How Does It Feel?

04 October 2017

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On a long trip from Helsinki to Cavalier, North Dakota. As Yogi supposedly said, "you can't get there from here." It's not so far on a great circle route. But there are no such flights.

How does it feel to be on the way to the trial of a really brave conscientious objector? Civil disobedience arrests are not new. I have been arrested five times myself. Good causes: draw attention to an issue, be taken away in handcuffs, pay a fine and get released. No real risk – usually. Once, with Larry Gibson, protesting mountaintop removal, I refused to pay the fine and was threatened with one year in prison. One year was a period I was willing to risk – for the sake of drawing attention to the situation in West Virginia, where elected officials and even (some of) the judiciary were crooked, bought off by the coal industry. Somehow, after years, West Virginia quietly dropped the case, so I escaped punishment.

There was one serious conscientious objector in the Bush/Obama era – <u>Bidder 70</u>, who disrupted an auction of public property for fossil fuel exploitation. The science shows that we can't burn those additional fossil fuels, unless young people extract the CO₂ from the air (unlikely) or suffer the consequences. President Obama let Bidder 70 go to jail and cook there for a couple of years – sending a message. The Clean Power Plan will be Obama's legacy – a tiny short-term dent that at best encouraged widened use of natural gas. Some legacy! Obama blew the enormous opportunities that he had, both <u>early</u> and <u>late</u>.

Relevant interlude re "make America America again": Our two major political parties are competing to see who can do more damage. In *Sophie's Planet* I will argue the need for a new, centrist, party, with the objective to "make America America again." That sure won't happen with either of our present two elitist political parties, both of which have gone off the rails.

Representatives of the party dominated by deniers, are honest crooks. They don't hide the fact that they are on the take from the fossil fuel industry. Science be damned; it's all about money.

History may find the other party to be more destructive. They fool the public and themselves. They are the Neville Chamberlain party. They pretended that the Kyoto Protocol would do something. Now they pretend that the Paris Agreement does something. Kyoto and Paris are analogous to what Churchill described as "half-measures," and "soothing and baffling expedients." As a result, young people will be "entering a period of consequences".

Have you heard the hogwash about the world turning the corner, moving to clean energies, phasing out fossil fuels? You heard it in 2015 with all the politicians clapping each other on the back in Paris. You can read it daily in "Big Green" propaganda machines, such as EcoWatch, just to pick on one of them. Let's look at real-world data for the quantity that matters.

Figure 1 shows the annual increase of greenhouse gas climate forcing. The annual increase is increasing, not decreasing! That growth continues up to the present. The figure appears to go only through 2015, because we smooth data to minimize effects of short-term variability, mainly the Southern Oscillation. The figure is from the <u>EGU video</u> on the <u>Young People's Burden</u> paper, for which observations of atmospheric gas amounts are updated monthly on our <u>website</u>.



Fig. 1. Greenhouse gas (GHG) climate forcing annual growth rate. IPCC scenario RCP2.6 keeps maximum global warming <1.5°C. Annual addition to future warming (right hand scale) assumes climate sensitivity 3°C for 2×CO₂. Actual GHG growth exceeds RCP2.6 by at least 0.01 W/m² in both 2015 and 2016. The added forcing each year is increasing, rather than following the black line (RCP2.6). The gap now exceeds 0.01 W/m² each year. Failure to reduce emissions as per RCP2.6 in principle can be offset by extracting CO₂ from the air, but, for example, the gap of 0.0127 W/m² in 2015 would require atmospheric CO₂ to be reduced about 1 ppm. Such a reduction requires extraction of about 3.5 GtC. Using the optimistic extraction cost estimate of \$150-350/tC implies a cost of \$525-\$1225B. See <u>Young People's Burden</u> paper for further explanation.

Why are CO_2 and CH_4 increasing faster than a decade ago? It's not surprising. Slow (amplifying) feedbacks are likely greater with recent global warming. Wetland CH_4 emissions seem to have increased; CH_4 leaks during fracking may contribute. However, the main point is that emissions of CO_2 and CH_4 are not decreasing rapidly, as they must if we are to avoid leaving young people climate change running out of control.

Wait a minute! Didn't Jerry Brown just renew cap-and-trade, with hoopla? Isn't California leading us on the right track! Hogwash. That scheme locks in fracked gas for decades, freely allocates allowances to polluters, provides offsets that virtually ensure carbon prices hug the floor, and thus does vanishingly little to reduce emissions. That is no model for our nation or any other. <u>I once called</u> Brown's cap-and-trade approach half-baked and half-assed to Jerry's face at the Commonwealth Club in San Francisco. Some in the audience gasped, but Jerry took it in stride – he is, after all, a tough guy with a sense of humor. Jerry defended his program as "pretty darned good." In truth, it's pretty damned bad. It is not plausible to get rapid phasedown of global fossil fuel emissions without an across-the-board global carbon fee, and the public will not accept ensuing price increases unless the money is distributed to the public, not grabbed by government for pet projects. A "cap" approach cannot achieve rapidly declining global emissions. What is the "cap" on India? Jerry likes the cap approach; it allows backroom deals with the fossil fuel industry and he is able to grab the people's money for a monument: a 20th century LA-SF railroad. If Jerry Brown had chosen a simple honest carbon fee-and-dividend, California could have led the world to a climate solution. Instead, baffling half-measures.

Cavalier, North Dakota: Michael Foster trial. Crime: turning valve of Keystone 1 pipeline near Canadian border, stopping flow of 590,000 barrels per day of tar sands oil. Potential sentence:

up to 20 years. Foster is a model citizen who put in years doing everything he could think of to influence the government in ways allowed in our democracy, undertaking the pipeline action only when it was clear that the government would never act responsibly. He does not deserve prolonged jail time.

The trial is still underway, so I will get into details in a future Communication. I have to wonder whether my words about the danger of unlocking unconventional fossil fuels (tar sands, fracking) didn't help spur his pipeline action. So I'm on my way to North Dakota, though it seems increasingly unlikely that the judge will allow my testimony on Foster's behalf.

One cannot attend a trial such as that of Michael without asking discomfitting questions.

Who are the real criminals?

This story is complicated, with calamity around the corner.

How does it feel? Like a rollin stone. Like a rollin stone.