

Cowards in Our Democracies: Part 2

28 January 2012

Scientists are finding it difficult to persuade the public of the urgency to reduce fossil fuel CO₂ emissions. This is in part because people profiting from fossil fuel business-as-usual support disinformation about the science, so that they can expand extraction of fossil fuels despite the evidence that such expansion will push the climate system beyond tipping points, assuring further climate change with impacts that are practically out of humanity's control.

Scientists attempt to communicate, but are flummoxed by the ability of the profiteers to manipulate democracies. The scientific method (objective analysis of all facts) is pitted against the talk-show method (selective citation of anecdotal bits supporting a predetermined position).

The tragedy is that a common sense pathway exists that would solve our energy needs, stimulate our economy and protect the future of young people. Yet people benefiting from business-as-usual are able to block adoption of policies in the public's interest, via the corrosive influence of money in politics and aided by corporate-dominated media.

Should scientists connect the dots all the way to policy implications? Profiteers strongly oppose that, because scientists are trained to be objective, and profiteers want no interference with their functioning profit pathways. Let's consider that issue after summarizing the situation.

1. Climate Science, Fossil Fuels, and Governments

Earth has warmed in the past century by about 0.8°C, with most of the warming caused by human-made greenhouse gases, mainly CO₂ from fossil fuel burning. Earth was out of energy balance during the recent solar minimum, more energy coming in than going out, which reveals that the largest natural climate forcing (solar variability) is overwhelmed by increasing greenhouse gases. The imbalance also proves that there is substantial additional global warming "in the pipeline" even without additional increase of atmospheric CO₂. Extreme climate anomalies such as the Texas-Oklahoma heat wave of 2011 and the Moscow heat wave of 2010 have increased in frequency to such a degree that they can be ascribed to global warming with a high degree of confidence. Paleoclimate data show that additional global warming of even another degree Celsius would cause irreparable harm to young people and other species.

The upshot is that we cannot burn and emit to the atmosphere most of the remaining fossil fuels. Fossil fuel emissions so far are a small fraction of known reserves and potentially recoverable resources (Figure 1). There are uncertainties in estimated reserves and resources, some of which may not be economically recoverable with current technologies and energy prices. But there is already more than enough available fossil fuel reserve to transform the planet, and fossil fuel subsidies and technological advances will make more and more of the resources available.

Burning all fossil fuels would create a very different planet than the one that humanity knows. The paleoclimate record and ongoing climate change make it clear that the climate system would be pushed beyond tipping points, setting in motion irreversible changes, including ice sheet disintegration with a continually adjusting shoreline, extermination of a substantial fraction of species on the planet, and increasingly devastating regional climate extremes.

Governments have recognized the need to limit emissions to avoid dangerous human-made climate change, as formalized in the Framework Convention on Climate Change. Despite this, the Kyoto Protocol, established in 1997 to reduce developed country emissions and slow emissions growth in developing countries, has been so ineffective that global emissions have since grown by almost 3%/year, compared to 1.5%/year in the preceding two decades.

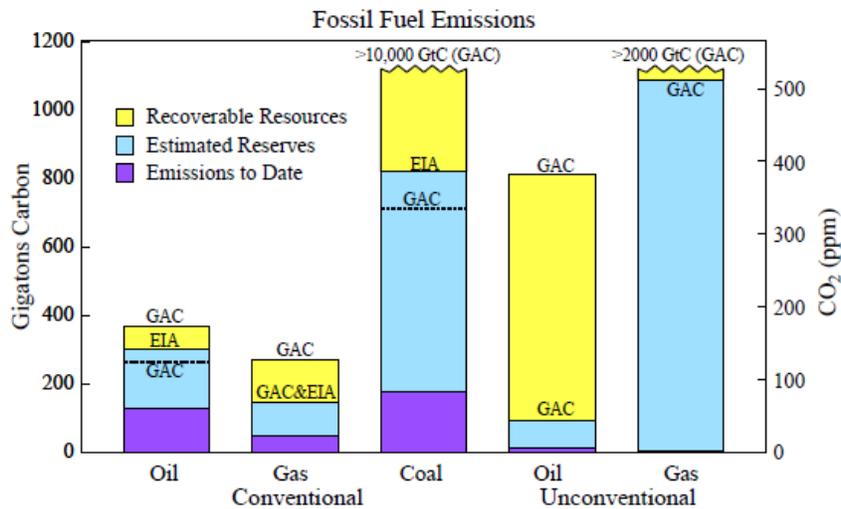


Figure 1. CO₂ emissions by fossil fuels (1 ppm CO₂ ~ 2.12 GtC). Estimated reserves and potentially recoverable resources are from Energy Information Administration (2011) and the German Advisory Council on Climate Change (2011).

Thus there is a huge gap between rhetoric about reducing emissions and reality. Governments assure that they are working to reduce emissions, but few nations have made substantial progress. Reality exposes massive efforts to expand fossil fuel extraction, including oil drilling to increasing ocean depths, into the Arctic, and onto environmentally fragile public lands; squeezing of oil from tar sands and tar shale; hydro-fracking to expand extraction of natural gas; and increased mining of coal via mechanized longwall mining and mountain-top removal.

How could a specter of large human-driven climate change have unfolded virtually unimpeded, despite scientific understanding of the consequences? Would not governments – presumably instituted to protect all citizens – have stepped in to safeguard the future of young people?

A facile explanation is that our politicians, in effect, are bribed by the fossil fuel industry. However, our politicians are pretty much boxed in. The public, by and large, supports expanded fossil fuel production, an indication of the success of the industry's public relations campaigns.

2. Fossil Fuel Advertisements and Dirty Tricks

You cannot turn on television without seeing advertisements for clean coal, clean tar sands (sanitized as "oil sands"), clean gas fracking. However, no matter what efforts are made to minimize damage during the mining process, Figure 1 implies¹ that the only way to retain a planet looking like the one that has existed the past 10,000 years, with stable shorelines and a reasonably stable climate, is to phase out fossil fuels as conventional oil and gas are depleted. Most of the total coal resource and unconventional fossil fuels should be left in the ground.

Environmentalists may, or may not, win individual skirmishes on mountaintop removal, specific coal fired power plants, tar sands pipelines, gas fracking. But the only lasting solution, and the only one that will save the planet, is the solution that puts a simple, honest, rising price on carbon emissions – and the money collected must go to the public for this approach to work².

¹ A paper, "The Case for Young People and Nature", quantifying this will soon be submitted for publication.

² So that the marketplace, not lobbyists, makes decisions regarding efficiency and energy sources. Also the public will never allow the carbon fee to rise as high as needed if politicians are taking and distributing the money.

Our fossil fuel addiction continues because, from a user perspective, fossil fuels are the cheapest energy. Fossil fuels are cheapest only because they are subsidized, directly³ and indirectly, and because they do not pay their costs to society. Human health costs of air and water pollution are dumped on individuals and the government (tax payers), who pick up the medical bills. Climate damage is also dumped on the public, especially young people, who will bear the greatest costs.

Fossil fuel moguls, the profiteers who want to keep us addicted to fossil fuels, understand the situation. They do not want the cost of the "externalities" added to the price of fossil fuels.

Economic efficiency dictates that the fossil fuel cost to the customer should be the true cost. Adding in the externality cost gradually would drive energy efficiency innovations and clean energy development; it would create more jobs than those provided now by fossil fuels, and it would make our industries more competitive.

However, it is difficult to inform the public of this situation, because of the huge advertising resources of the fossil fuel industry, the corrosive influence of money in politics, and our corporate-dominated media. Worse, the fossil fuel industry has resorted to dirty negative campaign tactics, including character assassination⁴, which politicians find to be effective.

Attacks, including character assassination, have been leveled against scientists Ben Santer, Michael Mann and Phil Jones. The approach includes acquiring and digging into personal correspondences in search of any inappropriate or questionable statements, and fine-toothed scrutiny of their scientific analyses to find any element, however minor, that can be criticized.

The target in Santer's case was a sentence that Santer was responsible for as a lead author in the 1995 IPCC report: "Taken together, these results point towards a human influence on climate." The target in Jones' case was his analysis showing rapid global warming in the past century. The target in Mann's case was the temperature record of the past millennium, which he showed to resemble a "hockey stick", bending upward into the rapid warming of the past century.

An important point to note is that all of these targets, the scientific conclusions that the critics aimed to destroy or discredit, have been shown in subsequent analyses to be correct, indeed, dead-on-the-mark. But these attacks took a toll on the scientists, despite the fact that their work was eventually vindicated and corroborated. More important for young people and the planet, these dirty negative tactics worked to confuse much of the public, leaving the public less trusting of scientists and less aware of the urgency of slowing fossil fuel emissions.

3. FOIA Demands and Law Suits

In the past year I have been bombarded by numerous FOIA (Freedom of Information Act) demands for my e-mails and other correspondences and suits have been filed against NASA for my personal information. Information obtained in these ways seems to be fed to people or organizations that broadcast a distorted picture of reality and question my ethics.⁵

A friend advised me not to respond to the attacks. No doubt one objective of the attacks is to diminish our scientific output by miring us in unproductive activity. But the attacks are part of a

³Worldwide subsidies are \$400-500B/year http://www.iea.org/weo/docs/G20_Subsidy_Joint_Report.pdf and http://www.hedon.info/docs/GSI_The-Politics-Of-Fossil-Fuel-Subsidies.pdf

⁴ See page 5 of [It's a Hard-Knock Butterfly's Life](#). The fact that fossil fuel billionaires, the kingpins sucking their wealth from the public's addiction, are successful in demonizing climate scientists has so turned the world upside down as to smack of Shakespeare's "Fair is foul and foul is fair." These kingpins are unlikely to be haunted by a "damned spot", but their children and grandchildren may be aware of their unsavory role.

⁵ <http://wattsupwiththat.com/2011/11/18/dr-james-hansens-growing-financial-scandal-now-over-a-million-dollars-of-outside-income>

professional effort to discredit climate science. If I do not respond once, their whoppers are ratcheted up, bigger and bigger. From angry calls and e-mails that I and my office receive, and from public opinion polls about climate change, it seems this campaign is achieving some "success". Many people believe that scientists are wasting taxpayer money, and there seems to be a pullback in public concern about climate change and support for efforts to reduce emissions.

For example, a sampling of messages received this week:

(1) You rework your temperature data sets every time Mother nature proves you wrong, in an effort to force Her to agree with your ill conceived ideas about energy and nature. You, in fact, are the one committing crimes against humanity by lying, conniving, and concealing the truth about climate change on our world. You can fool some of the people part of the time, but not all the people all of the time. Your deceitfulness, paid for by my tax dollars, will catch up with you sooner or later. I hope sooner, as more and more people realize you are the criminal here for manipulating data to suit your pre-conceived ideas.

(2) What a pile of nonsense, Hansen. You take money and junkets hand over fist from people who pay you to mouth off trash like that. You aren't exactly "forthcoming" about the "sources and amounts" of your graft – I mean, "gifts." You ought to be ashamed of yourself, Hansen, as far as the court of public opinion goes, it has already been concluded that "global warming" "science" is the lowest form of deceit and foolishness there is – and your lack of disclosure has already solidified your inevitable guilty verdict. Xxxxx, PhD, PE

(3) Are you some kind of lunatic?? Xxxxx

(4) charlatan you, it is amusing to me that this skeptic side of this intellectual disarray actually refers to more peer reviewed and scientific data than does your own. The premise of climate change tragedy is so flawed, that only bureaucrats that have lined their pockets through its populist commonality, would even pretend that any of the alarm is real, true or relevant. One wonders if a faith based cult such as you represent, has any shame. Xxxxx

(5) AGW con artist James Hansen guilty of crimes against humanity and nature! You're the guilty one you freaking idiot !!!!!

(6) You sir are a walking crime against humanity and you know exactly why. You lie constantly about man-made global warming. When the chips finally land, we will be pushing for your part in the AGW Scam to be recognized and punished by incarceration until the next ice age. You are not a scientist by any stretch of the imagination. You are a global warming shill and a con-artist. With ALL due respect, Xxxxx, PhD, biochem/marine biol

(7) The Atlantic, Arctic and Antarctic are cooling or significantly cooler than alarmists predicted...and last but not least---tornado numbers are on the decline, and have been for almost 4 decades. I live in Florida, where are all the predicted hurricanes caused by the huge increase in CO₂? How do you keep your job? You and your ilk hate creationism, scientifically...but are all in on this relatively new Global Warming consensus that's become a religion. RELIGION – (dictionary.com) def.#3, the body of persons adhering to a particular set of beliefs and practices. First, I can understand some organization being full of zealots...but not the scientific publishing community, science magazines, who should be the ultimate skeptics. They are the gate keepers, after all. But, they've become almost exclusive shills and protectors of the global warming consensus. Blind peer reviews aren't really blind (Climategate e-mails prove that) and a large part of your consensus community seems to spend as much time fighting against freedom of information data and what gets published as they do in their own scientific labs verifying their own work or the work of others – as good scientists should do....

In reality, scientists work hard, many more hours than they are paid for, mainly in pursuit of knowledge not riches. Assertions that scientists dream up the threat of climate change to enrich themselves is nonsense. Salary scales are set by the government or other employers, and are not determined by the ups and downs of research support.

I will first respond to specific allegations before drawing some conclusions.

A. "Outside" income. The attacks assert that I received a large income "outside" of my NASA job without appropriate approval. In fact, most of the income was from three international prizes (the Blue Planet, Dan David⁶, and Sophie Prizes) and some smaller national awards, all within the framework of my NASA job and approved by the government. NASA has even had a Nobel Prize winner in physics. Any agency is proud to have an employee win such honors. NASA has strict rules on awards; an agency official verifies that ethics criteria are met, including independence from government funding, public disclosure of the selection process, etc.

⁶ The Dan David award was not "half a million dollars", as asserted. It was \$270,000, as much of the prize went to my colleagues, and the \$270,000 was further reduced by about half by federal, state, and city taxes.

The money for the prizes came from Japan, Israel and Norway. Nearly half of the money went to federal, state and city taxes in the United States, the remainder largely into college funds for my grandchildren, and some into renewable energy projects.⁷ Thus the part not going to taxes went into the U.S. economy. Refusing the prizes would have been to our taxpayers' detriment.

B. Paid lectures. In recent years I have given about three paid lectures per year, with NASA approval. In matching up personal information on me obtained by law suit and information obtained by FOIA, American Tradition Institute (ATI)⁸ found only one paid lecture without an apparent NASA approval. However, that lecture ("The Threat to the Planet" at Illinois Wesleyan University in February 2008), was identical to my prior paid lecture (at Cal Tech in 2007), both based on an article of that title written with NASA approval for the New York Review of Books in 2006. The approval for the Cal Tech talk listed conditions such as: must be done on my time, no use of government resources, no use of information that was not publicly available. All conditions were valid for the second delivery of the talk. I reported the Illinois Wesleyan talk and payment in my 2008 annual disclosure of outside activities to the same NASA legal office, and of course I paid federal, state and local taxes on it.

ATI states that I was ordered by NASA to return a \$5000 honorarium to Dartmouth University. That statement is a fabrication. I never received an honorarium from Dartmouth. I was asked to give an inaugural public lecture for an annual "Great Issues in Energy" symposium and meet with several classes. I submitted the request for approval less than three weeks before the event, which did not allow sufficient time for approval by all the necessary offices – so the legal office informed me that I could not accept the honorarium. Therefore I gave the lecture and met with several classes, but I did not accept an honorarium.

C. Testimonies. I have not been paid for my other outside activity, the activity that must be most bothersome to the people funding the attacks on me: written and oral testimonies for many trials and hearings, concerning coal, tar sands, other fossil fuels, and vehicle efficiencies. In most cases, including the Kingsnorth⁹ trial and Alberta tar sands hearings, I was offered payment for my time in preparing testimony and testifying. For those two cases I requested and received approval from the government (NASA) to accept payment for preparing and giving testimony. However, I chose not to accept payment; in every case I decided that the testimony would be pro bono. In some cases I accepted travel costs, or partial travel costs, to allow me to deliver oral testimony, but in other cases I paid the travel costs out of my own pocket.

D. Travel costs for "activism". I paid the travel costs¹⁰ out of my own pocket for trips to protest mountaintop removal¹¹, tar sands development, and failure of our government to protect the rights of our young people. In cases where I was arrested and paid fines (twice for sitting down on the sidewalk in front of the White House and once for sleeping on the Boston

⁷ http://www.columbia.edu/~jeh1/mailings/2011/20110729_BabyLauren.pdf

⁸ <http://www.atinstitute.org/>

⁹ http://www.columbia.edu/~jeh1/mailings/2008/20080910_Kingsnorth.pdf

¹⁰ I reckon the cost of one specific trip to West Virginia at \$8580. I drove there in my auto (1995 Volvo), and up and down the heavily-rutted dirt road to the top of Kayford Mountain. By the time I got home, the car creaked badly on turns and was losing power. Before I had time to have it checked out, it chugged to a stop and had to be towed to our mechanic. Unfortunately, it was not worth fixing and our mechanic recommended a similar used Volvo that he knew of (I need such a vehicle on the farm for hauling stuff). But, by the time it got through inspection, the price was \$5510, and within 4 months it required additional work totaling \$3070. Now we have a new mechanic, and, if I drive to WV again, I will leave my car at the bottom of the mountain.

¹¹ See J. Henry Fair's exhibition http://www.forwardthinkingmuseum.com/exhibitions/solo_fair_01.php

Commons) I paid the fines out of my pocket. After my one other arrest, near Coal River Mountain, West Virginia, I refused to pay the fine and I am still awaiting trial.¹²

E. Royalties for "Storms of My Grandchildren." I requested and received permission to write *Storms of My Grandchildren* as an outside activity. However, I decided not to accept royalties, in part because I wanted to minimize any assertions that my warning about climate change was issued for the sake of profit. Also I thought that the book would reach more people with a price reduced by the royalty amount. But the publisher had a better idea: they donated the royalties to 350.org, because of my statement in the book that 350.org was the most effective organization informing the public about the global warming threat. It was a very good idea.

F. Costs to the taxpayer. My "activism"¹³ and talks given on my own time save U.S. taxpayers money. Before my grandchildren dragged me into this extracurricular activity, as explained in "Storms", I worked hard on pure science, seldom taking vacation. As a member of the Senior Executive Service, my unused vacation accumulated without limit, to be paid in a lump sum upon retirement. It had accumulated to almost a year's salary. However, because I use vacation time for outside lectures and the above activities that some describe as "activism", I have largely burned up the lump sum that the government would have paid me upon retirement.

I am careful to pay my taxes. I have enough to think about, and I don't want to waste time worrying about whether I paid them properly. So after I received my first big award, a cashiers check for \$270,000 (Dan David award) from a Swiss bank account, I asked a tax professional to prepare my returns. His main question: how many days was I in New York City? About 200. He checked back, saying I should check how many days I was on travel – if I was in New York less than 184, the award would not be subject to New York City and New York State taxes. Unfortunately, it was over 184 days in New York, so almost half of the award went to taxes.

Taxes provide a segue into the main topic, but I must first confess that my extensive checking of records in response to FOIA requests and law suits did uncover one slip-up on my part. In 2006 I received the Duke of Edinburgh award. Principal benefit was an opportunity for Anniek and me to have lunch with Prince Philip.¹⁴ In addition, the award included a Rolex watch. Anniek made one attempt to get me to try it on, but one glance and a heft was sufficient information for me to put it back in the box and on the bookshelf behind my desk, where it has been ever since. My \$10 Casio, now on its 2nd replacement battery and 4th wristband, serves me very well, thank you, including an alarm clock, night light, and other still-unexplored functions.

The slip-up that dawned on me thanks to ATI is that, although NASA approved my acceptance of the reward including the watch, I never paid taxes on the watch. My first thought was that I should return the Rolex (with a notarized affidavit that I never wore it or even tried it on) to Prince Philip and the World Wildlife Federation, including a suggestion that it would be a better fit for Lord Monckton (http://www.youtube.com/watch?v=w833cAs9EN0&feature=player_embedded)

¹² Coal River Mountain provides an egregious example of fossil fuel profiteers abusing the public and of government conniving and collaborating with the profiteers. About 25 of us were arrested when I was reading a list of demands in front of the Massey Energy office. Our principal demand was that Massey pay for a new elementary school to replace one above which they had built a massive slurry pond of coal waste that threatened to burst and bury the school (see J. Henry Fair's photo http://www.forwardthinkingmuseum.com/exhibitions/solo_fair_07.php). Unfortunately, in West Virginia the coal companies seem to control the politics; Massey donations helped elect state Supreme Court judges (http://www.usatoday.com/printedition/news/20090303/editorial03_st.art.htm), and the head of Massey was photographed vacationing on the Riviera with a judge (<http://www.nytimes.com/2008/01/15/us/15court.html>).

¹³ http://www.columbia.edu/~jeh1/mailings/2010/20100824_Activist.pdf

¹⁴ Where, among other things, we could relay Sophie's question: what was his favorite color? (answer in "Storms").

or Lord Lawson. The trashing of science by these "Lords", for the express purpose of perpetuating the lifestyle of privileged classes, perhaps warrants an award analogous to the Ig Nobel Prize in science.¹⁵ Wouldn't it be super if Prince Philip, whose lifelong services in the interest of nature and humanity are well-known¹⁶, would follow the example of Nobelists (who award the Ig Nobel Prize) by exposing the priggish self-absorption of these Lords?¹⁷

However, returning the watch might embarrass the Prince. So I thought of a better way to make retribution that benefits the public (see below). Here I only want to thank ATI for reminding me of the watch. I would hate to have gone to my deathbed with it on my conscience. Worse, one of my grandsons might have found and tried on the watch, thus becoming a partner in crime to be hauled into court by some successor "think tank".¹⁸

4. Final Points

Unfortunately (or fortunately, because it terminates my verbosity), I must end this discussion to pack for a trip to Antarctica. So I note just a few more points, including some good news!

(1) Notice the ways that big-money boys twist our democracy? They don't like to pay taxes. So, because they are a small minority, they must learn how to "work" a democracy. "Think tanks" help them with ideas. For example: "Death taxes." "You mean the feds are even going to tax me¹⁹ when I'm dead? – how dare they!!" Soon millions of little guys, who would never owe a cent of inheritance tax, are rallying to support billionaires. Very nice. It helps assure that the class structure will become even more entrenched, with the rich getting richer and their progeny being guaranteed a life of luxury, even if they are dim-witted galoots.

Similarly, fossil fuel kingpins manipulate public opinion and the government into supporting policies that are great for fossil fuel billionaires and awful for the public. Outing the Oligarchy: Billionaires Who Benefit from Today's Climate Crisis (<http://ifg.org/programs/plutonomy.html>) draws attention to individuals who benefit most from the public's fossil fuel addiction. However, my aim is not to identify fossil kingpins, but rather to help people recognize manipulation of public opinion that corrupts government energy policies to favor special interests of the few over the general good.

Advertisements that tar sands and shale oil are beneficial, providing energy independence and jobs, repeated hundreds of times a day, are an attempt to brainwash the public into supporting policies that enrich the few, while screwing the public, especially young people. The public

¹⁵ The Ig Nobel is awarded "for achievements that first make people LAUGH and then make them THINK" (<http://www.improbable.com/ig/>).

¹⁶ Prince Philip is patron of some 800 organizations, but wildlife has been an enduring concern, as the UK President of the World Wildlife Fund from 1961-1982, International President from 1981, and President Emeritus since 1996.

¹⁷ It's a lot to ask, but Prince Philip is legendary for his willingness to speak common sense for the common good, even if it might be "politically incorrect". When we had the privilege of having lunch with him and were discussing actions needed to stabilize climate he focused on an underlying fact thwarting efforts to achieve global sustainability – burgeoning human populations – and offered a one word prescription: "vasectomy." Recently he has drawn criticism for stating (in private, to a manager of a firm that builds and operates wind turbines) that wind farms are over-reliant on subsidies and that the assertion they will be a major affordable source of electricity is a "fairy tale."

¹⁸ Think tanks apparently provide scripts to talk show hosts and others – leading to the angry phone calls and e-mails from the public. Think tank web pages are often replete with patriotic symbols, waving American flags; you can almost hear the drums, pipes and Yankee Doodle Dandy. They ask for public support, not because they need \$10 contributions, but because it disguises their primary source of support. Just as broad public support is needed to eliminate the inheritance tax, so too public support is needed to perpetuate the public's fossil fuel addiction.

¹⁹ Actually, the tax is paid by the children, who may have done little or nothing to earn the wealth, and in any case they will still receive a large part of it.

should be demanding that a rising fee be collected from fossil fuel companies in proportion to the amount of carbon they pour into the air, with the money distributed to the public. That is what would create innovations in new energies and energy efficiency, creating far more jobs than the small number associated with bulldozing mountains and building oil pipelines. And it would move us to a clean energy future, and give us a leg up on technologies of the future.

(2) Conservatives should examine what the fossil fuel kingpins are doing to our country (the same is true in other countries). The few are being enriched at the expense of the many.

True conservative principles are those described by Jim Dipeso of Republicans for the Environment (see appendix A). I was invited to give a keynote talk to that organization. Then a few weeks later I was disinvited. It would have been fun to be a fly on the wall when they got dressed down for inviting me.

Nevertheless, conservatives may be our best hope for eventually achieving effective policies that allow us to solve our fossil fuel addiction – in any case they need to be part of the solution. So I am a bit worried about this Antarctic trip. We sail on the National Geographic Explorer from South America to Antarctica (I understand that most people spend that part of the journey hanging over the rail throwing up). That's innocuous enough, but the concern is that the trip is organized by Al Gore. As far as many conservatives are concerned anybody who has come close to Al Gore might as well have the bubonic plague.

So I need to get in a big fight with Al on the trip (yes, he is younger, but I'm in good shape – I don't believe I can be thrown overboard – and as a graduate of the polar bear plunge, I'm even ready for that). Yes, I know we owe him a debt for making the global warming issue known worldwide, but I must maintain political separation – I'm an Independent, not a Democrat.

Indeed, in my opinion, the two policy actions in the past several decades that were most harmful to global climate are both the responsibility of the Democratic Clinton/Gore administration:

(a) The cap-and-trade-with-offsets approach foisted on the world via the Kyoto Protocol. O.K., maybe that's a mistake many people could have made, but can't we recognize a mistake once it is clear? But the Democrats went right ahead and tried to pass just such an ineffectual cap-and-trade monstrosity within the U.S., unnecessarily bringing big banks into the bargain, while also siphoning off most of the revenue for special lobbying interests. Not only is that approach ineffectual, but there is no feasible way to make it global. The "cap" approach is an attempt to fool the public, pretending that it is not a tax. In fact, there must be a real increase in the price of carbon fuels if the policy is to be effective, but if 100% of the collected money is given to the public, a price increase for fossil fuels is acceptable.

(b) Clinton, in his 1994 State of the Union message, said "We are eliminating programs that are no longer needed, such as nuclear power research and development." Not needed? They did not know about a need for clean energy then? They had not heard about climate change? They were satisfied with existing nuclear technology? I don't think so. A more likely interpretation is that the anti-nukes in the Democratic Party got wind of the fact that Argonne National Laboratory was ready to build a demonstration 4th generation nuclear power plant – that scared the pants off anti-nukes who had dedicated their life to the cause. Such technology would allow us to burn all of the nuclear fuel, rather than 1%, and solve the nuclear waste problem.

We know how to make 4th generation reactors that would free us from the need to mine uranium for 1000 years, as we have enough nuclear waste and excess weapon material to provide fuel for these reactors for that long. With this technology the nuclear fuel we can extract from

the ocean is inexhaustible on the time scale of billions of years, at least as long as the sun will shine, putting it in the same category as solar and wind power.

The biggest advantage of nuclear power is its safety. Every year fossil fuels kill about 1,000,000 people. Nuclear power kills nobody. The worst nuclear accident possible with 50 year old western technology occurred last year at Fukushima. 20,000 people died from the tsunami, but none from the release of nuclear radiation. The accident was very inconvenient for anybody living nearby, which is not surprising, given that a cluster of reactors were placed on a coastline in an earthquake zone, without protection from any tsunami exceeding a few meters, and requiring power for cooling. Would anybody build such a reactor today? No, there are 3rd generation light-water reactors available now with passive cooling, i.e., a convective cooling system that does not require power. Using the Fukushima accident as a reason not to build new reactors is as foolish as saying that an airplane accident killing many people is a reason to never build another airplane. A sensible policy is to check what went wrong and build a safer one.

(3) Finally, the good news: my grandchildren Sophie and Connor have a baby brother. The photos on the next page shows Connor inspecting Eric Christopher several hours after he was born. It should be fairly apparent why I have given up spending all of my time on "the pleasure of finding things out", as Richard Feynman described it, and why I can tolerate the repercussions that come with trying to better inform the public about climate change.

That brings me back to my great idea about the Rolex, and also to the plans for installing geothermal heating in our house.²⁰ The cost of the latter, it turns out, would be more than \$50,000. I don't have that much left from my awards, and what I do have is needed to bring my 4th grandchild's college fund up to the level of the first three (just over \$100,000 each). Instead we will just add some insulation.

The 5th grandchild was an unplanned surprise (but not unwelcome).²¹ So I had reserved nothing for a 5th college fund. When I called my tax advisor, asking what to do about the Rolex, he said it was beyond the statute of limitations, so I did not need to do anything – but I could send an equivalent donation to the U.S. Treasury to reduce the national debt, if I so desired. So my idea is, when I get back from Antarctica, to put the Rolex up for sale on Ebay, however that works, and use the non-tax part of the sale as first installment on the 5th college fund.

It is a pleasure to continue to work to help our grandchildren go to college. It makes my heart glad to think that my grandchildren may be able to go to the same colleges as the super wealthy, at least for a few years. It is not nearly as easy for young people today as it was when I grew up. My father was a tenant farmer, educated to the 8th grade, yet a majority of his seven children have college degrees. It is a shame that all children do not have an equal opportunity today.

²⁰ http://www.columbia.edu/~jeh1/mailings/2011/20110729_BabyLauren.pdf

²¹ O.K., so we exceed our fair number. But several of my colleagues have zero or one child, and they have offered their unused slot to us, to relieve our conscience. Also our children are remarkably good parents, so I am sure our grandchildren will be a credit to society.



Appendix A: From Republicans for Environmental Protection
<http://www.rep.org/opinions/weblog/weblog10-10-11.html>

As a climate change activist, climatologist Jim Hansen takes his activism a step beyond where most would be willing to go.

He gets himself arrested.

Most recently, Hansen, who has directed the NASA Goddard Institute of Space Studies for nearly three decades, was cuffed in front of the White House at a protest against mountaintop removal coal mining.

Some write off Hansen as a flame-throwing radical.

That's a mistake. And not only because mountaintop removal is an abomination that flies in the face of just about everything conservatives are supposed to stand for – thrift, stewardship, and property rights for starters.

Hansen describes himself as a moderate conservative and is registered to vote as an independent. More importantly, he has been shopping around a framework for climate legislation that conservative elected officials might find interesting if they find themselves in a problem-solving mood.

Hansen's proposal is simple, far simpler than the 1,400-plus pages of the Waxman-Markey cap-and-trade bill that passed the House in 2009 but will die when the 111th Congress closes up for good later this year.

Hansen's proposal makes use of market principles, by prodding the market to tell the truth about the costs of carbon-based energy through prices.

It would not impose mandates on consumers or businesses, create new government agencies, or add a penny to Uncle Sam's coffers.

Hansen calls his approach "fee and dividend." A gradually rising fee would be imposed on carbon-based energy sources at the points where they enter the economy – at mine mouths or ports of entry, for example.

Carbon-based energy imposes costs – on the environment, public health, and national security - and those costs would be made more obvious in the marketplace through the fees. Energy prices likely would go up. How much and for which uses of energy would depend largely on market dynamics.

Revenues collected from carbon fees would be returned 100 percent to the public through dividends. Hansen estimates that a \$115-per-ton carbon fee would add a dollar to the per-gallon price of gasoline but would raise enough revenues to pay every adult American as much as \$3,000 per year.

How would Hansen's plan affect individuals? That would depend on how they exercise

their right to make free choices.

Those who wish to use carbon-based energy with abandon would be free to do so – knowing up front that they would pay the environmental and other costs of using lots of carbon-based energy rather than shift those costs onto their fellow citizens.

Those who acknowledge the market signal and change their purchasing decisions could avoid some or most of the higher prices. Depending on the choices they make and the size of their dividends, they might even come out ahead financially.

Businesses would seek out more opportunities to improve their energy efficiency. Other businesses would sell products and services that enable them to do so. Low-carbon energy sources would be more competitive with high-carbon sources.

The idea behind the bill could be described in a 1-minute elevator speech. As legislation, Hansen's approach could fit onto a few pages. The bill could be read and understood by anyone – voters and lawmakers alike willing to put in a few minutes of time.

Transparent. Market-based. Does not enlarge government. Leaves energy decisions to individual choices. Takes a better-safe-than-sorry approach to throttling back oil dependence and keeping heat-trapping gases out of the atmosphere.

Sounds like a conservative climate plan.