf>

¹⁴ Brattle Group Report, CO2 Price Volatility: Consequences and Cures, http://www.brattle.com/_documents/UploadLibrary/Upload736.pdf

Post Script

The answer to the riddle became clear on the train on the way home. I had puzzled about the continued attraction of Cap&Trade. Empirical evidence shows that Cap&Trade does not have a prayer of phasing out fossil fuel emissions fast enough to save the planet, e.g., allowing us to phase-out coal-fired power plants. Clearly there must be people in the Obama administration who understand that. Yet Cap&Trade is still talked about as if it were something good. One wonders: do they really believe we have "a planet in peril"?

In my testimony I noted that a "Cap" raises the price of energy, just as does a simple honest carbon tax on oil, gas and coal at the first sale at the mine or port of entry. "Cap" is a pseudonym, disguising the fact that it is a tax, assuming that the public is a bunch of dummies, who will never catch on. With all its hooks and eyes, Cap&Trade will allow a lot of funny business. At least we would get a few Wall Street millionaires back in business, via speculation and gaming the Cap&Trade system (funded by John Q. Public, of course).

On the train I read on politico.com that the number of lobbyists in DC working to influence federal policy on climate change increased in the past few years by 300% to 2,340 lobbyists -- four climate lobbyists for every member of Congress. At least the alligator shoe business is doing well. Not too good for alligators, though.

A Carbon Tax & 100% Dividend would not let Congress enrich their favorites or divine winning technologies. Instead, the winners would be innovators who invent products with improved energy efficiency or develop carbon-free energies, which allow people to reduce their carbon tax. Of course, if you don't trust your innovation skills, it is easier to pay a lobbyist to get Congress to adopt a jury-rigged Cap&Trade system.

2340 lobbyists. They are outnumbered by the at least 2500 people, mostly young people (but everybody welcome), who plan to converge on Washington March 2 (despite inclement weather) to peacefully protest the Capitol Power Plant, which our Congress insists must be powered substantially by coal (our coal-black Senate seems to be the culprit). The Capitol Power Plant is just the symbolic target -- the real aim is to influence Congress to adopt legislation that will rapidly phase out coal use. See <http://capitolclimateaction.org/>

The question is: who will Congress listen to. Protesters (bringing no gifts - it's hard enough to pay their own way) or lobbyists (with lobbying expenditures last year of about \$90M).

Young folks, if you need an indication of what you are up against, let me give you one example. Peabody Coal (a.k.a. Peabody Energy) hires Dick Gephardt, paying him \$120,000.00 per quarter in 2008. The amount of money going into lobbying is increasing rapidly. As Shakespeare would say, gird up your loins.

If democracy does not win this one, if the lobbyists win, perhaps the best we can do for our grandchildren is buy them a ticket to another planet. Of course, Congress would have to borrow the money from our grandchildren. But at least we would show that we are giving them some consideration.