

Testimony

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1. My name is Ross McKittrick, and I am a Full Professor of Economics at the University of Guelph where I specialize in environmental economics. I have published on both on the economics of climate change and statistical analysis in climatology. I was an expert reviewer for the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, and in 2006 I was one of 12 experts from around the world asked to brief a panel of the US National Academy of Sciences examining paleoclimate reconstruction methodology.
2. The global warming issue is often described with emphatic claims that the “science is settled”, the situation is urgent, and the necessary actions are obvious. The reality is that there are deep disagreements about underlying scientific issues, there is reason to believe the problem has been exaggerated, and most policy proposals simply do not pass objective cost-benefit tests. Amidst the disputes and controversies of the past few years, I believe two points have emerged with clarity.
3. *First*, the economics of climate change do not favour Kyoto-type commitments. Under current and foreseeable technologies, the greenhouse gas policies we can afford to undertake would have such small climatic impacts as to be pointless. The same kinds of models that are used to forecast global warming predict that, if all signatories to the Kyoto Protocol complied with their commitments, the level of carbon dioxide (CO₂) in the atmosphere that we would have observed by 2100, would instead have been reached by about 2105, a trivial difference. And Kyoto was too costly for countries to reach. When a policy is proposed that is too costly to implement and yields benefits that are too small to measure, you would expect reasonable people to see it as a bad idea. Instead we observed a dogmatic elite consensus emerge in support of Kyoto. In my mind this never validated Kyoto, it merely discredited the elite consensus, and suggested to me that the international political milieu in charge of the climate issue was unduly susceptible to groupthink.
4. Unlike such air pollutants as sulphur dioxide and particulates, CO₂ is not easy to capture, and once captured, there is no obvious way to dispose of it. There appears to be no way to cut CO₂ emissions on a large scale without cutting energy consumption and impeding economic activity. Despite their enthusiasm for embracing targets, policymakers around the world have not been able to cut CO₂ emissions while pursuing economic growth. Simply put, with regard to climate policy, the cure is worse than the disease.
5. *Second*, the official process for assessing technical and scientific information on climate change for the purpose of advising policymakers has become untrustworthy due to bias and partisanship. As a member of the expert review team for the last IPCC Report, I saw things take place that violated longstanding principles of peer review. I documented some of them in various publications since 2007, but the issues never received much attention until the fall of 2009, when thousands of emails from top IPCC scientists were leaked onto the internet. The so-called Climategate emails confirmed the reality of bias and cronyism in the IPCC process. The new leaks last month provided even more confirmation that climate scientists privately express greater doubts and disagreement about climate science than is reflected in IPCC reports.

6. Earlier this year I was asked by the London-based Global Warming Policy Foundation to review IPCC procedures, and to make recommendations for reform. My report was published last month, and includes a foreword written by John Howard, the former Prime Minister of Australia. I have included a copy with this submission. I mainly focus on how the IPCC handled issues with which I have first-hand knowledge as a contributor to the peer-reviewed literature on the subject, and on which I worked closely on the IPCC text in my capacity as an expert reviewer.
7. The IPCC is not a neutral observer of the scientific process, instead it has a party line. It is controlled by a relatively small Bureau in Geneva, consisting of a small core surrounded by a network of supportive academics and government officials. The oversight body, called the IPCC plenary panel, is passive, inattentive, and overly deferential to the Bureau. In effect there is no oversight.
8. The Bureau picks Lead Authors who share their views. They are routinely placed in the position of reviewing their own work and that of their critics, and are free to rule in their own favour. Lead Authors are also free to reject reviewer comments, over-ride Review Editors, and even rewrite text after the close of the peer review process. The combination of Bureau control over the selection of Lead Authors, and a toothless peer-review review process, means that IPCC Assessments are guaranteed merely to repeat and reinforce a set of foregone conclusions that make up the party line.
9. In my report I document some disturbing cases where the IPCC violated proper peer review practises. These include:
 - Manipulating prominent graphs so as to conceal known flaws in the statistical basis of paleoclimate reconstructions and to exaggerate evidence that modern climate change is historically exceptional. This is the so-called “hide the decline” scandal.
 - Fabricating a statistical test result to provide a rationale for dismissing published evidence of urbanization-related contamination of the surface temperature record on which key IPCC conclusions were based.
 - Waiting until the close of peer review, then removing text that had initially, and correctly, cautioned readers that the IPCC method of calculate warming trends likely exaggerated their significance, and replacing it with unsupported text saying the opposite.
10. My report documents these and other incidents that, in my view, suffice to discredit its claims to rigour and objectivity, and point to the urgent need for procedural reform.
11. In 2010 The InterAcademy Council reviewed IPCC procedures and drew attention to many of the same problems as my report does. Unfortunately the IPCC’s internal reform process has gone nowhere. I discuss this problem in Section 4 of my report.
12. At this point we could simply muddle along for another 20 years enacting more and more costly and wasteful schemes based on the increasingly biased and unreliable guidance of the international climate policy milieu. That would be the easiest course of

action, but would not serve the public interest. The more difficult option would be to begin the hard work of improving the decision-making process itself, beginning with reform of the IPCC.

13. My published research has led me to believe that the IPCC has overstated the global warming issue. I have shown that the spatial pattern of warming trends in the surface temperature record is strongly correlated with the spatial pattern of industrialization, even though this pattern is not predicted by climate models as a response to greenhouse gases. This indicates that the standard climate data sets likely have a warm bias due to their failure to correct for disturbances of the land surface from urbanization, agriculture, and so forth.
14. I have also shown that climate models predict significantly more warming over the past 30 years in the tropical troposphere than is observed in satellite or weather balloon records. This is a key region for measuring the water vapour feedbacks that control the magnitude of greenhouse warming. Despite this being the region that models say should be warming fastest in response to greenhouse gases, the 50-year balloon record actually shows no positive trend once the effect of ocean circulation changes in the late 1970s are removed from the record. One of the most telling emails in the so-called Climategate 2.0 archive that was just released last month involves one IPCC expert warning another that their efforts to finesse this issue by deceptive trend analysis is a "fools paradise."
15. Today you have a chance to hear from a number of serious Canadian scientists about work that they and their colleagues have done that also calls into question aspects of the IPCC party line. The fact that you have learned little of what they are about to tell you does not indicate any deficiencies in the research they or their colleagues have done. Instead it points to the deficiencies in the process that was supposed to have brought this information to your attention long before now.