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THE ULTIMATE GLOBAL WARMING CHALLENGE
Presented by JunkScience.com

MISSION:

Prove, in a scientific manner, that humans are causing harmful global warming by rejecting both of the UGWC Hypotheses.

UGWC Hypothesis 1

Manmade emissions of greenhouse gases do not discernibly, significantly and predictably cause increase in global surface and tropospheric temperatures along with associated stratospheric cooling.

Summary/Abstract:

A report published in February 2007 by the Intergovernmental Panel on Climate Change (IPCC) confirms that the observed increase in atmospheric concentrations of greenhouse gases carbon dioxide, methane, and nitrous oxide since 1750 is the result of human activities. Scientists now have 90% confidence – thanks to major advances in climate modeling and the collection and analysis of data – that human activities are causing the world to warm.

The full report – “Climate Change 2007: The Physical Science Basis” is published by Cambridge University Press. It was produced by some 600 authors from 40 countries. Over 620 expert reviewers and a large number of government reviewers also participated. Representatives from 113 governments reviewed and revised the Summary line-by-line during the course of this week before adopting it and accepting the underlying report. The full report is available at www.ipcc.ch, www.wmo.int or www.unep.org.

The report describes an accelerating transition to a warmer world marked by more extreme temperatures, heat waves, new wind patterns, worsening drought in some regions, heavier precipitation in other, melting glaciers and Arctic ice, and rising global average sea levels.

Among the findings in the report are as follows:

- If atmospheric concentrations of greenhouse gases double compared to pre-industrial levels, this would likely cause an average warming of around 3 degrees Celsius (5.4 degrees Fahrenheit).
- The world's average surface temperature has increased by approximately 0.74 degrees Celsius over the past 100 years (1906-2005), with the last 11 of the last 12 years ranking among the 12 warmest years since modern records began around 1850.
- Sea ice is expected to shrink in the Arctic and Antarctic regions. Large areas of the Arctic Ocean could lose year-round ice cover by the end of the 21st century if human emissions reach the higher end of current estimates. The extent of Arctic sea ice has already shrunk by about 2.7% per decade since 1978, with the summer minimum declining by about 7.4% per decade.
- Snow cover has decreased in most regions, especially in the spring. The maximum extent of frozen ground in the winter/spring has decreased by about 7% in the Northern Hemisphere over the latter half of the 20th century.

- The upward trend in hot extremes and heat waves will most likely continue. The duration and intensity of drought has increased over wider areas since the 1970s, particularly in the tropics and subtropics. The Sahel, the Mediterranean, southern Africa and parts of southern Asia have already become drier during the 20th century.
- The amounts of carbon dioxide and methane now in the atmosphere far exceed pre-industrial values going back 650,000 years. Concentrations of carbon dioxide have already risen from a pre-industrial level of 280 parts per million (ppm) to around 379 ppm in 2005, while methane concentrations have risen from 715 parts per billion (ppb) to 1,774 in 2005.

The findings of this report by IPCC provide unequivocal scientific evidence that human activity does play a role in harmful global warming.

References from the aforementioned IPCC report entitled, "Climate Change 2007: The Physical Science Basis", and "Environment News Service" 2007-2-2 article.

UGWC Hypothesis 2

The benefits equal or exceed the costs of any increases in global temperature caused by manmade greenhouse gas emissions between the present time and the year 2100, when all global social, economic and environmental effects are considered.

Summary/Abstract:

Obviously, there are huge uncertainties regarding global, social, economical and environmental effects when considering what will happen in the next 100 years. A study by De Leo et al. found that "accounting only for local external costs, together with production costs, to identify energy strategies, compliance with the Kyoto Protocol would imply lower, not higher, overall costs."¹ Initial greenhouse gas cuts may have little effect, but they set the political precedent for bigger and more effective cuts in the future.² The Stern Review, a UK government sponsored report into the economic impacts of climate change, concluded that one percent of the global Gross Domestic Product is required to be invested in order to mitigate the effects of climate change.³

Government has the most important role to play; it must engage the commitment of its people to reducing greenhouse gas emissions. This can be done at a very low cost – one in which the benefits would be less than the cost of any increases in global temperatures. A program like this would encourage good behavior and discourage bad by introducing green taxes. For example making the owners of gas-guzzling vehicles pay a tax, while cutting taxes on greener vehicles, may help reduce emissions. The Government can also set standards and legislate against highly-polluting products and activities.

While it has been difficult to arrive at a scenario under which the net benefits of fighting global warming are positive using traditional discounting methods, I'd argue that a much lower discount rate should be utilized; that high rates are biased toward the current generation. This may appear to be a philosophical value judgment, outside of the realm of economics, but it could be equally argued that the study of the allocation of resources does include how those resources are allocated over time.

1. De Leo, Giulio A.; Luca Rizzi, Andrea Caizzi and Marino Gatto (2001). "Carbon emissions: The economic benefits of the Kyoto Protocol." *Nature* **413**: 478-479. doi:10.1038/35097156

2. McKittrick, Ross (2000-09-26). "Submission to the Joint Standing Committee on Treaties Inquiry into the Kyoto Protocol (pdf)" (PDF). Retrieved on 2006-11-07.

3. Stern, Nicholas (2006-10-30). "Stern Review: The Economics of Climate Change, Summary of Conclusions" (PDF). Archived from the original on 2006-12-09. Retrieved 2006-11-11.

Information also gathered from Wikipedia, the free encyclopedia.