

Communicating Climate Change

Why are we having such a hard time convincing people that global warming is such a serious problem?

I have been reading about why it's so hard for people to get their minds around the climate change problem.

The book is by George Marshall *Don't Even Think About It: Why Our Brains Are Wired to Ignore Climate Change*

Very interesting to me as I am trying to communicate about this and make believers out of folks.

We scientists tend to make it too complex.

One confusing thing to people is CO2 – how can it be both good and bad?

Problem is far into the future and has no immediate impact.

Another thing is the apparent remoteness of any solution.

We don't talk about it and we don't talk about not talking about it (present company excepted, thank goodness).

Other books to consider reading

Re: The anti-science culture in America comes from both ends of the political spectrum.

Shawn L. Otto, *Fool Me Twice, Fighting the Assault on Science in America* (Rodale, 2011)

Re: We didn't evolve to solve a problem like this.

Daniel Kahneman, *Thinking Fast and Slow* (Farrar, Strauss and Giroux, 2012)

I want to start with a few charts that I am trying to develop as a short simple explanation of climate change (slides 1-14).

One point made by Marshall in his book is that climate scientists and concerned policy makers (UN and many governments) have approached the problem from the tailpipe end rather than the front end (well-heads, mines, etc.). The result is that instead of cutting off the supply of fossil fuels by making them expensive, they have focused on things that individuals can do such as recycling, buying fuel efficient cars, and cutting their own footprints. Many of the people asking for this have BIG FOOTPRINTS, myself included, so the requests seem (are?) hypocritical. This won't fly!

- Use less energy (your favorite here)
 - More efficient appliances
 - LED bulbs
 - Eat vegan, eat local, grow local
 - Recycle

The front end solution is to leave the ancient hydrocarbons in the ground, where they were created.

Stop hunting for and burning fossil fuels already!

- Convert to wind and solar
- Carbon tax to help incentivize renewables
 - Citizen's Climate Lobby (CCL) Carbon fee and dividend
- Develop sustainable economics

We will have to mourn the passing of a great era in human history. Fossil fuels drove an amazing expansion of human possibilities. We have all benefitted greatly and don't want to lose what we have gained.

Another front end solution is to make the price of carbon based fuels commensurate with their true costs, including the price of dealing with the costs associated with climate change from global warming. I will talk about the proposal of the Citizens Climate Lobby to put a price on carbon.

The physics of climate change was known 100 years ago. We understand the effect of diatomic molecules in blocking infrared radiation.

When did scientists get alarmed?

Raising the alarm on CO₂ began in the late 1950s. The first was Gilbert Plass¹. Scientists were morally obligated to sound the alarm, even if they were ill suited to carry a message many people didn't want to hear.

"Earthrise" photo taken on December 24, 1968

First Earth Day, April 22nd 1970.

First IPCC Report commissioned in 1988.

This discussion is not about my views. Nevertheless here is own perspective:

- No Arctic exploration
- No offshore drilling
- No coal mining permits
- No transporting of fossil fuels on railroads
- No more pipelines
- No more oil spills
- No fracking

¹ Plass, G.N., 1956, Carbon Dioxide and the Climate, American Scientist 44, p. 302-16. Plass, G.N., 1956, Effect of Carbon Dioxide Variations on Climate, American J. Physics 24, p. 376-87. Plass, G.N., 1956, The Carbon Dioxide Theory of Climatic Change, Tellus VIII, 2. (1956), p. 140-154.

As the economists would say, this is creative obsolescence of the fossil fuel industry.

Lest you think I'm too negative

- Yes to carbon taxes
- Yes to wind power
- Yes to rooftop solar
- Yes to solar collectors (with energy storage)
- Yes to nuclear energy (safer than coal)
- Yes to reforestation
- Yes to geothermal
- Yes to research (e.g. into geo-engineering)

Continue antipoverty work (empower women!, but don't make men useless in the process). There are a plethora of new economic opportunities to replace the fossil fuel industry.

Here is what I am here to explain: The Citizen's Climate Lobby's Proposed Carbon Fee and Dividend proposal.

CCL (<https://citizensclimatelobby.org>) is

- A non-profit, non-partisan, grassroots advocacy organization focused on national policies to address climate change.
- Working to pass Carbon Fee and Dividend
 - train and support volunteers to engage elected officials, the media and the public

Their Advisory board includes

- George Schultz, Secretary of State
- Dr. James Hansen, climate scientist, activist
- Bob Inglis, Energy and Enterprise Institute
- Dr. Katharine Hayhoe, climate scientist, author
- Sam Daley-Harris, microcredit guru
- Dr. Daniel Kammen, renewable energy
- Jose Aguto, Native American & Quaker activist

Further info can be found at: <https://citizensclimatelobby.org/about-ccl/#Advisory-Board>

Their legislative proposal is attached. They have followed the KISS principle.

Some comments:

The Purpose of a Carbon Fee (ok, a tax) is to take the costs associated with fossil fuels and bundle them into the price of such fuels so that the individuals using them have a more accurate idea of how much a specific activity truly costs. For example, when drivers understand how expensive gasoline really is when all the attendant costs are taken into account, then they'll treat it accordingly. Increased cost of hydrocarbon fuels/energy reflecting true costs will spur carbon-reducing investment.

Border adjustments will discourage businesses from relocating and encourage other nations to put a fee on carbon.

- Import fees: countries without a carbon fee
 - Motivate them to adopt carbon taxes
- Rebates to industries exporting to those countries
 - to keep US companies competitive
- Use existing tax and trade systems
 - avoid complex new institutional arrangements

Dividends are taxable

- CLEAR Act returned 75% of the funds
 - they did not know how to get around the 2010 pay-as-you-go act, and the 25% automatic haircut the CBO would attach to any tax.
- CCL proposal avoids problem by taxing dividends
- Modeled after a proposal by Jim Hanson in *Storms of My Grandchildren*
 - Original Bill submitted by Rep. John Larson, CT, 2007; most recent version HR 5307

A study, known as the REMI study, evaluated the economic impacts of their proposal.

- reduces CO₂ emissions 50% below 1990 levels in 20 years
- adds 2.8 million jobs to the economy
- does not increase size of government
- increases real disposable income
- gives clear guidance for business planning

Why no compensation for those adversely affected?

- CCL bill leaves the poorest better-off.
 - income is the best predictor of CO₂ emissions
 - dividend is the most progressive way of returning the revenue (e.g. vs. tax offsets)
- 60-66% of American households ending up even or better with a 100% dividend
 - these are the poorest 60-66%.
- About 20% of the revenue returned to the poorest 40% would compensate them (i.e. make them whole)

CCL's "Marketing summary":

Carbon Fee and Dividend is

- elegant in its simplicity,
- transparent in its accessibility to public scrutiny, &
- clear in its signals and benefits

One reaction:

Naomi Klein (neoliberal author): *The Shock Doctrine & This Changes Everything: Capitalism vs. the Climate*

“You know, I’ve been making these arguments around economics, but there is nothing more powerful than a values-based argument. We’re not going to win this as bean counters. We can’t beat the bean counters at their own game. We’re going to win this because this is an issue of values, human rights, right and wrong. We just have this brief period where we also have to have some nice stats that we can wield, but we shouldn’t lose sight of the fact that what actually moves people’s hearts are the arguments based on the value of life.”

There will undoubtedly be big arguments about what to do with the money raised by such a fee. Other carbon fee proposals include:

- Dale Jorgenson, Harvard, *Time to Tax Carbon*
 - <http://harvardmagazine.com/2014/09/time-to-tax-carbon>
 - \$44/metric ton
 - Capital gains tax reduction -> economic growth
 - International agreement
 - win, win, win for China (reduction of pollution -> health benefits)
 - Book: *Double Dividend: Environmental Taxes and Fiscal Reform in the United States*
- CLEAR Act, 2009 (cap and trade w/ price collar)
 - Sen. Maria Cantwell, D-Wash., Sen. Susan Collins (R-Maine)
- McDermott Bill in the house
 - *Managed Carbon Price Act of 2014*
- Many other bills and articles

Some recent developments:

- Paulson article: The Coming Climate Crash
 - <http://www.nytimes.com/2014/06/22/opinion/sunday/lessons-for-climate-change-in-the-2008-recession.html? r=0>
- BP: Put A Price on Carbon, Let The Market Cut Emissions
 - <http://www.triplepundit.com/2015/02/bp-put-price-carbon-let-market-cut-emissions/>
- Exxon-Mobil
 - <http://corporate.exxonmobil.com/en/current-issues/climate-policy/climate-policy-principles/overview>
- Shell Oil Self-Imposes Carbon Pollution Tax High Enough To Crash Coal, Erase Natural Gas’s Value-Added
 - <http://thinkprogress.org/climate/2013/11/21/2978021/shell-oil-carbon-pollution-tax/>

Lots more on the CCL web site

- REMI report <http://citizensclimatelobby.org/REMI-report/>
- Monthly talks: David Hone, Climate Change Advisor for Shell
 - <http://citizensclimatelobby.org/monthly-international-conference-calls/>
- Laser talks: all kinds of details discussed
<https://citizensclimatelobby.org/laser-talks/>

Finally, an economist friend of mine commented:

1. REMI says they are an offshoot of a program at U-Mass Amherst from the 1970's. That's not a great pedigree.
2. The fee and dividend is really just a Pigouvian tax (Arthur Pigou)--a technique that has been around a long time as an idea, but rarely employed. Greg Mankiw at Harvard has proposed a Pigouvian carbon tax for a long time, but he makes no claims for economic stimulation. (Note: Mankiw is a big fish, Remi are minnows).
3. The only way I can think of modeling a gain from the fee and dividend proposal is:
 - A. They screwed up and forgot to deduct the money withdrawn by the fee.
 - B. They assumed an arbitrage effect from taking money from one group of taxpayers and giving it to another. This is alchemy in my opinion, but there are people out there making this argument. The idea is that the taxpayers are wealthier and would have saved the money had it not been taxed while the recipients are less wealthy and more inclined to spend the money. The driver here is a measure called the "Marginal propensity to consume". I consider this theory hogwash.
4. I couldn't quickly find the REMI explanation of growth, just statements that it happens. I'll keep looking.
5. The beauty of a Pigouvian tax is that it (in theory) does not have any significant effect on the economy. Value is transferred from those who are disproportionately large users of the taxed fuels to those who use less. In theory, there is no impact on the economy arising directly from the redistribution of the taxed amounts.
6. The government has been handed a golden opportunity to tax the sale of fossil fuels at a time when consumers are enjoying a windfall of lower costs. Raising taxes when prices are high is difficult at best. If they want to impose a carbon tax, now is the time.
7. I have great faith in technology and innovation. I sincerely expect that geo-engineering or some other mitigating change will obviate the catastrophes that some foresee.
8. Whatever the net effects of climate change will be, I suspect, will be slow in coming. We can easily take an approach of watchful waiting and be prepared to adapt if necessary. I'm not prepared to reject the case that the results will be a net benefit to mankind rather than an apocalypse.