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# Assessing the Prospects for a Binding, Effective Global Climate Treaty

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Thank you for the invitation to be here today.

I'm going to offer my explanation of why decades of efforts to develop and implement an effective global greenhouse gas treaty have not only failed, but will likely continue to do so.

I have three basic points to make:

First, the economics of climate policy remain as impossible as ever. Climatologically-relevant actions are politically infeasible, while feasible policies are climatologically irrelevant.

Second, the climate science community exaggerated its level of certainty about the effects of greenhouse gases, and it now faces a loss of credibility as the doomsday predictions conspicuously fail.

Third, the highwater mark of popular support for climate action was before the 2008 financial crisis, and those days are not coming back.

Beginning with the economics, it's been my observation that the politicians who are most enthusiastic about the climate issue are the least likely to do the public the courtesy of a serious reckoning of the costs. Instead they talk as if policies to make energy more expensive and less reliable are a new engine of economic growth and innovation. As a result the public has never been brought inside for the massive policy measures that would be required to be climatologically relevant, instead they have been primed to believe that the so-called solutions are either trivially inexpensive or even a net gain. But policies that are trivially inexpensive are also trivially ineffective.

CO<sub>2</sub> emissions are closely tied to fossil fuel consumption, and in almost every case there is no effective end-of-pipe abatement, so if you burn the fuel you release the CO<sub>2</sub>. Demand elasticities for fuel are very low, which is why we have relatively high gasoline taxes: we only put high excise taxes on goods with low elasticities. But that means it takes large price shocks to generate relatively small changes in the quantity consumed. As it is for fossil fuels, so it is for CO<sub>2</sub>. Relatively small changes in total emissions come at high marginal costs, and these costs quickly dwarf the perceived benefits even at relatively modest reduction targets.

Making things worse, because CO<sub>2</sub> is a global issue, small local reductions have no measurable effect on the climate, which after all is what we are interested in. Only massive, coordinated international actions would have even a theoretical chance of making a detectable difference over the coming century at the global level, but these actions involve costs the public has been reassured they will never need to pay.

As a result there is no public appetite for climatologically-relevant policy action.

An added complication here is that the climate lobby identified itself very strongly with green energy, which is heavily reliant on subsidies, mandates and feed-in-tariffs. Far from being an economic benefit, governments are finding these technologies costlier and less reliable than

expected. The growing economic and political failure of renewables risks discrediting the larger climate agenda more generally.

The basic impossibility of climatologically-relevant action would be a big concern if the greenhouse warming issue were a crisis. But here I move to my second point, which is the widening gap between climate model projections and reality. You may not have heard about this, but for those of us who have been watching the technical debates closely for the past decade, it comes as no surprise. Since the late 1990s, climate models have been predicting a rapid warming of the atmosphere, yet no such warming has been observed. The climate science community has started putting forward dozens of novel explanations for the lack of warming, some of which imply pretty major revisions to the standard model of how the climate works, and in particular, the relative importance of greenhouse gases versus natural variability.

The problem is that the climate science community, through organs like the Intergovernmental Panel on Climate Change, insisted for many years that the science is all settled, the major uncertainties are resolved, and the models are sound. On this basis they disparaged the very idea of debate, and confidently asserted that the climate is very sensitive to CO<sub>2</sub> emissions and that global warming is a major problem.

The recent avalanche of hasty, ad hoc, ex post rationalizations for the lack of warming belie all this confidence. But personally I'm not surprised by any of it.

My perspective has been formed over the past 15 years through my involvement in some of the major technical battles involving the statistical analysis of data sets at the core of the major climate issues. On topics like paleoclimate reconstructions, surface temperature measurement and climate model evaluation I have usually ended up publishing findings that go against the establishment consensus. This meant that I did not have the luxury of relying on appeals to authority, or the trick of claiming that the debate is over before it had even started. I and my coauthors had to drill down into the technical details, learn them inside out, and prove our points the hard way. These debates played out not only in the climatology literature, but also in the media, government hearings, scientific assessments and even, as we speak, major court cases.

My observation after all this is that too many climate scientists have been too willing to sweep aside valid technical objections to the so-called consensus, and it is now coming back to bite them. The models keep predicting more and more warming and it is not showing up in the data. On important spatial details the discrepancy is even worse. For instance, models project the strongest and fastest response to rising CO<sub>2</sub> levels should be in the vast troposphere over the tropics. Yet aside from a single blip in the late 1970s, there has been no significant trend at the lower or upper troposphere levels since balloon records began in the late 1950s. This is something that climate models fundamentally cannot square with the assumption of high sensitivity to rising CO<sub>2</sub> levels.

In addition, a string of recent empirical studies have shown that when long term climate sensitivity is estimated from observations rather than from climate models it comes out at the low end of the model distribution: in other words the vast majority of climate models embed sensitivity assumptions that are too high to reconcile with the past 100 years of observations.

Although much of this remains a well-kept secret within academia, it is getting harder and harder for people not to notice that the doomsday warming predictions are not coming true. The basic inertia on the policy front, that arises from the impossible economics, might have been overcome if warming exceeded model projections. But the opposite has happened, and the model overshoot is

widening, not shrinking. That is already depleting the sense of urgency about the warming threat and may do so even more in a few years. Unless there is a sudden, dramatic warming in next couple of years, we can expect a major rethink of climate models and their projections of harm from CO<sub>2</sub> emissions.

My final point concerns the US chiefly, though it also applies to Europe. Wealthy environmental groups, such as Al Gore's Climate Action Partnership, spent hundreds of millions of dollars a decade ago in doom-laden PR campaigns to get the public onside with policies like a carbon cap-and-trade system. The 2008 financial crisis hit the US hard, and public concerns about climate change evaporated with it as people focused on economic survival. The problem with end-of-the-world rhetoric, though, is you can only use it once. It doesn't work the second time around. Efforts to rekindle the Waxman-Markey era mood of support for Congressional action on cap and trade are going nowhere.

In many ways the US has never recovered from the financial crisis. Monetary measures like the velocity of circulation and the M1 multiplier have continued to fall since 2008 and are at the lowest levels ever recorded. Banks have hoarded the vast amounts of QE money, and now hold \$2.7 trillion in excess reserves at the Fed. Were growth to resume and banks to begin lending it out, the US monetary base would more than triple, leading to an inflation crisis. Other than trying to sell assets, which would be difficult given the dubious quality of holdings that makes up so much of the Fed balance sheet even today, the only way for the Fed to prevent this would be to force up interest rates, but this would once again contract credit and constrain investment. It is a trap reminiscent of the one Japan got into after its property bubble burst in the 1990s. And as their experience shows, there is no obvious way out.

This ongoing economic weakness, and the corresponding slowing down in the EU, means the US Congress, including many Democrats, will not support a costly new treaty or similar initiative from the Administration. And if Congress becomes even more conservative after this fall's election, that simply adds to the difficulty of getting Senate approval for a treaty. And if the US refuses to ratify, there is little point in other countries doing so.

So, for these reasons: the impossible economics, the failing models and the lack of US support, I think it very unlikely that any sort of effective climate treaty will be implemented any time soon.