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CLIMATE SCIENTISTS DEBUNK PROMINENT CONTRARIAN CHRISTOPHER MONCKTON'S CONGRESSIONAL TESTIMONY

A group of five scientists solicited responses from more than twenty world-class climate scientists to the May 6th testimony by Christopher Monckton to the House Select Committee on Energy Independence and Global Warming. These climate scientists "...have thoroughly refuted all of Mr. Monckton's major assertions, clearly demonstrating a number of obvious and elementary errors," the report says. "We encourage the U.S. Congress to give careful consideration to the implications this document has for the care that should be exercised in choosing expert witnesses to inform the legislative process."

The report examines claims from Monckton's testimony in nine major areas and corrects and refutes each of them. The authoritative scientific statements in each of these nine areas are summarized below.

- 1) In ancient times, the warming from carbon dioxide release played a critical role in lifting the Earth from a cold 'snowball' state to a warm climate. Monckton totally misunderstands the sequence of these events in denying the heat-trapping ability of carbon dioxide. He treats the events as if they were contemporaneous.
- 2) Ancient corals and other life forms were able to adapt to high carbon dioxide concentrations because they have had millions of years to react to slower, natural climate change. Monckton ignores the vast difference in the rate of these changes compared to the present rate; he incorrectly argues that the present rapid increase in carbon dioxide is harmless.
- 3) Paleo-climatologists understand that the rate of change of carbon dioxide concentration is more important than the overall levels of carbon dioxide for plant adaptation. Monckton claims a single benefit of higher carbon dioxide levels – increased yields on selected crops (which he appears to have exaggerated) – but fails to mention the wide-ranging negative consequences for plant species and agriculture as well as rising sea levels and changing weather patterns.
- 4) The fact that increasing carbon dioxide in the atmosphere is driving ocean acidification is based on "experimental results, field observations and our fundamental understanding of physical chemistry going back hundreds of years." The responses to Monckton's claim that "*if ocean acidification is occurring then CO₂ is not, and will not be, the culprit*" provide a compelling example of Monckton's lack of understanding of basic science – in this case of ocean chemistry.
- 5) Despite Monckton's assertions, compilations of global temperatures show that the late 20th century was exceptionally warm compared with the last 1500 years, with a rate of warming that is indeed exceptional.
- 6) "Global warming on decadal time scales is continuing without letup". The frequently heard assertion, repeated by Monckton, that '*global warming ceased in*

2001' is contradicted by recent, record-breaking global mean temperatures obtained by both NOAA and NASA. The long-term instrumental record shows an unequivocal upward trend.

- 7) "Over the last century we have observed large and coherent changes...of the Earth's climate...all these changes are consistent with our...understanding of how the climate system should be responding to anthropogenic forcing...collectively this behavior is inconsistent with the changes...due to natural variability alone." By contrast, Monckton ascribes the recent rise in global temperature to 'naturally-occurring global brightening', citing a 2005 paper by Dr. Rachel Pinker et al. As the responses forcefully demonstrate, and indeed as Dr. Pinker herself has stated, his conclusions are based upon a misunderstanding and misapplication of that work.
- 8) 'Climate sensitivity' characterizes the long-term increase in global temperatures in response to increased CO₂ concentration. Multiple estimates of climate sensitivity, based on different types of data, are in agreement. Monckton argues the value is very much lower than these estimates, based on his misinterpretation of the Pinker paper, as well as on a recent paper by Lindzen and Choi. Two recently published papers discussed in this report thoroughly discredit the paper by Lindzen and Choi, as well as Monckton's conclusions.
- 9) "The urgent need to act cannot be overstated. Anthropogenic climate change is already affecting our lives and livelihoods through extreme storms, unusual floods and droughts, rising seas, and many changes in biological systems." Monckton argues that "*global warming is a non-problem*", and in any case "*there is no hurry*", and that the correct response is "*to do nothing*". This report states that a "decision to delay action to reduce greenhouse emissions is not a decision 'to do nothing'. It is a decision to continue emissions of CO₂...committing the world to higher levels of global warming...with associated adverse impacts." A paper by Dr. S. Solomon et al. cited in the report emphasizes the long-term role of increased CO₂ levels on future climate and shows that the assumption that a "decision can always be made to reduce CO₂ emissions and thereby reduce any harm within a few years or decades" is incorrect.

The 21 climate scientists contributing to the report were:

Drs. James Annan, David Archer, Ken Caldeira, David Easterling, James Hansen, Ove Hoegh-Guldberg, James Hurrell, David Karoly, Jeffrey Kiehl, Nancy Knowlton, Lee Kump, Norman Loeb, Michael MacCracken, Peter Reich, Reto Ruedy, Benjamin Santer, Gavin Schmidt, Pieter Tans, Kevin Trenberth, John Veron and Bruce Wielicki. Their affiliations and credentials are listed in Appendix A of the report.

The five scientists who organized the report were: Drs. Ray Weymann, Barry Bickmore, John Abraham, Michael Mann and Winslow Briggs. Their affiliations are given in the Executive Summary of the Report.

The opinions expressed in the Report reflect the participants' professional scientific judgment, and not necessarily the positions of their sponsoring institutions.

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