From: Joseph Bast
Sent: Mon 6/19/2017 6:20:53 PM
Subject: NASA still lies about climate change "consensus"
Why Scientists Disagree Second Edition with covers.pdf

Thomas Wysmuller [mailto:tom@colderside.com]

Mr. President:

As a former Apollo era NASA employee, I am stunningly embarrassed that this shameful material is still "up" on the NASA website:

https://climate.nasa.gov/scientific-consensus/

But just taking it down is not my preferred solution, as this drivel has been pounded into the public brain for the last few years.

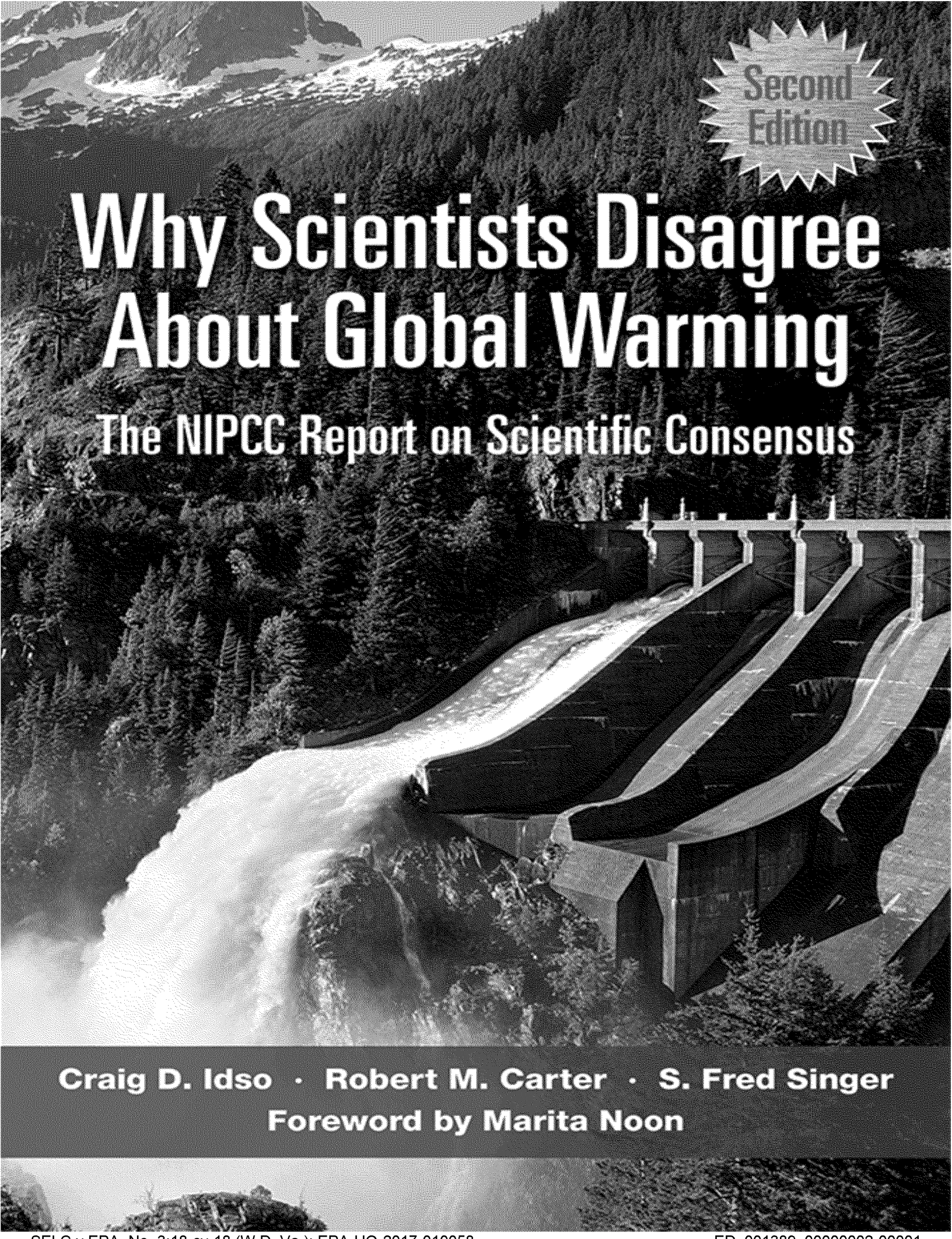
Each of the items should clearly be labeled as "FALSE," with a succinct explanation along the lines drawn by Heartland's excellent "Why Scientists Disagree About Global Warming" - examples on Pages 13, 15, and 17 of the PDF that I've attached.

More is needed than just making the offensive and scientifically vapid material disappear. A concerted and technically accurate re-education process is needed here. The NASA webpage referred to above is just the tip of the (non-melting) iceberg! This one HAS to melt, and much sooner than later! It goes without saying that we are more than a dozen years behind this particular power curve!

NASA needs new scientifically literate leadership. …

BEST to you, and thanks for what you are doing to "Make America Great Again!!!"

Tom


Second Edition
Why Scientists Disagree About Global Warming
The NIPCC Report on Scientific Consensus
Craig D. Idso · Robert M. Carter · S. Fred Singer
Foreword by Marita Noon

Praise for past reports by the
Nongovernmental International Panel on Climate Change

Climate Change Reconsidered is a comprehensive, multidisciplinary compilation of technical papers covering a very large variety of important topics that will be appreciated by all who desire reliable, up-to-date information.

— Larry Bell, endowed professor and director
Sasakawa International Center for Space
Architecture at the University of Houston

Many will treat *Climate Change Reconsidered* as a highly authoritative source of reference. It is in particular a standing rebuke to all those alarmists who deny the existence of hard science supporting the sceptical case. ... Given the increasing realisation that climate mitigation efforts are creating an economic crisis, and increasing popular scepticism about the alarmist scenario, this is a timely publication, and a key resource for all of us who are arguing for common sense.

— Roger Helmer
Member of the European Parliament

The 2011 edition of *Climate Change Reconsidered* is a quite extraordinary achievement. It should put to rest once and for all any notion that "the science is settled" on the subject of global warming, or that humanity and our planet face an imminent manmade climate change disaster.

— Paul Driessen
Author, *Eco-Imperialism*

I fully support the efforts of the Nongovernmental International Panel on Climate Change (NIPCC) and publication of its latest report, *Climate Change Reconsidered II: Physical Science*, to help the general public to understand the reality of global climate change.

— Kumar Raina
Former Deputy Director General
Geological Survey of India

I've been waiting for this book for twenty years. It was a long wait, but I'm not disappointed. *Climate Change Reconsidered* is a *tour de force*.

— E. Calvin Beisner, Ph.D.
National Spokesman, Cornwall Alliance for the Stewardship of Creation

Highly informative, *Climate Change Reconsidered* ought to be required reading for scientists, journalists, policymakers, teachers, and students. It is an eye-opening read for everyone else (concerned citizens, taxpayers, etc.).

— William Mellberg
Author, *Moon Missions*

[T]here are several chapters in the NIPCC report that are substantially more thorough and comprehensive than the IPCC treatment, including 5 (Solar variability and climate cycles), 7 (Biological effects of carbon dioxide enrichment), 8 (Species extinction) and 9 (Human health effects). Further, the NIPCC's regional approach to analyzing extreme events and historical and paleo records of temperature, rainfall, streamflow, glaciers, sea ice, and sea-level rise is commendable and frankly more informative than the global analyses provided by the IPCC.

— Dr. Judith Curry, professor and chair
School of Earth and Atmospheric Sciences
Georgia Institute of Technology

NIPCC's CCR-II report should open the eyes of world leaders who have fallen prey to the scandalous climate dictates by the IPCC. People are already suffering the consequences of sub-prime financial instruments. Let them not suffer more from IPCC's sub-prime climate science and models. That is the stark message of the NIPCC's CCR-II report.

— M.I. Bhat, formerly professor and head
Department of Geology and Geophysics
University of Kashmir, India

Climate Change Reconsidered is a comprehensive, authoritative, and definitive reply to the IPCC reports.

— Dr. Gerrit van der Lingen
Christchurch, New Zealand

I was glad to see that a new report was coming from the NIPCC. The work of this group of scientists to present the evidence for natural climate warming and climate change is an essential counter-balance to the biased reporting of the IPCC. They have brought to focus a range of peer-reviewed publications showing that natural forces have in the past and continue today to dominate the climate signal. Considering the recent evidence that climate models have failed to predict the flattening of the global temperature curve, and that global warming seems to have ended some 15 years ago, the work of the NIPCC is particularly important.

— Ian Clark, professor, Department of Earth Sciences
University of Ottawa, Canada

Library shelves are cluttered with books on global warming. The problem is identifying which ones are worth reading. The NIPCC's CCR-II report is one of these. Its coverage of the topic is comprehensive without being superficial. It sorts through conflicting claims made by scientists and highlights mounting evidence that climate sensitivity to carbon dioxide increase is lower than climate models have until now assumed.

— Chris de Freitas, School of Environment
The University of Auckland, New Zealand

The CCR-II report correctly explains that most of the reports on global warming and its impacts on sea-level rise, ice melts, glacial retreats, impact on crop production, extreme weather events, rainfall changes, etc. have not properly considered factors such as physical impacts of human activities, natural variability in climate, lopsided models used in the prediction of production estimates, etc. There is a need to look into these phenomena at local and regional scales before sensationalization of global warming-related studies.

— S. Jeevananda Reddy
Former Chief Technical Advisor
United Nations World Meteorological Organization

The claim by the UN IPCC that "global sea level is rising at an enhanced rate and swamping tropical coral atolls" does NOT agree with observational facts, and must hence be discarded as a serious disinformation. This is well taken in the CCR-II report.

— Nils-Axel Mörner, emeritus professor
Paleogeophysics & Geodynamics
Stockholm University, Sweden

Climate Change Reconsidered is simply the most comprehensive documentation of the case against climate alarmism ever produced. Basing policy on the scientifically incomplete and internally inconsistent reports of the UN's Intergovernmental Panel on Climate Change is no longer controversial – *Climate Change Reconsidered* shows that it is absolutely foolhardy, and anyone doing so is risking humiliation. It is a must-read for anyone who is accountable to the public, and it needs to be taken very, very seriously.

— Patrick J. Michaels, Director
Center for the Study of Science, Cato Institute

CCR-II provides scientists, policy makers and other interested parties information related to the current state of knowledge in atmospheric studies. Rather than coming from a pre-determined politicized position that is typical of the IPCC, the NIPCC constrains itself to the scientific process so as to provide objective information. If we (scientists) are honest, we understand that the study of atmospheric processes/dynamics is in its infancy. Consequently, the work of the NIPCC and its most recent report is very important. It is time to move away from politicized science back to science – this is what NIPCC is demonstrating by example.

— Bruce Borders, professor of Forest Biometrics
Warnell School of Forestry and Natural Resources
University of Georgia

Why Scientists Disagree About Global Warming

The NIPCC Report on Scientific Consensus

Craig D. Idso, Robert M. Carter, S. Fred Singer

NIPCC
NONGOVERNMENTAL INTERNATIONAL PANEL
ON CLIMATE CHANGE

Originally published in 2015

Published for the
Nongovernmental International Panel on Climate Change (NIPCC)
by The Heartland Institute
3939 North Wilke Road
Arlington Heights, Illinois 60004
phone 312/377-4000
www.heartland.org

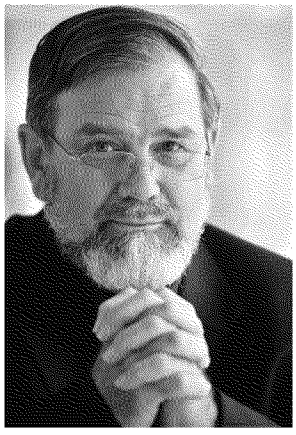
Additional copies of this book are available from
The Heartland Institute for the following prices:

1-10 copies	$6.95 per copy
11-50 copies	$5.95 per copy
51-100 copies	$4.95 per copy
101 or more	$3.95 per copy

Printed in the United States of America
ISBN-13 978-1-934791-59-2
ISBN-10 1-934791-59-8

Manufactured in the United States of America

Dedicated to the memory of our good friend, Robert Carter, who contributed so much to the writing of this book, and who passed away shortly after the first edition was released.



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Foreword

Marita Noon, executive director, Citizen's Alliance for Responsible Energy

President Barack Obama and his followers have repeatedly declared that climate change is "the greatest threat facing mankind." This, while ISIS is beheading innocent people, displacing millions from their homeland, and engaging in global acts of mass murder.

If it weren't so scary, it would be laughable. These statements should ring alarm bells in the minds of all Americans. They show how out of touch this president and the movement he leads are with reality and the American public.

The global warming movement is the most extensive and most expensive public relations campaign in the history of the world. Nearly every government agency in the United States and many more around the world are promoting the manmade-climate-change-scare scenario. An entire generation has been brought up hearing and reading about it. Yet public concern about it peaked in 2000 and today, people are no more worried about it than they were 26 years ago when Gallup began polling this issue. They've seen through the rhetoric and exaggerations. They remember, even if journalists and politicians seem not to, that past sky-is-falling predictions failed to come true, and forecasts of a dire climate catastrophe are just as unlikely to come true.

Surveys show the American people put climate change at the very

bottom of lists of problems they want the government to address. But it is a very important issue nonetheless for anyone concerned about individual freedom and protecting our way of life. The alarmist view, advocated by the Obama administration and environmental extremists, influences virtually every public policy, including the kind of light bulbs we may purchase, the type of cars we may be able to drive, where we live, and the types of jobs we may create or are available for us or our children to perform.

The most consequential policy decisions coming out of Washington today are predicated on the narrative that climate change is a crisis of catastrophic proportion, that it is caused by humans using fossil fuels, and that ending the use of hydrocarbons will save us from this pending disaster. It is imperative that the topic gets a full debate. Instead, those who want to "fundamentally transform America," as Obama promised, are seeking to silence and discredit anyone who dares to speak up and question their assertions. They claim the science is "settled."

But true science is never "settled," and true scientists are always eager to ask and answer questions. This is plainly the case regarding climate change, as this book, *Why Scientists Disagree About Global Warming,* makes clear.

Sweeping regulations like the Environmental Protection Agency's Clean Power Plan – which will totally transform the way electricity is generated, distributed, and used, and will dramatically increase costs for industry and individuals – are justified by their supporters because they are purported to mitigate climate change. Yet even their proponents admit such laws will have a minuscule impact on global greenhouse gas emissions and an imperceptible impact on the world's climate, well below the range of natural variability and the margin of error of our methods of measuring the planet's temperature.

This begs the question: "Why bother?" Why impose regulations that will cost hundreds of billions of dollars a year, destroy millions of jobs, and condemn millions of people to lives of grinding poverty, if there is virtually no beneficial impact on Earth's climate? Many people support the regulations out of pure naivete: They've been told over and over again that "97 percent of scientists" believe global warming is a crisis and so sacrifices, even huge sacrifices, are necessary to stop it. The leaders of the global warming movement surely know better. They know most scientists do not endorse their simplistic and alarmist narrative of a complex scientific question. They back the regulations despite, not because of, what scientists

believe. They support the Clean Power Plan because it will give them more power, more control, and more profit.

The alarmist view of global warming is at the core of renewable energy mandates and massive subsidies for solar and wind companies. Strangely, as more and more of these boondoggles have been exposed for what they are – massive transfers of wealth from the general public to a small politically connected cabal of climate profiteers – the "act now!" cries have become louder and more insistent, perhaps hoping to drown out the news of the failures. Like Dorothy in *The Wizard of Oz,* we are told not to look behind the curtain, lest we discover what a total fraud the global warming movement truly is.

Today, in 2016, those who dare to look behind the curtain are being threatened by the U.S. Department of Justice and a group of attorneys general with legal action under a law passed in 1970 to combat organized crime. Sadly, such threats are taking a toll as some who've spoken freely now have fallen silent, fearing for their livelihoods and even their safety and that of their families. Yes, this is happening in America, where freedom of speech once was considered a sacred right.

This is why scientific debate over the causes and consequences of climate change is so vitally important and must not be stifled. The fact of the matter is, despite the oft-stated claim that "97 percent of scientists agree," scientists actually disagree, profoundly and on many points. Their disagreements are on display in almost countless articles in scientific journals and books. Before public policy is set in cement, irreversibly charting our course for decades, the voices of real scientists need to be heard.

Thankfully, *Why Scientists Disagree About Global Warming* presents the side in the global warming debate that has been demonized by environmental advocacy groups, censored by the mainstream media, and threatened by politicians and their allies in government agencies. The authors carefully document the shortcomings of studies claiming to find a "scientific consensus" and present evidence pointing to the opposite conclusion, that a full-throated debate is continuing over the human role in climate change and whether anything can or should be done to reduce our role.

Why Scientists Disagree About Global Warming is written by three highly regarded climate scientists, is carefully documented, and offers an easy-to-read format featuring summary points for the casual reader and

thorough explanations for the more inquisitive. All this, plus the importance of the subject it addresses, makes it a must-read for concerned citizens, truth-seeking policymakers, and educators. Energy is a pivotal issue of utmost priority, and it is tightly woven into the debate underway over global warming. Before you decide where you stand, be sure you understand the issue, not just believe what you've been told is true. Read *Why Scientists Disagree About Global Warming.*

– *Marita Noon, executive director,*
Citizen's Alliance for Responsible Energy
May 2016

About Marita Noon

Marita Noon is executive director for Energy Makes America Great Inc. and its companion educational organization, the Citizens' Alliance for Responsible Energy (CARE). Together they work to educate the public and influence policymakers regarding energy, its role in freedom, and the American way of life.

Noon is also a columnist for Breitbart.com and a regular contributor to many online commentary sites including *The American Spectator*, RedState.com, *Canada Free Press*, and *NetRight Daily*.

Noon's twentieth book, *Energy Freedom*, is her first in the current affairs genre. Readers of her previous books, including best sellers *Wired That Way* and *Communication Plus,* know her as Marita Littauer. Prior to her work in energy, Noon was known as a motivational speaker and author.

Preface to the Second Edition

Just a few weeks after the release of the first edition of this book, which took place in December 2015 in Paris during the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), one of the coauthors, Robert M. Carter, passed away unexpectedly. He was 74 years old.

The authors and editors of this book are still, in May 2016, in shock over the loss of a friend, mentor, and source of inspiration. Dr. Carter attended the Paris release of the first edition of this book, and upon his arrival back home in Australia was hard at work on the third and final volume in the *Climate Change Reconsidered II* series. We could hardly believe the news when it arrived, in a series of late-night emails from his friends and family. We still can hardly believe he is gone.

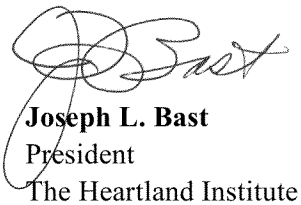
This small book is based on Chapter 2 of the larger work Dr. Carter and others were working to finish. It focuses, as its title suggests, on the question of whether a "scientific consensus" exists on the causes and consequences of climate change. It discusses the role of consensus in science and reviews surveys and other evidence showing agreement and lack of agreement among climate scientists. It explains why scientists often disagree (not just on climate change) and summarizes the physical and biological sciences findings of the first two volumes of the *Climate Change Reconsidered II* series, released in 2013 and 2014. The summary relies significantly on the summaries for policymakers of those two volumes written mainly by Dr. Carter.

The first edition was quite a success. More than 50,000 copies of the

book were sold or given away in only five months to elected officials, civic and business leaders, scientists, and other opinion leaders. The response from the science community and experts on climate change has been overwhelmingly positive.

To meet demand for more copies, we are proud to produce this second revised edition. Changes in this edition include the new foreword by Marita Noon, an extremely talented and highly respected voice in the debate over energy policy and climate change. Some of the discussion in Chapter 1 has been revised and expanded thanks to feedback from readers. Some graphs have been added, mostly taken from testimony presented by Dr. John Christy, distinguished professor of atmospheric science, Alabama's state climatologist, and director of the Earth System Science Center at The University of Alabama in Huntsville, on February 2, 2016 to the U.S. House Committee on Science, Space & Technology.

Donors to The Heartland Institute are making it possible for this new edition to be sent to large numbers of teachers, university professors, and the CEOs of major companies in the United States. We greatly appreciate their financial support. This book stands on its own merits, but the political climate of the day requires that we report no corporate funds were raised or used to support the writing, editing, or publication of this book or the larger volumes from which it was derived. For more information about the publisher, The Heartland Institute, please visit its website at www.heartland.org, and be sure to read the "reply to critics" page linked on the homepage.



Joseph L. Bast
President
The Heartland Institute

Diane Carol Bast
Executive Editor
The Heartland Institute

Preface to the First Edition

The global warming debate is one of the most consequential public policy debates taking place in the world today. Billions of dollars have been spent in the name of preventing global warming or mitigating the human impact on Earth's climate. Governments are negotiating treaties that would require trillions of dollars more to be spent in the years ahead.

A frequent claim in the debate is that a "consensus" or even "overwhelming consensus" of scientists embrace the more alarming end of the spectrum of scientific projections of future climate change. Politicians including President Barack Obama and government agencies including the National Aeronautics and Space Administration (NASA) claim "97 percent of scientists agree" that climate change is both man-made and dangerous.

As the authors of this book explain, the claim of "scientific consensus" on the causes and consequences of climate change is without merit. There is no survey or study showing "consensus" on any of the most important scientific issues in the climate change debate. On the contrary, there is extensive evidence of scientific disagreement about many of the most important issues that must be resolved before the hypothesis of dangerous man-made global warming can be validated.

Other authors have refuted the claim of a "scientific consensus" about global warming. This book is different in that it comprehensively and specifically rebuts the surveys and studies used to support claims of a consensus. It then summarizes evidence showing disagreement, identifies four reasons why scientists disagree about global warming, and then provides a detailed survey of the physical science of global warming based

on the authors' previous work.

This book is based on a chapter in a forthcoming much larger examination of the climate change debate to be titled *Climate Change Reconsidered II: Benefits and Costs of Fossil Fuels.* That volume will finish the three-volume *Climate Change Reconsidered II* series, totaling some 3,000 pages and reporting the findings of more than 4,000 peer-reviewed articles on climate change.

This book and the larger volume that will follow it are produced by the Nongovernmental International Panel on Climate Change (NIPCC), an international panel of scientists and scholars who came together to understand the causes and consequences of climate change. NIPCC has no formal attachment to or sponsorship from any government or government agency. It also receives no corporate funding for its activities.

NIPCC seeks to objectively analyze and interpret data and facts without conforming to any specific agenda. This organizational structure and purpose stand in contrast to those of the United Nations' Intergovernmental Panel on Climate Change (IPCC), which is government-sponsored, politically motivated, and predisposed to believing that dangerous human-related global warming is a problem in need of a UN solution.

This volume, like past NIPCC reports, is edited and published by the staff of The Heartland Institute, a national nonprofit research and educational organization newly relocated from Chicago to suburban Arlington Heights, Illinois. The authors wish to acknowledge and thank Joseph L. Bast and Diane C. Bast, Heartland's seemingly tireless editing duo, for their help in getting this chapter ready for release before the rest of the volume in which it will eventually appear.

Craig D. Idso, Ph.D.
Chairman
Center for the Study of Carbon Dioxide and Global Change (USA)

Robert M. Carter, Ph.D.
Emeritus Fellow
Institute of Public Affairs (Australia)

S. Fred Singer, Ph.D.
Chairman
Science and Environmental Policy Project (USA)

Key Findings

Key findings of this book include the following:

No Consensus

- The most important fact about climate science, often overlooked, is that scientists disagree about the environmental impacts of the combustion of fossil fuels on the global climate.

- The articles and surveys most commonly cited as showing support for a "scientific consensus" in favor of the catastrophic man-made global warming hypothesis are without exception methodologically flawed and often deliberately misleading.

- There is no survey or study showing "consensus" on the most important scientific issues in the climate change debate.

- Extensive survey data show deep disagreement among scientists on scientific issues that must be resolved before the man-made global warming hypothesis can be validated. Many prominent experts and probably most working scientists disagree with the claims made by the United Nations' Intergovernmental Panel on Climate Change (IPCC).

Why Scientists Disagree

- Climate is an interdisciplinary subject requiring insights from many fields of study. Very few scholars have mastery of more than one or two of these disciplines.

- Fundamental uncertainties arise from insufficient observational evidence, disagreements over how to interpret data, and how to set the parameters of models.

- IPCC, created to find and disseminate research finding a human impact on global climate, is not a credible source. It is agenda-driven, a political rather than scientific body, and some allege it is corrupt.

- Climate scientists, like all humans, can be biased. Origins of bias include careerism, grant-seeking, political views, and confirmation bias.

Scientific Method vs. Political Science

- The hypothesis implicit in all IPCC writings, though rarely explicitly stated, is that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions.

- The null hypothesis is that currently observed changes in global climate indices and the physical environment, as well as current changes in animal and plant characteristics, are the result of natural variability.

- In contradiction of the scientific method, IPCC assumes its implicit hypothesis is correct and that its only duty is to collect evidence and make plausible arguments in the hypothesis's favor.

Flawed Projections

- IPCC and virtually all the governments of the world depend on global climate models (GCMs) to forecast the effects of human-related greenhouse gas emissions on the climate.

- GCMs systematically over-estimate the sensitivity of climate to carbon dioxide (CO_2), many known forcings and feedbacks are poorly modeled, and modelers exclude forcings and feedbacks that run counter to their mission to find a human influence on climate.

- NIPCC estimates a doubling of CO_2 from pre-industrial levels (from 280 to 560 ppm) would likely produce a temperature forcing of 3.7 Wm^{-2} in the lower atmosphere, for about ~1 °C of *prima facie* warming.

- Four specific forecasts made by GCMs have been falsified by real-world data from a wide variety of sources. In particular, there has been no global warming for some 18 years.

False Postulates

- Neither the rate nor the magnitude of the reported late twentieth century surface warming (1979–2000) lay outside normal natural variability.

- The late twentieth century warm peak was of no greater magnitude than previous peaks caused entirely by natural forcings and feedbacks.

- Historically, increases in atmospheric CO_2 followed increases in temperature, they did not precede them. Therefore, CO_2 levels could not have forced temperatures to rise.

- Solar forcings are not too small to explain twentieth century warming. In fact, their effect could be equal to or greater than the effect of CO_2 in the atmosphere.

- A warming of 2°C or more during the twenty-first century would probably not be harmful, on balance, because many areas of the world would benefit from or adjust to climate change.

Unreliable Circumstantial Evidence

- Melting of Arctic sea ice and polar icecaps is not occurring at "unnatural" rates and does not constitute evidence of a human impact on the climate.

- Best available data show sea-level rise is not accelerating. Local and regional sea levels continue to exhibit typical natural variability – in some places rising and in others falling.

- The link between warming and drought is weak, and by some measures drought decreased over the twentieth century. Changes in the hydrosphere of this type are regionally highly variable and show a closer correlation with multidecadal climate rhythmicity than they do with global temperature.

- No convincing relationship has been established between warming over the past 100 years and increases in extreme weather events.

Meteorological science suggests just the opposite: A warmer world will see milder weather patterns.

- No evidence exists that current changes in Arctic permafrost are other than natural or are likely to cause a climate catastrophe by releasing methane into the atmosphere.

Policy Implications

- Rather than rely exclusively on IPCC for scientific advice, policymakers should seek out advice from independent, nongovernment organizations and scientists who are free of financial and political conflicts of interest.

- Individual nations should take charge of setting their own climate policies based upon the hazards that apply to their particular geography, geology, weather, and culture.

- Rather than invest scarce world resources in a quixotic campaign based on politicized and unreliable science, world leaders would do well to turn their attention to the real problems their people and their planet face.

Introduction

Probably the most widely repeated claim in the debate over global warming is that "97 percent of scientists agree" that climate change is man-made and dangerous. This claim is not only false, but its presence in the debate is an insult to science.

As the size of recent reports by the alarmist Intergovernmental Panel on Climate Change (IPCC) and its skeptical counterpart, the Nongovernmental International Panel on Climate (NIPCC) suggest, climate science is a complex and highly technical subject, making simplistic claims about what "all" or "most" scientists believe necessarily misleading. Regrettably, this hasn't prevented various politicians and activists from proclaiming a "scientific consensus" or even "overwhelming scientific consensus" that human activities are responsible for observed climate changes in recent decades and could have "catastrophic" effects in the future.

The claim that "97 percent of scientists agree" appears on the websites of government agencies such as the U.S. National Aeronautics and Space Administration (NASA, 2015) and even respected scientific organizations such as the American Association for the Advancement of Science (AAAS, n.d.), yet such claims are either false or meaningless.

Chapter 1 debunks surveys and abstract-counting exercises that allege to have found a "scientific consensus" in favor of the man-made global warming hypothesis and reports surveys that found no consensus on the most important issues in the debate. Chapter 2 explains why scientists disagree, finding the sources of disagreement in the interdisciplinary character of the issue, fundamental uncertainties concerning climate

science, the failure of IPCC to be an independent and reliable source of research on the subject, and bias among researchers.

Chapter 3 explains the scientific method and contrasts it with the methodology used by IPCC and appeals to the "precautionary principle." Chapter 4 describes flaws in how IPCC uses global climate models to make projections about present and future climate changes and reports the findings of superior models that foresee much less global warming and even cooling. Chapter 5 critiques five postulates or assumptions that underlie IPCC's work, and Chapter 6 critiques five key pieces of circumstantial evidence relied on by IPCC. Chapter 7 reports the policy implications of these findings, and a brief summary and conclusion end this book.

Chapters 1 and 2 are based on previously published work by Joseph Bast (Bast, 2010, 2012, 2013; Bast and Spencer, 2014) that has been revised for this publication. Chapters 3 to 7 are based on the *Summary for Policymakers* of *Climate Change Reconsidered II: Physical Science,* an earlier volume in the same series as the present book produced by the Nongovernmental International Panel on Climate Change (NIPCC) (Idso, Carter, and Singer, 2014). Although brief, this summary of climate science is based on an exhaustive review of the scientific literature. Lead authors Craig D. Idso, Robert M. Carter, and S. Fred Singer worked with a team of some 50 scientists to produce a 1,200-page report that is comprehensive, objective, and faithful to the scientific method. It mirrors and rebuts IPCC's Working Group 1 and Working Group 2 contributions to IPCC's 2014 *Fifth Assessment Report,* or AR5 (IPCC, 2014). Like IPCC reports, NIPCC reports cite thousands of articles appearing in peer-reviewed science journals relevant to the subject of human-induced climate change.

NIPCC authors paid special attention to research that was either overlooked by IPCC or contains data, discussion, or implications arguing against IPCC's claim that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions. Most notably, NIPCC's authors say IPCC has exaggerated the amount of warming likely to occur if the concentration of atmospheric CO_2 were to double, and such warming as occurs is likely to be modest and cause no net harm to the global environment or to human well-being. The principal findings from *CCR-II: Physical Science* are summarized in Figure 1.

Figure 1
Summary of NIPCC's Findings on Physical Science

- Atmospheric carbon dioxide (CO_2) is a mild greenhouse gas that exerts a diminishing warming effect as its concentration increases.

- Doubling the concentration of atmospheric CO_2 from its pre-industrial level, in the absence of other forcings and feedbacks, would likely cause a warming of ~0.3°C to 1.1°C, almost 50 percent of which must already have occurred.

- A few tenths of a degree of additional warming, should it occur, would not represent a climate crisis.

- Model outputs published in successive IPCC reports since 1990 project a doubling of CO_2 could cause warming of up to 6°C by 2100. Instead, global warming ceased around the end of the twentieth century and was followed (since 1997) by 19 years of stable temperature.

- Over recent geological time, Earth's temperature has fluctuated naturally between about +4°C and -6°C with respect to twentieth century temperature. A warming of 2°C above today, should it occur, falls within the bounds of natural variability.

- Though a future warming of 2°C would cause geographically varied ecological responses, no evidence exists that those changes would be net harmful to the global environment or to human well-being.

- At the current level of ~400 ppm we still live in a CO_2-starved world. Atmospheric levels 15 times greater existed during the Cambrian Period (about 550 million years ago) without known adverse effects.

- The overall warming since about 1860 corresponds to a recovery from the Little Ice Age modulated by natural multidecadal cycles driven by ocean-atmosphere oscillations, or by solar variations at the de Vries (~208 year) and Gleissberg (~80 year) and shorter periodicities.

- Earth has not warmed significantly for the past 18 years despite an 8 percent increase in atmospheric CO_2, which represents 34 percent of all extra CO_2 added to the atmosphere since the start of the industrial revolution.

- No close correlation exists between temperature variation over the past 150 years and human-related CO_2 emissions. The parallelism of temperature and CO_2 increase between about 1980 and 2000 AD could be due to chance and does not necessarily indicate causation.

- The causes of historic global warming remain uncertain, but significant correlations exist between climate patterning and multidecadal variation and solar activity over the past few hundred years.

- Forward projections of solar cyclicity imply the next few decades may be marked by global cooling rather than warming, despite continuing CO_2 emissions.

Source: Idso, C.D., Carter, R.M., Singer, S.F. 2013. Executive Summary, *Climate Change Reconsidered II: Physical Science.* Chicago, IL: The Heartland Institute.

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1

No Consensus

Key findings of this chapter include the following:

- The most important fact about climate science, often overlooked, is that scientists disagree about the environmental impacts of the combustion of fossil fuels on the global climate.

- The articles and surveys most commonly cited as showing support for a "scientific consensus" in favor of the catastrophic man-made global warming hypothesis are without exception methodologically flawed and often deliberately misleading.

- There is no survey or study showing "consensus" on the most important scientific issues in the climate change debate.

- Extensive survey data show deep disagreement among scientists on scientific issues that must be resolved before the man-made global warming hypothesis can be validated. Many prominent experts and probably most working scientists disagree with the claims made by the United Nations' Intergovernmental Panel on Climate Change (IPCC).

Why Debate Consensus?

Environmental activists and their allies in the media often characterize climate science as an "overwhelming consensus" in favor of a single view

that is sometimes challenged by a tiny minority of scientists funded by the fossil fuel industry to "sow doubt" or otherwise emphasize the absence of certainty on key aspects of the debate (Hoggan and Littlemore, 2009; Oreskes and Conway, 2010; Mann, 2012; Prothero, 2013). This popular narrative grossly over-simplifies the issue while libeling scientists who question the alleged consensus (Cook, 2014). This chapter reveals scientists do, in fact, disagree on the causes and consequences of climate change.

In May 2014, Secretary of State John Kerry warned graduating students at Boston College of the "crippling consequences" of climate change. "Ninety-seven percent of the world's scientists tell us this is urgent," he added (Kerry, 2014). Three days earlier, President Obama tweeted that "Ninety-seven percent of scientists agree: #climate change is real, man-made and dangerous" (Obama, 2014). What is the basis of these claims?

The most influential statement of this alleged consensus appears in the *Summary for Policymakers* of the *Fifth Assessment Report* (AR5) from the Intergovernmental Panel on Climate Change (IPCC): "It is extremely likely (95%+ certainty) that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in greenhouse gas concentrations and other anthropogenic forcings together. The best estimate of the human-induced contribution to warming is similar to the observed warming over this period" (IPCC, 2013, p. 17).

In a "synthesis report" produced the following year, IPCC went further, claiming "Continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks" (IPCC, 2014, p. 8). In that same report, IPCC expresses skepticism that even reducing emissions will make a difference: "Many aspects of climate change and associated impacts will continue for centuries, even if anthropogenic emissions of greenhouse gases are stopped. The risks of abrupt or irreversible changes increase as the magnitude of the warming increases" (p. 16).

The media uncritically reported IPCC's claims with headlines such as "New Climate Change Report Warns of Dire Consequences" (Howard, 2014) and "Panel's Warning on Climate Risk: Worst Is Yet to Come"

(Gillis, 2014).

What evidence is there for a "scientific consensus" on the causes and consequences of climate change? What do scientists really say? Any inquiry along these lines must begin by questioning the legitimacy of the question. Science does not advance by consensus or a show of hands. Disagreement is the rule and consensus is the exception in most academic disciplines. This is because science is a process leading to ever-greater certainty, necessarily implying that what is accepted as true today will likely not be accepted as true tomorrow. As Albert Einstein famously once said, "No amount of experimentation can ever prove me right; a single experiment can prove me wrong" (Einstein, 1996).

Still, claims of a "scientific consensus" cloud the current debate on climate change. Many people, scientists included, refuse to believe scientists and other experts, even scholars eminent in the field, simply because they are said to represent minority views in the science community. So what do the surveys and studies reveal?

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Flawed Surveys

Claims of a "scientific consensus" on the causes and consequences of climate change rely on a handful of essays reporting the results of surveys or efforts to count the number of articles published in peer-reviewed journals that appear to endorse or reject the positions of IPCC. NASA on its website cites four sources supporting its claim that "Multiple studies published in peer-reviewed scientific journals show that 97 percent or more of actively publishing climate scientists agree: Climate-warming trends over the past century are extremely likely due to human activities" (NASA, 2015). As this section reveals, these surveys and abstract-counting exercises are deeply flawed and do not support the claims of those who cite them.

Oreskes, 2004

The most frequently cited source for a "consensus of scientists" is a 2004 essay for the journal *Science* written by a socialist historian named Naomi Oreskes (Oreskes, 2004). Oreskes reported examining abstracts from 928 papers reported by the Institute for Scientific Information database published in scientific journals from 1993 and 2003, using the keywords

"global climate change." Although not a scientist, she concluded 75 percent of the abstracts either implicitly or explicitly supported IPCC's view that human activities were responsible for most of the observed warming over the previous 50 years while none directly dissented.

Oreskes' essay appeared in a "peer-reviewed scientific journal," as NASA reported, but the essay itself was not peer-reviewed. It was an opinion essay and the editors hadn't bothered asking to see her database. This opinion essay became the basis of a book, *Merchants of Doubt* (Oreskes and Conway, 2010), and then an academic career built on claiming that global warming "deniers" are a tiny minority within the scientific community, and then even a movie based on her book released in 2015. Her 2004 claims were repeated in former Vice President Al Gore's movie, *An Inconvenient Truth,* and in his book with the same title (Gore, 2006).

It is now widely agreed Oreskes did not distinguish between articles that acknowledged or assumed some human impact on climate, however small, and articles that supported IPCC's more specific claim that human emissions are responsible for more than 50 percent of the global warming observed during the past 50 years. The abstracts often are silent on the matter, and Oreskes apparently made no effort to go beyond those abstracts. Her definition of consensus also is silent on whether man-made climate change is dangerous or benign, a rather important point in the debate.

Oreskes' literature review inexplicably overlooked hundreds of articles by prominent global warming skeptics including John Christy, Sherwood Idso, Richard Lindzen, and Patrick Michaels. More than 1,350 such articles (including articles published after Oreskes' study was completed) are now identified in an online bibliography (Popular Technology.net, 2014).

Oreskes' methodology was flawed by assuming a nonscientist could determine the findings of scientific research by quickly reading abstracts of published papers. Indeed, even trained climate scientists are unable to do so because abstracts routinely do not accurately reflect their articles' findings. According to In-Uck Park *et al.* in research published in *Nature* in 2014 (Park *et al.*, 2014), abstracts routinely overstate or exaggerate research findings and contain claims that are irrelevant to the underlying research. The authors found "a mismatch between the claims made in the abstracts, and the strength of evidence for those claims based on a neutral analysis of the data, consistent with the occurrence of herding." They note abstracts often are loaded with "keywords" to ensure they are picked up by search engines and thus cited by other researchers.

Oreskes' methodology is further flawed, as are all the other surveys and abstract-counting exercises discussed in this chapter, by surveying the opinions and writings of scientists and often nonscientists who may write about climate but are by no means experts on or even casually familiar with the science dealing with attribution – that is, attributing a specific climate effect (such as a temperature increase) to a specific cause (such as rising CO_2 levels). Most articles simply reference or assume to be true the claims of IPCC and then go on to address a different topic, such as the effect of ambient temperature on the life-cycle of frogs, say, or correlations between temperature and outbreaks of influenza. Attribution is the issue the surveys ask about, but they ask people who have never studied the issue. The number of scientists actually knowledgeable about this aspect of the debate may be fewer than 100 in the world. Several are prominent skeptics (John Christy, Richard Lindzen, Patrick Michaels, and Roy Spencer, to name only four) and many others may be.

Monckton (2007) finds numerous other errors in Oreskes' essay including her use of the search term "global climate change" instead of "climate change," which resulted in her finding fewer than one-thirteenth of the estimated corpus of scientific papers on climate change over the stated period. Monckton also points out Oreskes never stated how many of the 928 abstracts she reviewed actually endorsed her limited definition of "consensus."

Medical researcher Klaus-Martin Schulte used the same database and search terms as Oreskes to examine papers published from 2004 to February 2007 and found fewer than half endorsed the "consensus" and only 7 percent did so explicitly (Schulte, 2008). His study is described in more detail below.

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Doran and Zimmerman, 2009

In 2009, a paper by Maggie Kendall Zimmerman, at the time a student at the University of Illinois, and her master's thesis advisor Peter Doran was published in *EOS.* They claimed "97 percent of climate scientists agree" that mean global temperatures have risen since before the 1800s and that humans are a significant contributing factor (Doran and Zimmerman, 2009). This study, too, has been debunked.

The researchers sent a two-minute online survey to 10,257 Earth scientists working for universities and government research agencies, generating responses from 3,146 people. Solomon (2010) observed, "The two researchers started by altogether excluding from their survey the thousands of scientists most likely to think that the Sun, or planetary movements, might have something to do with climate on Earth – out were the solar scientists, space scientists, cosmologists, physicists, meteorologists and astronomers. That left the 10,257 scientists in disciplines like geology, oceanography, paleontology, and geochemistry that were somehow deemed more worthy of being included in the consensus. The two researchers also decided that scientific accomplishment should not be a factor in who could answer – those surveyed were determined by their place of employment (an academic or a governmental institution). Neither was academic qualification

a factor – about 1,000 of those surveyed did not have a Ph.D., some didn't even have a master's diploma." Only 5 percent of respondents self-identified as climate scientists.

Even worse than the sample size, the bias shown in its selection, and the low response rate, though, is the irrelevance of the questions asked in the survey to the debate taking place about climate change. The survey asked two questions:

"Q1. When compared with pre-1800s levels, do you think that mean global temperatures have generally risen, fallen, or remained relatively constant?

Q2. Do you think human activity is a significant contributing factor in changing mean global temperatures?"

Overall, 90 percent of respondents answered "risen" to question 1 and 82 percent answered "yes" to question 2. The authors get their fraudulent "97 percent of climate scientists believe" sound bite by focusing on only 79 scientists who responded and "listed climate science as their area of expertise and who also have published more than 50 percent of their recent peer-reviewed papers on the subject of climate change."

Most skeptics of man-made global warming would answer those two questions the same way as alarmists would. At issue is not whether the climate warmed since the Little Ice Age or whether there is a human impact on climate, but whether the warming is unusual in rate or magnitude; whether that part of it attributable to human causes is likely to be beneficial or harmful on net and by how much; and whether the benefits of reducing human carbon dioxide emissions – i.e., reducing the use of fossil fuels – would outweigh the costs, so as to justify public policies aimed at reducing those emissions. The survey is silent on these questions.

The survey by Doran and Zimmerman fails to produce evidence that would back up claims of a "scientific consensus" about the causes or consequences of climate change. They simply asked the wrong people the wrong questions. The "98 percent" figure so often attributed to their survey refers to the opinions of only 79 scientists, hardly a representative sample of scientific opinion.

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Anderegg *et al.*, 2010

The third source cited by NASA as proof of a "scientific consensus" is another paper written by a college student. William R. Love Anderegg, then a student at Stanford University, used Google Scholar to identify the views of the most prolific writers on climate change. He claimed to find "(i) 97–98% of the climate researchers most actively publishing in the field support the tenets of ACC [anthropogenic climate change] outlined by the Intergovernmental Panel on Climate Change, and (ii) the relative climate expertise and scientific prominence of the researchers unconvinced of ACC are substantially below that of the convinced researchers" (Anderegg *et al.*, 2010). This college paper was published in *Proceedings of the National Academy of Sciences*, thanks to the addition of three academics as coauthors.

This is not a survey of scientists, whether "all scientists" or specifically climate scientists. Instead, Anderegg simply counted the number of articles he found on the Internet published in academic journals by 908 scientists. This counting exercise is the same flawed methodology utilized by Oreskes, falsely assuming abstracts of papers accurately reflect their findings. Further, Anderegg did not determine how many of these authors believe global warming is harmful or that the science is sufficiently established to be the basis for public policy. Anyone who cites this study in defense of these views is mistaken.

Anderegg *et al.* also didn't count as "skeptics" the scientists whose work exposes gaps in the man-made global warming theory or contradicts claims that climate change will be catastrophic. Avery (2007) identified several hundred scientists who fall into this category, even though some profess to "believe" in global warming.

Looking past the flashy "97–98%" claim, Anderegg *et al.* found the average skeptic has been published about half as frequently as the average

alarmist (60 versus 119 articles). Most of this difference was driven by the hyper-productivity of a handful of alarmist climate scientists: The 50 most prolific alarmists were published an average of 408 times, versus only 89 times for the skeptics. The extraordinary publication rate of alarmists should raise a red flag. It is unlikely these scientists actually participated in most of the experiments or research contained in articles bearing their names.

The difference in productivity between alarmists and skeptics can be explained by several factors other than merit:

- Publication bias – articles that "find something," such as a statistically significant correlation that might suggest causation, are much more likely to get published than those that do not;

- Heavy government funding of the search for one result but little or no funding for other results – the U.S. government alone paid $64 billion to climate researchers during the four years from 2010 to 2013, virtually all of it explicitly assuming or intended to find a human impact on climate and virtually nothing on the possibility of natural causes of climate change (Butos and McQuade, 2015, Table 2, p. 178);

- Resumé padding – it is increasingly common for academic articles on climate change to have multiple and even a dozen or more authors, inflating the number of times a researcher can claim to have been published (Hotz, 2015). Adding a previously published researcher's name to the work of more junior researchers helps ensure approval by peer reviewers (as was the case, ironically, with Anderegg *et al.*);

- Differences in the age and academic status of global warming alarmists versus skeptics – climate scientists who are skeptics tend to be older and more are emeritus than their counterparts on the alarmist side; skeptics are under less pressure and often are simply less eager to publish.

So what, exactly, did Anderegg *et al.* discover? That a small clique of climate alarmists had their names added to hundreds of articles published in academic journals, something that probably would have been impossible or judged unethical just a decade or two ago. Anderegg *et al.* simply assert those "top 50" are more credible than scientists who publish less, but they

make no effort to prove this and there is ample evidence they are not (Solomon, 2008). Once again, Anderegg *et al.* did not ask if authors believe global warming is a serious problem or if science is sufficiently established to be the basis for public policy. Anyone who cites this study as evidence of scientific support for such views is misrepresenting the paper.

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Cook *et al.*, 2013

NASA's fourth source proving a "scientific consensus" is an abstract-counting exercise by a wacky Australian blogger named John Cook. Cook makes no effort to disguise his bias: His blog, misleadingly called "Skeptical Science," is mostly a collection of talking points for environmental activists and attacks on realists. He's also the author of a book titled *Climate Change Denial: Heads in the Sand.* When he's not writing about global warming, he's a professional cartoonist (PopularTechnology.net, 2012). Why does NASA consider him to be a credible source of evidence of scientific consensus?

In 2013, Cook and some of his friends persuaded *Environmental*

Research Letters to publish their claim that a review of the abstracts of peer-reviewed papers from 1991 to 2011 found 97 percent of those that stated a position explicitly or implicitly suggested human activity is responsible for some warming (Cook *et al.*, 2013). This exercise in abstract-counting doesn't support the alarmist claim that climate change is both man-made and dangerous, and it doesn't even support IPCC's claim that a majority of global warming in the twentieth century was man-made.

This study was quickly debunked by Legates *et al.* (2015) in a paper published in *Science & Education.* Legates *et al.* found "just 0.03 percent endorsement of the standard definition of consensus: that most warming since 1950 is anthropogenic." They found "only 41 papers – 0.3 percent of all 11,944 abstracts or 1.0 percent of the 4,014 expressing an opinion, and not 97.1 percent – had been found to endorse the standard or quantitative hypothesis."

Scientists whose work questions the consensus, including Craig Idso, Nils-Axel Mörner, Nicola Scafetta, and Nir J. Shaviv, protested that Cook misrepresented their work (Popular Technology.net, 2013).

Richard Tol, a lead author of the United Nations' IPCC reports, said of the Cook report, "the sample of papers does not represent the literature. That is, the main finding of the paper is incorrect, invalid and unrepresentative" (Tol, 2013). On a blog of *The Guardian,* a British newspaper that had reported on the Cook report, Tol explained: "Cook's sample is not representative. Any conclusion they draw is not about 'the literature' but rather about the papers they happened to find. Most of the papers they studied are not about climate change and its causes, but many were taken as evidence nonetheless. Papers on carbon taxes naturally assume that carbon dioxide emissions cause global warming – but assumptions are not conclusions. Cook's claim of an increasing consensus over time is entirely due to an increase of the number of irrelevant papers that Cook and Co. mistook for evidence" (Tol, 2014).

Montford (2013) produced a blistering critique of Cook *et al.* in a report for the Global Warming Policy Foundation. He reveals the authors were marketing the expected results of the paper before the research itself was conducted; changed the definition of an endorsement of the global warming hypothesis mid-stream when it became apparent the abstracts they were reviewing did not support their original (IPCC-based) definition; and gave guidance to the volunteers recruited to read and score abstracts "suggest[ing] that an abstract containing the words 'Emissions of a broad

range of greenhouse gases of varying lifetimes contribute to global climate change' should be taken as explicit but unquantified endorsement of the consensus. Clearly the phrase quoted could imply any level of human contribution to warming." Montford concludes "the consensus referred to is trivial" since the paper "said nothing about global warming being dangerous" and that "the project was not a scientific investigation to determine the extent of agreement on global warming, but a public relations exercise."

A group of Canadian retired Earth and atmospheric scientists called Friends of Science produced a report in 2014 that reviewed the four surveys and abstract-counting exercises summarized above (Friends of Science, 2014). The scientists searched the papers for the percentage of respondents or abstracts that explicitly agree with IPCC's declaration that human activity is responsible for more than half of observed warming. They found Oreskes found only 1.2 percent agreement; Doran and Zimmerman, 3.4 percent; Anderegg *et al.*, 66 percent; and Cook *et al.*, 0.54 percent. They conclude, "The purpose of the 97% claim lies in the psychological sciences, not in climate science. A 97% consensus claim is merely a 'social proof' – a powerful psychological motivator intended to make the public comply with the herd; to not be the 'odd man out.' Friends of Science deconstruction of these surveys shows there is no 97% consensus on human-caused global warming as claimed in these studies. None of these studies indicate any agreement with a catastrophic view of human-caused global warming" (p. 4).

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Evidence of Lack of Consensus

In contrast to the studies described above, which try but fail to find a consensus in support of the claim that global warming is man-made and dangerous, many authors and surveys have found widespread disagreement or even that a majority of scientists oppose the alleged consensus. These surveys and studies generally suffer the same methodological errors as afflict the ones described above, but they suggest that even playing by the alarmists' rules, the results demonstrate disagreement rather than consensus.

Klaus-Martin Schulte, 2008

Schulte (2008), a practicing physician, observed, "Recently, patients alarmed by the tone of media reports and political speeches on climate change have been voicing distress, for fear of the imagined consequences of anthropogenic 'global warming.'" Concern that his patients were experiencing unnecessary stress "prompted me to review the literature available on 'climate change and health' via PubMed

(http://www.ncbi.nlm.nih.gov/sites/entrez)"and then to attempt to replicate Oreskes' 2004 report.

"In the present study," Schulte wrote, "Oreskes' research was brought up to date by using the same search term on the same database to identify abstracts of 539 scientific papers published between 2004 and mid-February 2007." According to Schulte, "The results show a tripling of the mean annual publication rate for papers using the search term 'global climate change', and, at the same time, a significant movement of scientific opinion away from the apparently unanimous consensus which Oreskes had found in the learned journals from 1993 to 2003. Remarkably, the proportion of papers explicitly or implicitly rejecting the consensus has risen from zero in the period 1993–2003 to almost 6% since 2004. Six papers reject the consensus outright."

Schulte also found "Though Oreskes did not state how many of the papers she reviewed explicitly endorsed the consensus that human greenhouse-gas emissions are responsible for more than half of the past 50 years' warming, only 7% of the more recent papers reviewed here were explicit in endorsing the consensus even in the strictly limited sense she had defined. The proportion of papers that now explicitly or implicitly endorse the consensus has fallen from 75% to 45%."

Schulte's findings demonstrate that if Oreskes' methodology were correct and her findings for the period 1993 to 2003 accurate, then scientific publications in the more recent period of 2004–2007 show a strong tendency away from the consensus Oreskes claimed to have found. We can doubt the utility of the methodology used by both Oreskes and Schulte but recognize that the same methodology applied during two time periods reveals a significant shift from consensus to open debate on the causes of climate change.

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Dennis Bray and Hans von Storch, 1996, 2003, 2008, 2010

Surveys by German scientists Dennis Bray and Hans von Storch conducted

in 1996, 2003, 2008, and 2010 consistently found climate scientists have deep doubts about the reliability of the science underlying claims of man-made climate change (Bray and von Storch, 2007; Bray and von Storch, 2008; Bray and von Storch, 2010). This finding is seldom reported because the authors repeatedly portray their findings as supporting, as Bray wrote in 2010, "three dimensions of consensus, as it pertains to climate change science: 1. manifestation, 2. attribution, and 3. legitimation" (Bray, 2010). They do not.

One question in Bray and von Storch's latest survey (2010) asked scientists to grade, on a scale from 1 = "very inadequate" to 7 = "very adequate," the "data availability for climate change analysis." On this very important question, more respondents said "very inadequate" (1 or 2) than "very adequate" (6 or 7), with most responses ranging between 3 and 5.

Bray and von Storch summarized their survey results using a series of graphs plotting responses to each question. In their latest survey, 54 graphs show responses to questions addressing scientific issues as opposed to opinions about IPCC, where journalists tend to get their information, personal identification with environmental causes, etc. About a third show more skepticism than confidence, a third show more confidence than skepticism, and a third suggest equal amounts of skepticism and confidence.

For example, more scientists said "very inadequate" (1 or 2) than "very adequate" (6 or 7) when asked "How well do atmospheric models deal with the influence of clouds?" and "How well do atmospheric models deal with precipitation?" and "How well do atmospheric models deal with atmospheric convection?" and "The ability of global climate models to model sea-level rise for the next 50 years" and "The ability of global climate models to model extreme events for the next 10 years." These are not arcane or trivial matters in the climate debate.

Unfortunately, the Bray and von Storch surveys also show disagreement and outright skepticism about the underlying science of climate change don't prevent most scientists from expressing their opinion that man-made global warming is occurring and is a serious problem. On those questions, the distribution skews away from uncertainty and toward confidence. Observing this contradiction in their 1996 survey, Bray and von Storch described it as "an empirical example of 'postnormal science,'" the willingness to endorse a perceived consensus despite knowledge of contradictory scientific knowledge when the risks are perceived as being great (Bray and von Storch, 1999). Others might refer to this as cognitive

dissonance, holding two contradictory opinions at the same time, or "herding," the well-documented tendency of academics facing uncertainty to ignore research that questions a perceived consensus position in order to advance their careers (Baddeleya, 2013).

On their face, Bray and von Storch's results should be easy to interpret. For at least a third of the questions asked, more scientists aren't satisfied than are with the quality of data, reliability of models, or predictions about future climate conditions. For another third, there is as much skepticism as there is strong confidence. Most scientists are somewhere in the middle, somewhat convinced that man-made climate change is occurring but concerned about lack of data and other fundamental uncertainties, far from the "95%+ certainty" claimed by IPCC.

Bray and von Storch are very coy in reporting and admitting the amount of disagreement their surveys find on the basic science of global warming, suggesting they have succumbed to the very cognitive dissonance they once described. But their data clearly reveal a truth: There is no scientific consensus.

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Verheggen *et al.*, 2014, 2015

Verheggen *et al.* (2014) and Strengers, Verheggen, and Vringer (2015) reported the results of a survey they conducted in 2012 of contributors to IPCC reports, authors of articles appearing in scientific literature, and signers of petitions on global warming (but apparently not the Global Warming Petition Project, described below). By the authors' own admission, "signatories of public statements disapproving of mainstream climate science … amounts to less than 5% of the total number of respondents," suggesting the sample is heavily biased toward pro-"consensus" views. Nevertheless, this survey found fewer than half of respondents agreed with IPCC's most recent claims.

A total of 7,555 authors were contacted and 1,868 questionnaires were returned, for a response rate of 29 percent. Verheggen *et al.* asked specifically about agreement or disagreement with IPCC's claim in its *Fifth Assessment Report* (AR5) that it is "virtually certain" or "extremely likely" that net anthropogenic activities are responsible for more than half of the observed increase in global average temperatures in the past 50 years.

When asked "What fraction of global warming since the mid 20th century can be attributed to human induced increases in atmospheric greenhouse gas (GHG) concentrations?," 64 percent chose fractions of 51 percent or more, indicating agreement with IPCC AR5. (Strengers, Verheggen, and Vringer, 2015, Figure 1a.1) When those who chose fractions of 51 percent or more were asked, "What confidence level would you ascribe to your estimate that the anthropogenic GHG warming is more than 50%?," 65 percent said it was "virtually certain" or "extremely likely," the language used by IPCC to characterize its level of confidence (*Ibid.*, Figure 1b).

The math is pretty simple: Two-thirds of the authors in this survey – a sample heavily biased toward IPCC's point of view by including virtually all its editors and contributors – agreed with IPCC on the impact of human emissions on the climate, and two-thirds of those who agreed were as confident as IPCC in that finding. Sixty-five percent of 64 percent is 41.6 percent, so fewer than half of the survey's respondents support IPCC. More precisely – since some responses were difficult to interpret – 42.6 percent

(797 of 1,868) of respondents were highly confident that more than 50 percent of the warming is human-caused.

This survey shows IPCC's position on global warming is the minority perspective in this part of the science community. Since the sample was heavily biased toward contributors to IPCC reports and academics most likely to publish, one can assume a survey of a larger universe of scientists would reveal even less support for IPCC's position.

Like Bray and von Storch (2010) discussed above, and Stenhouse *et al.*, (2014) discussed below, Verheggen *et al.* seem embarrassed by their findings and hide them in tables in a report issued a year after their original publication rather than explain them in the text of their peer-reviewed article. It took the efforts of a blogger to call attention to the real data (Fabius Maximus, 2015). Once again, the data reveal no scientific consensus.

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Surveys of Meteorologists and Environmental Professionals

The American Meteorological Society (AMS) reported in 2013 that only 52 percent of AMS members who responded to its survey reported believing the warming of the past 150 years was man-made (Stenhouse *et al.*, 2014). The finding was reported in a table on the last page of the pre-publication version of the paper and was not even mentioned in the body of the peer-reviewed article.

From an earlier publication of the survey's results (Maibach *et al.*, 2012) it appears 76 percent of those who believe in man-made global warming also believe it is "very harmful" or "somewhat harmful," so it appears 39.5 percent of AMS members responding to the survey say they believe man-made global warming could be dangerous. Once again, this finding doesn't appear in the peer-reviewed article.

Questions asked in the AMS survey reveal political ideology is the strongest or second strongest factor in determining a scientist's position on global warming. But the published report doesn't reveal whether all or just nearly all of the AMS members who believe man-made global warming is dangerous self-identify as being liberals. In light of the numbers presented above, this appears likely.

Other surveys of meteorologists also found a majority oppose the alleged consensus (Taylor, 2010a, 2010b). A 2006 survey of scientists in the U.S. conducted by the National Registry of Environmental Professionals, for example, found 41 percent disagreed the planet's recent warmth "can be, in large part, attributed to human activity," and 71 percent disagreed recent hurricane activity is significantly attributable to human activity (Taylor, 2007).

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Global Warming Petition Project

The Global Warming Petition Project (2015) is a statement about the causes and consequences of climate change signed by 31,478 American scientists, including 9,021 with Ph.D.s. The full statement reads:

> We urge the United States government to reject the global warming agreement that was written in Kyoto, Japan in December, 1997, and any other similar proposals. The proposed limits on greenhouse gases would harm the environment, hinder the advance of science and technology, and damage the health and welfare of mankind.
>
> There is no convincing scientific evidence that human release of carbon dioxide, methane, or other greenhouse gases is causing or will, in the foreseeable future, cause catastrophic heating of the Earth's atmosphere and disruption of the Earth's climate. Moreover, there is substantial scientific evidence that increases in atmospheric carbon dioxide produce many beneficial effects upon the natural plant and animal environments of the Earth.

This is a remarkably strong statement of dissent from the perspective advanced by IPCC. The fact that more than ten times as many scientists have signed it as are alleged to have "participated" in some way or another in the research, writing, and review of IPCC's *Fourth Assessment Report* is very significant. These scientists actually endorse the statement that appears above. By contrast, fewer than 100 of the scientists (and nonscientists) who are listed in the appendices to IPCC reports actually participated in the writing of the all-important *Summary for Policymakers*

or the editing of the final report to comply with the summary, and therefore could be said to endorse the main findings of that report.

The Global Warming Petition Project has been criticized for including names of suspected nonscientists, including names submitted by environmental activists for the purpose of discrediting the petition. But the organizers of the project painstakingly reconfirmed the authenticity of the names in 2007, and a complete directory of those names appeared as an appendix to *Climate Change Reconsidered: Report of the Nongovernmental International Panel on Climate Change (NIPCC),* published in 2009 (Idso and Singer, 2009). For more information about The Petition Project, including the text of the letter endorsing it written by the late Dr. Frederick Seitz, past president of the National Academy of Sciences and president emeritus of Rockefeller University, visit the project's website at www.petitionproject.org.

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Admissions of Lack of Consensus

Even prominent "alarmists" in the climate change debate admit there is no consensus. Phil Jones, director of the Climatic Research Unit at the University of East Anglia, when asked if the debate on climate change is over, told the BBC, "I don't believe the vast majority of climate scientists think this. This is not my view" (BBC News, 2010). When asked, "Do you agree that according to the global temperature record used by IPCC, the rates of global warming from 1860–1880, 1910–1940 and 1975– 1998 were identical?" Jones replied,

> Temperature data for the period 1860–1880 are more uncertain, because of sparser coverage, than for later periods in the 20th Century. The 1860–1880 period is also only 21 years in length. As

> for the two periods 1910–40 and 1975–1998 the warming rates are not statistically significantly different (see numbers below).
>
> I have also included the trend over the period 1975 to 2009, which has a very similar trend to the period 1975–1998.
>
> So, in answer to the question, the warming rates for all 4 periods are similar and not statistically significantly different from each other.

Finally, when asked "Do you agree that from 1995 to the present there has been no statistically significant global warming" Jones answered "yes." His replies contradict claims made by IPCC.

Mike Hulme, also a professor at the University of East Anglia and a contributor to IPCC reports, wrote in 2009: "What is causing climate change? By how much is warming likely to accelerate? What level of warming is dangerous? – represent just three of a number of contested or uncertain areas of knowledge about climate change" (Hulme, 2009, p. 75). He admits "Uncertainty pervades scientific predictions about the future performance of global and regional climates. And uncertainties multiply when considering all the consequences that might follow from such changes in climate" (p. 83). On the subject of IPCC's credibility, he admits it is "governed by a Bureau consisting of selected governmental representatives, thus ensuring that the Panel's work was clearly seen to be serving the needs of government and policy. The Panel was not to be a self-governing body of independent scientists" (p. 95). All this is exactly what IPCC critics have been saying for years.

* * *

As this summary makes apparent, there is no survey or study that supports the claim of a scientific consensus that global warming is both man-made and a problem, and ample evidence to the contrary. There is no scientific consensus on global warming.

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2

Why Scientists Disagree

Key findings in this section include the following:

- Climate is an interdisciplinary subject requiring insights from many fields. Very few scholars have mastery of more than one or two of these disciplines.

- Fundamental uncertainties arise from insufficient observational evidence, disagreements over how to interpret data, and how to set the parameters of models.

- The United Nations' Intergovernmental International Panel on Climate Change (IPCC), created to find and disseminate research finding a human impact on global climate, is not a credible source. It is agenda-driven, a political rather than scientific body, and some allege it is corrupt.

- Climate scientists, like all humans, can be biased. Origins of bias include careerism, grant-seeking, political views, and confirmation bias.

Conflict of Disciplines

One reason disagreement among those participating in the climate change debate may be sharper and sometimes more personal than is observed in debates on other topics is because climate is an interdisciplinary subject

requiring insights from astronomy, biology, botany, cosmology, economics, geochemistry, geology, history, oceanography, paleontology, physics, and scientific forecasting and statistics, among other disciplines. Very few scholars in the field have mastery of more than one or two of these disciplines.

Richard S. Lindzen, an atmospheric physicist at MIT, observed, "Outside any given specialty, there are few – including scientists – who can distinguish one scientist from another, and this leaves a great deal of latitude for advocates and politicians to invent their own 'experts.' … In effect, once political action is anticipated, the supporting scientific position is given a certain status whereby objections are reckoned to represent mere uncertainty, while scientific expertise is strongly discounted" (Lindzen, 1996, p. 98).

When an expert in one field, say physics, presents an estimate of the climate's sensitivity to rising carbon dioxide levels, an expert in another field, say biology, can quickly challenge his understanding of the carbon cycle, whereby huge volumes of carbon dioxide are added to and removed from the atmosphere. Unless the physicist is intimately familiar with the literature on the impact of rising levels of CO_2 on photosynthesis, plant growth, and carbon sequestration by plants and aquatic creatures, he or she is missing the bigger picture and is likely to be wrong. But so too will the biologist miss the "big picture" if he or she doesn't understand the transfer of energy at the top of the atmosphere and how the effects of CO_2 change logarithmically as its concentration rises.

Geologists view time in millennia and eons and are aware of huge fluctuations in both global temperatures and carbon dioxide concentrations in the atmosphere, with the two often moving in different directions. They scoff at physicists and botanists who express concern over a historically tiny increase in carbon dioxide concentrations of 100 parts per million and a half-degree C increase in temperature over the course of a century. But how many geologists understand the impact of even relatively small changes in temperature or humidity on the range and health of some plants and animals?

Economists are likely to ask if the benefits of trying to "stop" global warming outweigh the benefits of providing clean water or electricity to billions of people living in terrible poverty. Wouldn't it be wiser – better for humanity and perhaps even wildlife – to focus on helping people today become more prosperous and consequently more concerned about

protecting the environment and able to afford to adapt to changes in weather regardless of their causes? But do economists properly value the contribution of ecological systems to human welfare, or apply properly the discount rates they use to measure costs and benefits that occur far in the future?

Simon (1999) observed another consequence of this tunnel vision. Scientists are often optimistic about the safety of the environment when it relates to subjects encompassing their own area of research and expertise, but are pessimistic about risks outside their range of expertise. Simon wrote:

> This phenomenon is apparent everywhere. Physicians know about the extraordinary progress in medicine that they fully expect to continue, but they can't believe in the same sort of progress in natural resources. Geologists know about the progress in natural resources that pushes down their prices, but they worry about food. Even worse, some of those who are most optimistic about their own areas point with alarm to other issues to promote their own initiatives. The motive is sometimes self-interest (pp. 47–8).

The climate change debate resembles the famous tale of a group of blind men touching various parts of an elephant, each arriving at a very different idea of what it is like: to one it is like a tree, to another, a snake, and to a third, a wall. A wise man tells the group, "You are all right. An elephant has all the features you mentioned." But how many physicists, geologists, biologists, and economists want to be told they are missing "the big picture" or that their earnest concern and good research aren't enough to describe a complex phenomenon, and therefore not a reliable guide to making decisions about what mankind should do? Few indeed.

This source of disagreement seems obvious but is seldom discussed. Scientists (both physical scientists and social scientists) make assertions and predictions claiming high degrees of confidence, a term with precise meaning in science but turned into an empty tool of rhetoric by IPCC and its allies, that are wholly unjustified given their training and ignorance of large parts of the vast literature regarding climate.

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Scientific Uncertainties

Fundamental uncertainties arise from insufficient observational evidence, disagreements over how to interpret data, and how to set the parameters of models.

The claim that human activities are causing or will cause catastrophic global warming or climate change is a rebuttable hypothesis, not a scientific theory and certainly not the "consensus" view of the science community. The human impact on climate remains a puzzle. As Bony *et al.* wrote in 2015, "Fundamental puzzles of climate science remain unsolved because of our limited understanding of how clouds, circulation and climate interact" (abstract).

Reporting in *Nature* on Bony's study, Quirin Schiermeier wrote, "There is a misconception that the major challenges in physical climate science are settled. 'That's absolutely not true,' says Sandrine Bony, a climate researcher at the Laboratory of Dynamic Meteorology in Paris. 'In fact, essential physical aspects of climate change are poorly understood'" (Schiermeier, 2015, p. 140). Schiermeier goes on to write, "large uncertainties persist in 'climate sensitivity,' the increase in average global temperature caused by a given rise in the concentration of carbon dioxide," citing Bjorn Stevens, a director at the Max Planck Institute for Meteorology in Hamburg, Germany (*Ibid.*). Bony has also identified uncertainty in climate science in the journal *Science* (Stevens and Bony, 2013).

The first volume in the *Climate Change Reconsidered II* series cited thousands of peer-reviewed articles and studies revealing the extensive uncertainty acknowledged by Bony *et al.* Since the *Summary for Policymakers* of that volume appears below (Chapters 3 to 7), there is no need to summarize its findings here. Instead, it is useful to ponder the views of two prominent climate scientists whose scientific contributions to the

debate are widely acknowledged.

Richard S. Lindzen, quoted earlier, is one of the world's most distinguished atmospheric physicists. According to the biography on MIT's website, "he has developed models for the Earth's climate with specific concern for the stability of the ice caps, the sensitivity to increases in CO_2, the origin of the 100,000 year cycle in glaciation, and the maintenance of regional variations in climate. Prof. Lindzen is a recipient of the AMS's Meisinger, and Charney Awards, the AGU's Macelwane Medal, and the Leo Huss Walin Prize. He is a member of the National Academy of Sciences, and the Norwegian Academy of Sciences and Letters, and a fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Sciences, the American Geophysical Union and the American Meteorological Society.

"Lindzen is a corresponding member of the NAS Committee on Human Rights, and has been a member of the NRC Board on Atmospheric Sciences and Climate and the Council of the AMS. He has also been a consultant to the Global Modeling and Simulation Group at NASA's Goddard Space Flight Center, and a Distinguished Visiting Scientist at California Institute of Technology's Jet Propulsion Laboratory." He received his Ph.D. from Harvard University in 1964.

According to Lindzen (1996), there are three principal areas of uncertainty in climate science:

- "First, the basic greenhouse process is not simple. In particular, it is not merely a matter of the bases that absorb heat radiation – greenhouse gases – keeping the earth warm. If it were, the natural greenhouse would be about four times more effective than it actually is. …

- "Second, the most important greenhouse gas in the atmosphere is water vapor. … Roughly speaking, changes in relative humidity on the order of 1.3 to 4 percent are equivalent to the effect of doubling carbon dioxide. Our measurement uncertainty for trends in water vapor is in excess of 10 percent, and once again, model errors are known to substantially exceed measurement errors in a very systematic way.

- "Third, the direct impact of doubling carbon dioxide on the earth's temperature is rather small: on the order of .3 degrees C. Larger predictions depend on positive feedbacks. … [T]hose factors arise from models with errors in those factors."

"[T]here is very little argument about the above points," Lindzen wrote. "They are, for the most part, textbook material showing that there are errors and uncertainties in physical processes central to model predictions that are an order of magnitude greater than the climate forcing due to a putative doubling of carbon dioxide. There is, nonetheless, argument over whether the above points mean that the predicted significant response to increased carbon dioxide is without meaningful basis. Here there is disagreement" (pp. 86–7). For Lindzen's more recent views (which are similar) see Lindzen (2012).

A second recognized authority is Judith Curry, a professor and former chair of the School of Earth and Atmospheric Sciences at the Georgia Institute of Technology. Her Ph.D. in geophysical sciences is from the University of Chicago, and she served for three decades on the faculties of the University of Wisconsin-Madison, Purdue, Penn State, University of Colorado-Boulder, and since 2002 at the Georgia Institute of Technology. She is an elected fellow of the American Geophysical Union and councilor and fellow of the American Meteorological Society.

Curry delivered a speech on June 15, 2015 to the British House of Lords. Titled "State of the climate debate in the U.S.," the prepared text of her remarks is available online (Curry, 2015). Curry wrote, "there is widespread agreement" on three basic tenets: "Surface temperatures have increased since 1880, humans are adding carbon dioxide to the atmosphere, [and] carbon dioxide and other greenhouse gases have a warming effect on the planet." However, she wrote, "there is disagreement about the most consequential issues," which she lists as the following:

- "Whether the warming since 1950 has been dominated by human causes
- "How much the planet will warm in the 21st century
- "Whether warming is 'dangerous'
- "Whether we can afford to radically reduce CO_2 emissions, and whether reduction will improve the climate"

Observing the "growing divergence between models and observations," she poses three questions:

- "Are climate models too sensitive to greenhouse forcing?

- "Is the modeled treatment of natural climate variability inadequate?
- "Are climate model projections of 21st century warming too high?"

After observing surveys show most scientists seem to accept IPCC's claims, she wrote, "Nevertheless, a great deal of uncertainty remains, and there is plenty of room for disagreement. So why do scientists disagree?" She gives five possible reasons:

- "Insufficient observational evidence
- "Disagreement about the value of different classes of evidence
- "Disagreement about the appropriate logical framework for linking and assessing the evidence
- "Assessments of areas of ambiguity & ignorance
- "And finally, the politicization of the science can torque the science in politically desired directions."

"None of the most consequential scientific uncertainties are going to be resolved any time soon," Curry wrote. "[T]here is a great deal of work still to do to understand climate change. And there is a growing realization that unpredictable natural climate variability is important."

All of this concurs with the findings of NIPCC and was documented at great length in *Climate Change Reconsidered II: Physical Science* and *Climate Change Reconsidered II: Biological Impacts* (Idso *et al.,* 2013; Idso *et al.,* 2014).

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Failure of IPCC

The Intergovernmental Panel on Climate Change (IPCC), created to find and disseminate research finding a human impact on global climate, is not a credible source. It is agenda-driven, a political rather than scientific body, and some allege it is corrupt.

According to Bray (2010), "In terms of providing future projection[s] of the global climate, the most significant player in setting the agenda is the Intergovernmental Panel on Climate Change (IPCC). It is typically assumed that IPCC, consisting of some 2500 climate scientists, after weighing the evidence, arrived at a consensus that global temperatures are rising and the most plausible cause is anthropogenic in nature." As this section will explain, that assumption is wrong.

Prior to the mid-1980s very few climate scientists believed man-made climate change was a problem. This non-alarmist "consensus" on the causes and consequences of climate change included nearly all the leading climate scientists in the world, including Roger Revelle, often identified as one of the first scientists to "sound the alarm" over man-made global warming (Solomon, 2008; Singer, Revelle and Starr, 1992).

Most of the reports purporting to show a "consensus" beginning in the 1980s came from and continue to come from committees funded by

government agencies tasked with finding a new problem to address or by liberal foundations with little or no scientific expertise (Darwall, 2013; Carlin, 2015; Moore *et al.*, 2014). These committees, one of which was IPCC, often produced reports making increasingly bold and confident assertions about future climate impacts, but they invariably included statements admitting deep scientific uncertainty (Weart, 2015). Reports of IPCC, including drafts of the latest *Fifth Assessment Report,* are replete with examples of this pattern.

It is common for committees seeking consensus reports to include qualifications and admissions of uncertainty and even publish dissenting reports by committee members. This common practice had an unintended result in the climate debate. Politicians, environmental activists, and rent-seeking corporations in the renewable energy industry began to routinely quote IPCC's alarming claims and predictions shorn of the important qualifying statements expressing deep doubts and reservations. Rather than protest this mishandling of its work, IPCC encouraged it by producing *Summaries for Policymakers* that edit away or attempt to hide qualifying statements. IPCC news releases have become more and more alarmist over time until they are indistinguishable from the news releases and newsletters of environmental groups. In fact, many of those IPCC news releases were written or strongly influenced by professional environmental activists who had effectively taken over the organization.

Some climate scientists spoke out early and forcefully against this corruption of science (Idso, 1982; Landsberg, 1984; Idso, 1989; Singer, 1989; Jastrow, Nierenberg, and Seitz, 1990; Balling, 1992; Michaels, 1992), but their voices were difficult to hear amid a steady drumbeat of doomsday forecasts produced by environmentalists and their allies in the mainstream media.

Perhaps the most conspicuous and consequential example of this practice occurred in 2006 in the form of a movie titled *An Inconvenient Truth*, produced by former Vice President Al Gore, and Gore's book with the same title (Gore, 2006). The movie earned Gore a Nobel Peace Prize (shared with IPCC), yet it made so many unsubstantiated claims and over-the-top predictions it was declared "propaganda" by a UK judge, and schools there were ordered to give students a study guide identifying and correcting its errors before showing the movie (*Dimmock* v. *Secretary of State for Education and Skills,* 2007).

The principal source cited in Gore's movie and book, and arguably the

reason it was well-received by much of the science community, was IPCC. There is no evidence IPCC ever complained about the misrepresentation of its report in the film or asked for corrections. Despite documentation of the film's and book's many flaws (e.g., Lewis, 2007), Gore has never revised the book or even acknowledged the errors.

IPCC's reliability was crippled at birth, mandated by the UN Framework Convention on Climate Change (UNFCCC) to define climate change as human-caused climate change and to disregard naturally caused climate change. Since natural climate change is at the very center of the debate over whether human activity is influencing the climate and by how much, this essentially predetermined IPCC's conclusions. Tasked with finding a human impact on climate and calling on the nations of the world to do something about it, IPCC pursued its mission with fierce dedication.

IPCC's reports have been subjected to withering criticism by scientists and authors almost too numerous to count, including even high-profile editors and contributors to its reports (Seitz, 1996; Lindzen, 2012; Tol, 2014; Stavins, 2014) and no fewer than six rigorously researched books by one climate scientist, Patrick Michaels, former president of the American Association of State Climatologists, former program chair for the Committee on Applied Climatology of the American Meteorological Society, and a research professor of Environmental Sciences at the University of Virginia for 30 years (Michaels, 1992, 2000, 2005a, 2005b, 2009, 2011). Michaels also was a contributing author and is a reviewer of IPCC's reports. Besides Michaels, see Singer (1997); Essex and McKitrick (2003); McIntyre and McKitrick (2005); Green and Armstrong (2007); Green, Armstrong, and Soon (2009); Pielke Jr. (2010); Carter (2010); Bell (2011); and Vahrenholt and Lüning (2015).

Others have pointed out IPCC's heavy reliance on environmental advocacy groups in the compilation of its official reports, using their personnel as lead authors and incorporating their publications – even newsletters – as source material (Laframboise, 2011). Scientists who participated in the latest IPCC report (AR5) described the process of producing the *Summary for Policymakers* as "exceptionally frustrating" and "one of the most extraordinary experiences of my academic life" (*Economist,* 2014).

Criticism hasn't come only from individual scientists. *Nature,* a prominent science journal, editorialized in 2013: "[I]t is time to rethink the IPCC. The organization deserves thanks and respect from all who care

about the principle of evidence-based policy-making, but the current report should be its last mega-assessment." (*Nature*, 2013) After describing the "exponential" growth of its reports and "truly breathtaking array of data" IPCC reports offer, the editors wrote, "Unfortunately, one thing that has not changed is that scientists cannot say with any certainty what rate of warming might be expected, or what effects humanity might want to prepare for, hedge against or avoid at all costs. In particular, the temperature range of the warming that would result from a doubling of atmospheric carbon dioxide levels is expected to be judged as 1.5– 4.5°C in next week's report – wider than in the last assessment and exactly what it was in the report of 1990. … Absent from next week's report, for instance, is recent and ongoing research on the rate of warming and what is – or is not – behind the plateau in average global temperatures that the world has experienced during the past 15 years. These questions have important policy implications, and the IPCC is the right body to answer them. But it need not wait six years to do so" (*Ibid.*).

In 2014, a reporter for *Science,* published by the American Association for the Advancement of Science (AAAS), reported on political interference with IPCC's *Fifth Assessment Report*: "Although the underlying technical report from WGIII was accepted by the IPCC, final, heated negotiations among scientific authors and diplomats led to a substantial deletion of figures and text from the influential 'Summary for Policymakers' (SPM). … [S]ome fear that this redaction of content marks an overstepping of political interests, raising questions about division of labor between scientists and policy-makers and the need for new strategies in assessing complex science. Others argue that SPM should explicitly be coproduced with governments" (Wible, 2014). The subtitle of the article is "Did the 'Summary for Policymakers' become a summary by policy-makers?"

Later in 2014, after release of the Working Group III contribution to the *Fifth Assessment Report*, *Nature* reported critics "find the key conclusions unsurprising and short of detail. They say that the document sidesteps any hint of what specific countries, or groups of countries, should do to move towards clean energy systems. … Some researchers have long argued for a more pragmatic and diversified approach to climate change" (Schiermeier, 2014, p. 298).

Particularly harsh criticism of IPCC has come from the Amsterdam-based InterAcademy Council (IAC), which is made up of the presidents of many of the world's national science academies, the very

academies defenders of IPCC often say endorse IPCC's findings. IAC conducted a thorough audit of IPCC in 2010 (IAC, 2010). Among its findings:

> *Fake confidence intervals:* IAC was highly critical of IPCC's method of assigning "confidence" levels to its forecasts, singling out "… the many statements in the Working Group II Summary for Policymakers that are assigned high confidence but are based on little evidence. Moreover, the apparent need to include statements of 'high confidence' (i.e., an 8 out of 10 chance of being correct) in the Summary for Policymakers led authors to make many vaguely defined statements that are difficult to refute, therefore making them of 'high confidence.' Such statements have little value" (p. 61).
>
> *Use of gray-sources:* Too much reliance on unpublished and non-peer-reviewed sources (p. 63). Three sections of IPCC's 2001 climate assessment cited peer-reviewed material only 36 percent, 59 percent, and 84 percent of the time.
>
> *Political interference:* Line-by-line editing of the summaries for policymakers during "grueling Plenary session that lasts several days, usually culminating in an all-night meeting. Scientists and government representatives who responded to the Committee's questionnaire suggested changes to reduce opportunities for political interference with the scientific results …" (p. 64).
>
> *The use of secret data:* "An unwillingness to share data with critics and enquirers and poor procedures to respond to freedom-of-information requests were the main problems uncovered in some of the controversies surrounding IPCC (Russell *et al.*, 2010; PBL, 2010). Poor access to data inhibits users' ability to check the quality of the data used and to verify the conclusions drawn …" (p. 68).
>
> *Selection of contributors is politicized:* Politicians decide which scientists are allowed to participate in the writing and review process: "political considerations are given more weight than scientific qualifications" (p. 14).

> *Chapter authors exclude opposing views:* "Equally important is combating confirmation bias—the tendency of authors to place too much weight on their own views relative to other views (Jonas *et al.*, 2001). As pointed out to the Committee by a presenter and some questionnaire respondents, alternative views are not always cited in a chapter if the Lead Authors do not agree with them ..." (p. 18).
>
> *Need for independent review:* "Although implementing the above recommendations would greatly strengthen the review process, it would not make the review process truly independent because the Working Group Co-chairs, who have overall responsibility for the preparation of the reports, are also responsible for selecting Review Editors. To be independent, the selection of Review Editors would have to be made by an individual or group not engaged in writing the report, and Review Editors would report directly to that individual or group (NRC, 1998, 2002)" (p. 21).

This is a damning critique. IPCC misrepresents its findings and does not properly peer review its reports. The selection of scientists who participate is politicized, the summary for policymakers is the product of late-night negotiations among governments and is not written by scientists, and more. The quotations above and the reference below are to a publicly circulated draft of IAC's final report, still available online (see reference). The final report was heavily edited to water down and perhaps hide the extent of problems uncovered by the investigators, itself evidence of still more misconduct. The report received virtually no press attention in the United States.

In 2012, IPCC issued a news release saying in part, "IPCC's 32nd session in Busan, Republic of Korea, in October 2010, adopted most of the IAC recommendations, and set up Task Groups to work on their implementation" (IPCC, 2012). One key recommendation, that a new Executive Committee be created that would include "three independent members," was almost comically disregarded: the committee was created, but all three slots were filled with IPCC employees (Laframboise, 2013). It is doubtful whether any other changes made at that time would have meaningfully affected the *Fifth Assessment Report*, which was already largely written. Media accounts of the release of AR5 once again told of late-night sessions with politicians and advocacy group representatives

rewriting the *Summary for Policymakers*.

In conclusion, it is difficult to understand why IPCC reports still command the respect of anyone in the climate debate. They are political documents, not balanced or accurate summaries of the current state of climate science. They cannot provide reliable guidance to policymakers, economists, and climate scientists who put their trust in them.

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Bias

Climate scientists, like all humans, can be biased. Origins of bias include careerism, grant-seeking, political views, and confirmation bias.

Bias is another reason for disagreement among scientists and other writers on climate change. Scientists, no less than other human beings, bring their personal beliefs and interests to their work and sometimes make decisions based on them that direct their attention away from research findings that would contradict their opinions. Bias is often unconscious or overcome by professional ethics, but sometimes it leads to outright corruption.

Park *et al.* (2014), in a paper published in *Nature*, summarized research on publication bias, careerism, data fabrication, and fraud to explain how scientists converge on false conclusions. They write, "Here we show that even when scientists are motivated to promote the truth, their behaviour may be influenced, and even dominated, by information gleaned from their peers' behaviour, rather than by their personal dispositions. This phenomenon, known as herding, subjects the scientific community to an inherent risk of converging on an incorrect answer and raises the possibility that, under certain conditions, science may not be self-correcting."

Freedman (2010) identified a long list of reasons why experts are often wrong, including pandering to audiences or clients, lack of oversight, reliance on flawed evidence provided by others, and failure to take into account important confounding variables.

John P.A. Ioannidis, professor of medicine and of health research and policy at Stanford University School of Medicine and a professor of statistics at Stanford University School of Humanities and Sciences, in a series of articles published in journals including the *Journal of the American Medical Association* (JAMA), revealed most published research in the health care field cannot be replicated or is likely to be contradicted by later publications (Ioannidis, 2005a, 2005b; Ioannidis and Trikalinos, 2005; Ioannidis, 2012). His most frequently cited work is titled "Why most published research findings are false."

Ioannidis's work generated widespread awareness that peer review is no guarantee of the accuracy or value of a research paper. In fact, he found that the likelihood of research being contradicted was highest with the most prestigious journals, including *Nature*, *Science,* and *JAMA.* Springer, a major publisher of science journals, recently announced it was removing 16

papers it had published that were generated by a computer program called SCIgen that were simply gibberish (*Nature*, 2014). Much to their credit, these journals and academic institutions claim to be engaged in considerable soul-searching and efforts to reform a peer-review process that is plainly broken.

This controversy has particular relevance to the climate change debate due to "Climategate," the release of emails exchanged by prominent climate scientists discussing efforts to exclude global warming skeptics from journals, punish editors who allowed skeptics' articles to appear, stonewall requests for original data, manipulate data, and rush into publication articles refuting or attempting to discredit scientists who disagree with IPCC's findings (Montford, 2010; Sussman, 2010; Michaels, 2011, Chapter 2). The scandal received little press attention in the United States. Journals such as *Nature* take the scandal over peer-review corruption seriously when it involves other topics (Ferguson *et al.*, 2014), but are curiously silent about its occurrence in the climate change literature.

Scientists, especially those in charge of large research projects and laboratories, have a financial incentive to seek more funding for their programs. They are not immune to having tunnel vision regarding the importance of their work and employment. Each believes his or her mission is more significant and essential relative to other budget priorities.

To obtain funding (and more funding), it helps scientists immensely to have the public – and thus Congress and potentially private funders – worried about the critical nature of the problems they study. This incentive makes it less likely researchers will interpret existing knowledge or present their findings in a way that reduces public concern (Lichter and Rothman, 1999; Kellow, 2007; Kabat, 2008). As a result, scientists often gravitate toward emphasizing worst-case scenarios, though there may be ample evidence to the contrary. This bias of alarmism knows no political bounds, affecting both liberal Democrats and conservative Republicans (Berezow and Campbell, 2012; Lindzen, 2012).

Alarmists in the climate debate seem to recognize only one possible source of bias, and that is funding from "the fossil fuel industry." The accusation permeates any conversation of the subject, perhaps second only to the "consensus" claim, and the two are often paired, as in "only scientists paid by the fossil fuel industry dispute the overwhelming scientific consensus." The accusation doesn't work for many reasons:

- There has never been any evidence of a climate scientist accepting money from industry to take a position or change his or her position in the climate debate (Cook, 2014);

- Vanishingly few global warming skeptics have ever been paid by the fossil fuel industry. Certainly not more than a tiny fraction of the 31,478 American scientists who signed the Global Warming Petition or the thousands of meteorologists and climate scientists reported in Chapter 1 who tell survey-takers they do not agree with IPCC;

- Funding of alarmists by government agencies, liberal foundations, environmental advocacy groups, and the alternative energy industry exceeds funding from the fossil fuel industry by two, three, or even four orders of magnitude (Butos and McQuade, 2015). Does government and interest-group funding of alarmists not also have a "corrupting" influence on its recipients?

- The most prominent organizations supporting global warming skepticism get little if any money from the fossil fuel industry. Their support comes overwhelmingly from individuals (and their foundations) motivated by concern over the apparent corruption of science taking place and the enormous costs it is imposing on the public.

In the text of her speech to the British House of Lords cited earlier, climate scientist Judith Curry wrote, "I am very concerned that climate science is becoming biased owing to biases in federal funding priorities and the institutionalization by professional societies of a particular ideology related to climate change. Many scientists, and institutions that support science, are becoming advocates for UN climate policies, which is leading scientists into overconfidence in their assessments and public statements and into failures to respond to genuine criticisms of the scientific consensus. In short, the climate science establishment has become intolerant to disagreement and debate, and is attempting to marginalize and de-legitimize dissent as corrupt or ignorant" (Curry, 2015).

Money probably isn't what motivates Mike Hulme, now professor of climate and culture in the Department of Geography at King's College

London. He was professor of climate change in the School of Environmental Sciences at the University of East Anglia and a contributor to IPCC reports, and he is author of *Why We Disagree About Climate Change* (Hulme, 2009). Hulme was cited in Chapter 1 admitting to great uncertainties in climate science, yet he eagerly endorses and promotes IPCC's claims. Why does he do that?

In his book, Hulme calls climate change "a classic example of ... 'post-normal science,'" which he defines (quoting Silvio Funtowicz and Jerry Ravetz) as "the application of science to public issues where 'facts are uncertain, values in dispute, stakes high and decisions urgent.'" Issues that fall into this category, he says, are no longer subject to the cardinal requirements of true science: skepticism, universalism, communalism, and disinterestedness. Instead of experimentation and open debate, post-normal science says "consensus" brought about by deliberation among experts determines what is true, or at least true enough for the time being to direct public policy decisions.

The merits and demerits of post-normal science can be debated, but it undoubtedly has one consequence of significance in the climate change debate: Scientists are no longer responsible for actually doing science themselves, such as testing hypotheses, studying data, and confronting data or theories that contradict the "consensus" position. Scientists simply "sign onto" IPCC's latest report and are free to indulge their political biases. Hulme is quite open about his. He wrote, "The idea of climate change should be seen as an intellectual resource around which our collective and personal identities and projects can form and take shape. We need to ask not what we can do for climate change, but to ask what climate change can do for us" (p. 326).

In his book, Hulme says "because the idea of climate change is so plastic, it can be deployed across many of our human projects and can serve many of our psychological, ethical, and spiritual needs." Hulme describes himself as a social-democrat so his needs include sustainable development, income redistribution, population control, and social justice. By focusing on these "needs," how can Hulme objectively evaluate the anthropogenic global warming hypothesis?

Like the late Stephen Schneider, who once said "to reduce the risk of potentially disastrous climate change … we need to get some broad based support, to capture the public's imagination. That, of course, means getting loads of media coverage. So we have to offer up scary scenarios, make

simplified, dramatic statements, and make little mention of any doubts we might have" (Schneider, 1989), Hulme wrote, "We will continue to create and tell new stories about climate change and mobilise them in support of our projects." He suggests his fellow global warming alarmists promote four "myths," which he labels Lamenting Eden, Presaging Apocalypse, Constructing Babel, and Celebrating Jubilee.

This is unusual behavior for a scientist and disturbing for one working at high levels in IPCC. When Hulme talks about climate science, is he telling us the truth or one of his "myths"?

* * *

While it would be ideal if scientists could be relied upon to deliver the unvarnished truth about complex scientific matters to governments and voters, the truth is they almost always fall short. Ignorance of research outside their area of specialization, reliance on flawed authorities, bias, and outright corruption all contribute to unwarranted alarmism in the climate change debate.

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3

Scientific Method vs. Political Science

Key findings of this section include the following:

- The hypothesis implicit in all IPCC writings, though rarely explicitly stated, is that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions.
- The null hypothesis is that currently observed changes in global climate indices and the physical environment, as well as current changes in animal and plant characteristics, are the result of natural variability.
- In contradiction of the scientific method, IPCC assumes its implicit hypothesis is correct and that its only duty is to collect evidence and make plausible arguments in the hypothesis's favor.

The Missing Null Hypothesis

Although IPCC's reports are voluminous and their arguments impressively persistent, it is legitimate to ask whether that makes them good science. In order to conduct an investigation, scientists must first formulate a falsifiable hypothesis to test. The hypothesis implicit in all IPCC writings, though rarely explicitly stated, is that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions.

In considering any such hypothesis, an alternative and null hypothesis must be entertained, which is the simplest hypothesis consistent with the known facts. Regarding global warming, the null hypothesis is that currently observed changes in global climate indices and the physical environment are the result of natural variability. To invalidate this null hypothesis requires, at a minimum, direct evidence of human causation of specified changes that lie outside usual, natural variability. Unless and until such evidence is adduced, the null hypothesis is assumed to be correct.

In contradiction of the scientific method, IPCC assumes its implicit hypothesis is correct and that its only duty is to collect evidence and make plausible arguments in the hypothesis's favor. One probable reason for this behavior is that the United Nations protocol under which IPCC operates defines climate change as "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods" (United Nations, 1994, Article 1.2). Not surprisingly, directing attention to only the effects of human greenhouse gas emissions has resulted in IPCC failing to provide a thorough analysis of climate change.

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Models, Postulates, and Circumstantial Evidence

IPCC offers three lines of reasoning in defense of its hypothesis: global climate model projections, a series of postulates or assumptions, and appeals to circumstantial evidence. The specific arguments are summarized in Figure 2.

All three lines of reasoning depart from proper scientific methodology. Global climate models produce meaningful results only if we assume we already know perfectly how the global climate works, and most climate scientists say we do not (Bray and von Storch, 2010; Strengers, Verheggen, and Vringer, 2015). Moreover, it is widely recognized that climate models

are not designed to produce predictions of future climate but rather what-if projections of many alternative possible futures (Trenberth, 2009).

Figure 2
IPCC's Three Lines of Argument

Global Climate Model Projections

IPCC modelers assume Global Climate Models (GCMs) are based on a perfect knowledge of all climate forcings and feedbacks. They then assert:

- A doubling of atmospheric CO_2 would cause warming of up to 6°C.
- Human-related CO_2 emissions caused an atmospheric warming of at least 0.3°C over the past 15 years.
- Enhanced warming (a "hot spot") should exist in the upper troposphere in tropical regions.
- Both poles should have warmed faster than the rest of Earth during the late twentieth century.

Postulates

Postulates are statements that assume the truth of an underlying fact that has not been independently confirmed or proven. IPCC postulates:

- The warming of the twentieth century cannot be explained by natural variability.
- The late twentieth century warm peak was of greater magnitude than previous natural peaks.
- Increases in atmospheric CO_2 precede, and then force, parallel increases in temperature.
- Solar forcings are too small to explain twentieth century warming.
- A future warming of 2°C or more would be net harmful to the biosphere and human well-being.

Circumstantial Evidence

Circumstantial evidence does not bear directly on the matter in dispute but refers to circumstances from which the occurrence of the fact might be inferred. IPCC cites the following circumstantial evidence:

- Unusual melting is occurring in mountain glaciers, Arctic sea ice, and polar icecaps.
- Global sea level is rising at an enhanced rate and swamping tropical coral atolls.
- Droughts, floods, and monsoon variability and intensity are increasing.
- Global warming is leading to more, or more intense, wildfires, rainfall, storms, hurricanes, and other extreme weather events.
- Unusual melting of Boreal permafrost or sub-seabed gas hydrates is causing warming due to methane release.

Source: Summary for Policymakers, *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Postulates, commonly defined as "something suggested or assumed as true as the basis for reasoning, discussion, or belief," can stimulate relevant observations or experiments but more often are merely assertions that are difficult or impossible to test (Kahneman, 2011). IPCC expresses "great confidence" and even "extreme confidence" in its assumptions, but it cannot apply a statistical confidence level because they are statements of opinion and not of fact. This is not the scientific method.

Circumstantial evidence, or observations, in science are useful primarily to falsify hypotheses and cannot prove one is correct (Popper, 1965, p. vii). It is relatively easy to assemble reams of "evidence" in favor of a point of view or opinion while ignoring inconvenient facts that would contradict it, a phenomenon called "confirmation bias." The only way to avoid confirmation bias is independent review of a scientist's work by other scientists who do not have a professional, reputational, or financial stake in whether the hypothesis is confirmed or disproven. As documented in Chapter 2, this sort of review is conspicuously absent in the climate change

debate. Those who attempt to exercise it find themselves demonized, their work summarily rejected by academic journals, and worse.

Facing such criticism of its methodology and a lack of compelling evidence of dangerous warming, IPCC's defenders often invoke the precautionary principle. The principle states: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation" (United Nations, 1992, Principle 15). This is a sociological precept rather than a scientific one and lacks the intellectual rigor necessary for use in policy formulation (Goklany, 2001).

The hypothesis of human-caused global warming comes up short not merely of "full scientific certainty" but of reasonable certainty or even plausibility. The weight of evidence now leans heavily against the theory. Invoking the precautionary principle does not lower the required threshold for evidence to be regarded as valid, nor does it answer the most important questions about the causes and consequences of climate change. Scientific principles acknowledge the supremacy of experiment and observation and do not bow to instinctive feelings of alarm or claims of a supposed scientific "consensus" (Legates *et al.*, 2015). The formulation of effective public environmental policy must be rooted in evidence-based science, not an over-abundance of precaution (More and Vita-More, 2013; U.K. House of Commons Science and Technology Committee, 2006).

Contradictions about methodology and the verity of claimed facts make it difficult for unprejudiced lay persons to judge for themselves where the truth actually lies in the global warming debate. This is one of the primary reasons why politicians and commentators rely so heavily on supposedly authoritative statements issued by one side or another in the public discussion. Arguing from authority, however, is the antithesis of the scientific method. Attempting to stifle debate by appealing to authority hinders rather than helps scientific progress and understanding.

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4

Flawed Projections

Key findings in this section include the following:

- The United Nations' Intergovernmental Panel on Climate Change (IPCC) and virtually all the governments of the world depend on global climate models (GCMs) to forecast the effects of human-related greenhouse gas emissions on the climate.

- GCMs systematically over-estimate the sensitivity of climate to carbon dioxide (CO_2), many known forcings and feedbacks are poorly modeled, and modelers exclude forcings and feedbacks that run counter to their mission to find a human influence on climate.

- The Nongovernmental International Panel on Climate Change (NIPCC) estimates a doubling of CO_2 from pre-industrial levels (from 280 to 560 ppm) would likely produce a temperature forcing of 3.7 Wm^{-2} in the lower atmosphere, for about ~1°C of *prima facie* warming.

- Four specific forecasts made by GCMs have been falsified by real-world data from a wide variety of sources. In particular, there has been no global warming for some 18 years.

Why Computer Models Are Flawed

In contrast to the scientific method, IPCC and virtually all national

governments in the world rely on computer models, called global climate models or GCMs, to represent speculative thought experiments by modelers who often lack a detailed understanding of underlying processes. The results of GCMs are only as reliable as the data and theories "fed" into them, which scientists widely recognize as being seriously deficient. If natural climate forcings and feedbacks are not perfectly understood, then GCMs become little more than an exercise in curve-fitting, or changing parameters until the outcomes match the modeler's expectations. As John von Neumann is reported to have once said, "with four parameters I can fit an elephant, and with five I can make him wiggle his trunk" (Dyson, 2004).

The science literature is replete with admissions by leading climate modelers that forcings and feedbacks are not sufficiently well understood, that data are insufficient or too unreliable, and that computer power is insufficient to resolve important climate processes. Many important elements of the climate system, including atmospheric pressure, wind, clouds, temperature, precipitation, ocean currents, sea ice, and permafrost, cannot be properly simulated by the current generation of models.

The major known deficiencies include model calibration, non-linear model behavior, and the omission of important natural climate-related variability. Model calibration is faulty as it assumes all temperature rise since the start of the industrial revolution has resulted from human CO_2 emissions. In reality, major human-related emissions commenced only in the mid-twentieth century.

More facts about climate models and their limitations reported in Chapter 1 of *Climate Change Reconsidered II: Physical Science* are reported in Figure 3.

Figure 3
Key Facts about Global Climate Models

- Climate models generally assume a climate sensitivity of 3°C for a doubling of CO_2 above preindustrial values, whereas meteorological observations are consistent with a sensitivity of 1°C or less.

- Climate models underestimate surface evaporation caused by increased temperature by a factor of 3, resulting in a consequential underestimation of global precipitation.

- Climate models inadequately represent aerosol-induced changes in infrared (IR) radiation, despite studies showing different mineral aerosols (for equal loadings) can cause differences in surface IR flux between 7 and 25 Wm^{-2}.

- Deterministic climate models have inherent properties that make dynamic predictability impossible; introduction of techniques to deal with this (notably parameterization) introduces bias into model projections.

- Limitations in computing power restrict climate models from resolving important climate processes; low-resolution models fail to capture many important regional and lesser-scale phenomena such as clouds.

- Model calibration is faulty, as it assumes all temperature rise since the start of the industrial revolution has resulted from human CO_2 emissions; in reality, major human-related emissions commenced only in the mid-twentieth century.

- Non-linear climate models exhibit chaotic behavior. As a result, individual simulations ("runs") may show differing trend values.

- Internal climate oscillations (AMO, PDO, etc.) are major features of the historic temperature record; climate models do not even attempt to simulate them.

- Climate models fail to incorporate the effects of variations in solar magnetic field or in the flux of cosmic rays, both of which are known to significantly affect climate.

Source: "Chapter 1. Global Climate Models and Their Limitations," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Forcings and Feedbacks

The discussion in the previous section of why global climate models are flawed included references to some of the forcings and feedbacks that are poorly modeled and likely to make models unreliable. In many of these cases, climate scientists are substituting opinions or best guesses for data. As serious as that problem is, it is made worse by the exclusion of forcings and feedbacks that are well documented in the scientific literature. Many of these run counter to the goal of many modelers to find a human influence on climate and so are ignored.

Among the forcings and feedbacks IPCC has failed to take into account are increases in low-level clouds in response to enhanced atmospheric water vapor, ocean emissions of dimethyl sulfide (DMS), and the presence and total cooling effect of both natural and industrial aerosols. These processes and others are likely to offset most or even all of any warming caused by rising CO_2 concentrations. Figure 4 summarizes these and other findings about forcings and feedbacks appearing in Chapter 2 of *Climate Change Reconsidered II: Physical Science.*

Figure 4
Key Facts about Temperature Forcings and Feedbacks

- A doubling of CO_2 from pre-industrial levels (from 280 to 560 ppm) would likely produce a temperature forcing of 3.7 Wm^{-2} in the lower atmosphere, for about ~1°C of *prima facie* warming.

- IPCC models stress the importance of positive feedback from increasing water vapor and thereby project warming of ~3–6°C, whereas empirical data indicate an order of magnitude less warming of ~0.3–1.0°C.

- In ice core samples, changes in temperature precede parallel changes in atmospheric CO_2 by several hundred years; also, temperature and CO_2 are uncoupled through lengthy portions of the historical and geological records; therefore CO_2 cannot be the primary forcing agent for most temperature changes.

- Atmospheric methane (CH_4) levels for the past two decades fall well below the values projected by IPCC in its assessment reports. IPCC's temperature projections incorporate these inflated CH_4 estimates and need downward revision accordingly.

- The thawing of permafrost or submarine gas hydrates is not likely to emit dangerous amounts of methane at current rates of warming.

- Nitrous oxide (N_2O) emissions are expected to fall as CO_2 concentrations and temperatures rise, indicating it acts as a negative climate feedback.

- Other negative feedbacks on climate sensitivity that are either discounted or underestimated by IPCC include increases in low-level clouds in response to enhanced atmospheric water vapor, increases in ocean emissions of dimethyl sulfide (DMS), and the presence and total cooling effect of both natural and industrial aerosols.

Source: "Chapter 2. Forcings and Feedbacks," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Yet another deficiency in GCMs is that non-linear climate models exhibit chaotic behavior. As a result, individual simulations ("runs") may show differing trend values (Singer, 2013b). Internal climate oscillations (Atlantic Multidecadal Oscillation (AMO), Pacific Decadal Oscillation (PDO), etc.) are major features of the historic temperature record, yet GCMs do not even attempt to simulate them. Similarly, the models fail to incorporate the effects of variations in the solar magnetic field or in the flux of cosmic rays, both phenomena known to significantly affect climate.

We conclude the current generation of GCMs is unable to make accurate projections of climate even 10 years ahead, let alone the 100-year period that has been adopted by policy planners. The output of such models should therefore not be used to guide public policy formulation until they have been validated and shown to have predictive value.

Failed Forecasts

Four specific forecasts made by GCMs have been falsified by real-world data from a wide variety of sources:

Failed Forecast #1: A doubling of atmospheric CO_2 would cause warming between 3°C and 6°C.

The increase in radiative forcing produced by a doubling of atmospheric CO_2 is generally agreed to be 3.7 Wm^{-2}. Equating this forcing to temperature requires taking account of both positive and negative feedbacks. IPCC models incorporate a strong positive feedback from increasing water vapor but exclude negative feedbacks such as a concomitant increase in low-level clouds – hence they project a warming effect of 3°C or more.

IPCC ignores mounting evidence that climate sensitivity to CO_2 is much lower than its models assume (Spencer and Braswell, 2008; Lindzen and Choi, 2011). Monkton *et al.* cited 27 peer-reviewed articles "that report climate sensitivity to be below current central estimates" (Monckton *et al.*, 2015). Their list of sources appears in Figure 5.

Figure 5
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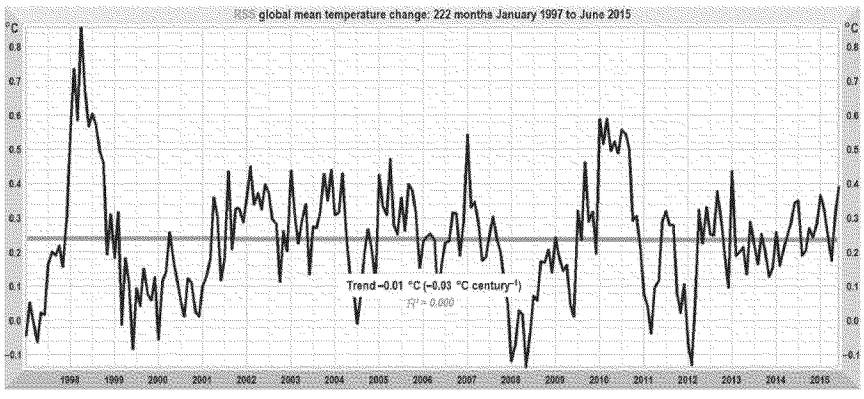
Source: Monckton, C., Soon, W. W-H., Legates, D.R., and Briggs, W.M. 2015. Keeping it simple: the value of an irreducibly simple climate model. *Science Bulletin* **60** (15): 1378–1390, footnotes 7 to 33.

Failed Forecast #2: CO_2 caused an atmospheric warming of at least 0.3°C over the past 15 years.

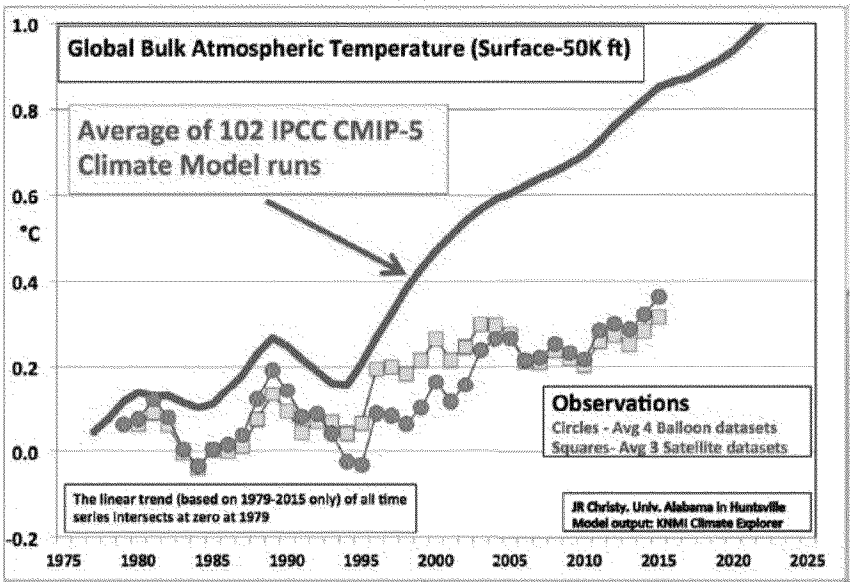
The global climate models relied on by IPCC predicted an atmospheric warming of at least 0.3ºC during the first 15 years of the twenty-first century, but temperatures did not rise at all during that period. Figure 6 shows global temperatures from 1997 to 2015, based on satellite data compiled and reported by Remote Sensing Systems and interpreted by Monckton *et al.* (2015). They show a trend of -0.01ºC from January 1997 to June 2015. Figure 7, from Dr. John Christy's 2016 Congressional testimony, vividly portrays the failure of GCMs to hindcast this trend.

Figure 6
RSS Monthly Global Mean Lower-troposphere Temperature Anomalies, January 1997 to June 2015



Source: Monckton *et al.*, 2015.

Figure 7. Failure of Climate Models to Hindcast Global Temperatures, 1979–2015



Notes: Five-year averaged values of annual mean (1979–2015) global bulk (termed "midtropospheric" or "MT") temperature as depicted by the average of 102 IPCC CMIP5 climate models (red), the average of 3 satellite datasets – UAH, RSS, NOAA (green), and 4 balloon datasets – NOAA, UKMet, RICH, RAOBCORE (blue). *Source:* Christy, 2016.

The absence of a warming trend for more than 15 years invalidates GCMs based on IPCC's assumptions regarding climate sensitivity to carbon dioxide. In its 2008 *State of the Climate* report, the National Oceanic and Atmospheric Administration (NOAA) reported, "Near zero and even negative trends are common for intervals of a decade or less in the simulations, due to the models internal climate variability. The simulations rule out (at the 95% level) zero trends for intervals of 15 yr or more, suggesting that an observed absence of warming of this duration is needed to create a discrepancy with the expected present-day warming rate" (Knight *et al.*, 2009). This "discrepancy" now exists, indeed now extends to 18 years without warming, and the models have been invalidated.

IPCC's authors compare the output of unforced (and incomplete)

models with a dataset that represents twentieth century global temperature (HadCRUT, British Meteorological Office). Finding a greater warming trend in the dataset than in model projections, the false conclusion is then drawn that this "excess" warming must be caused by human-related greenhouse forcing. In reality, no excess warming has been demonstrated, first because this line of argument assumes models have perfect knowledge, information, and power, which they do not, and second, because a wide variety of datasets other than the HadCRUT global air temperature curve favored by IPCC do not exhibit a warming trend during the second half of the twentieth century. See Figure 8.

Figure 8
Lack of Evidence for Rising Temperatures

The difference in surface temperatures between 1942–1995 and 1979–1997, as registered by datasets that represent land, oceanic, and atmospheric locations.

LAND SURFACE	Global (IPCC, HadCRUT)	+0.5° C
	United States (GISS)	~zero
OCEAN	Sea surface temperature (SST)[1]	~zero
	SST Hadley NMAT	~zero
ATMOSPHERE	Satellite MSU (1979–1997)	~zero
	Hadley radiosondes (1979–1997)	~zero
PROXIES	Mostly land surface temperature[2]	~zero

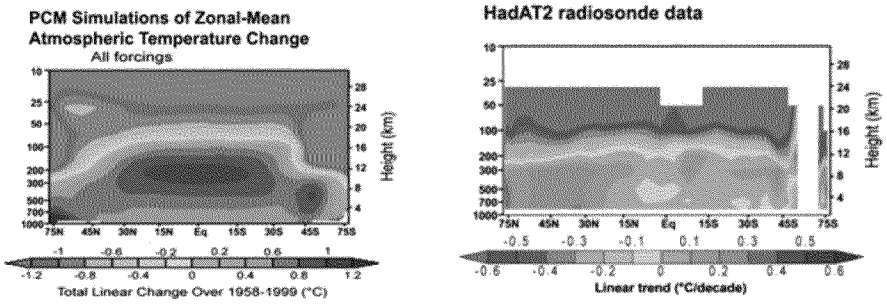
Unless otherwise indicated, data are drawn from the nominated government agencies.

Source: [1]Gouretski *et al.*, 2012; [2]Anderson *et al.*, 2013.

Failed Forecast #3: A Thermal Hot Spot Should Exist in the Upper Troposphere in Tropical Regions

Observations from both weather balloon radiosondes and satellite MSU sensors show the opposite, with either flat or decreasing warming trends with increasing height in the troposphere (Douglass *et al.*, 2007; Singer, 2011; Singer, 2013a). In Figure 9, the image on the left is model simulations of temperature trends in the tropical mid-troposphere, as shown in figure 1.3F from a report by the U.S. Climate Change Science Program (Karl *et al.*, 2006). The image shows a "hot spot" should occur in the upper troposphere in tropical regions. The image on the right is figure 5.7E from the same source. It shows observed temperatures based on radiosonde data by the Hadley Centre, which are in good agreement with the corresponding U.S. analyses. The observed data do not show the temperature rise in the tropical mid-troposphere forecast by the model.

Figure 9
Greenhouse-model-predicted Temperature Trends Versus Latitude and Altitude Versus Observed Temperature Trends



Source: Karl *et al.*, 2006, pp. 25, 116.

Failed Forecast #4: Both Polar Regions Should Have Warmed Faster than the Rest of Earth During the Late Twentieth Century

Late-twentieth century warming occurred in many Arctic locations and also over a limited area of the West Antarctic Peninsula, but the large polar East Antarctic Ice Sheet has been cooling since at least the 1950s (O'Donnell *et al.*, 2010). More data and commentary on this appears in Chapter 6.

* * *

In general, GCMs perform poorly when their projections are assessed against empirical data. In their comprehensive report of an extensive test of contemporary climate models, Idso and Idso write, "we find (and document) a total of 2,418 failures of today's top-tier climate models to accurately hindcast a whole host of climatological phenomena. And with this extremely poor record of success, one must greatly wonder how it is that anyone would believe what the climate models of today project about earth's climate of tomorrow, i.e., a few decades to a century or more from now" (Idso and Idso, 2015).

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5

False Postulates

Key findings in this section include the following:

- Neither the rate nor the magnitude of the reported late twentieth century surface warming (1979–2000) lay outside normal natural variability.
- The late twentieth century warm peak was of no greater magnitude than previous peaks caused entirely by natural forcings and feedbacks.
- Historically, increases in atmospheric CO_2 followed increases in temperature, they did not precede them. Therefore, CO_2 levels could not have forced temperatures to rise.
- Solar forcings are not too small to explain twentieth century warming. In fact, their effect could be equal to or greater than the effect of CO_2 in the atmosphere.
- A warming of 2°C or more during the twenty-first century would probably not be harmful, on balance, because many areas of the world would benefit from or adjust to climate change.

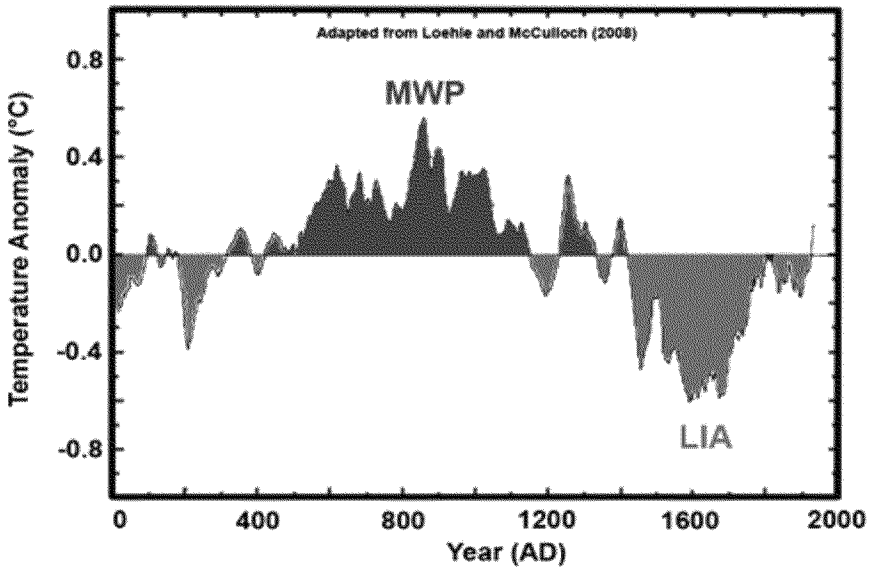
Figure 2 in Chapter 3 identified five postulates at the base of IPCC's claim that global warming has resulted, or will result, from anthropogenic greenhouse gas emissions. All five are readily refuted by real-world observations.

Modern Warming Is Not Unnatural

IPCC's first false postulate is that the warming of the twentieth century cannot be explained by natural variability. But temperature records contain natural climate rhythms that are not well summarized or defined by fitting straight lines through arbitrary portions of a fundamentally rhythmic, non-stationary data plot. In particular, linear fitting fails to take account of meteorological-oceanographical-solar variations that are well established to occur at multidecadal and millennial time scales.

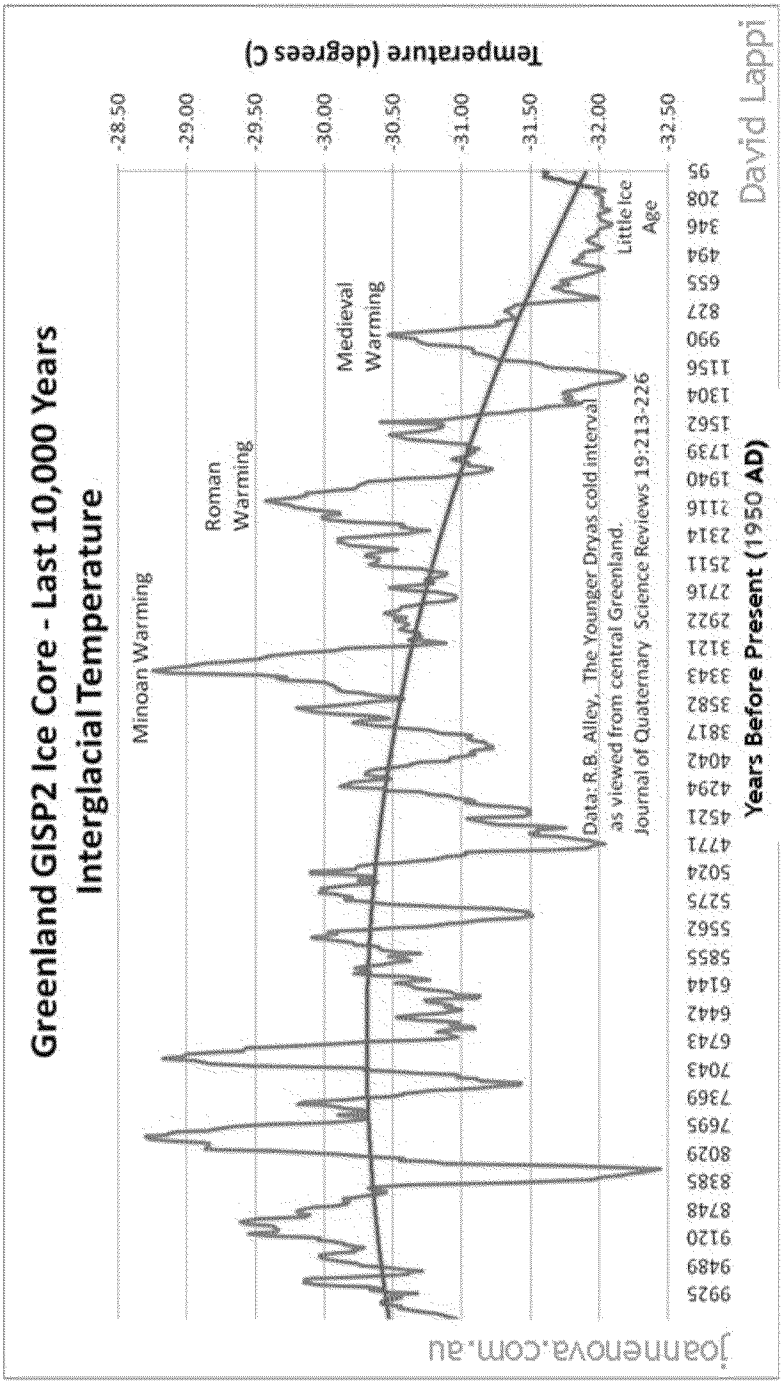
Even assuming, wrongly, that global temperatures would have been unchanging in the absence of man-made greenhouse gas emissions, the correctness of IPCC's assertion depends upon the period of time considered (Davis and Bohling, 2001). For example, temperatures have been cooling since 8,000 and 2,000 years ago; warming since 20,000 years ago, and also since 1850; and static (no net warming or cooling) between 700 BC and 150 AD and since 1997 AD. Figures 10 and 11 illustrate the variability of global temperatures during the past 2,000 and 10,000 years, respectively.

Figure 10
Mean Relative Temperature History of the Globe



Source: Loehle and McCulloch, 2008.

Figure 11


Greenland GISP2 Ice Core - Last 10,000 Years
Interglacial Temperature
Temperature (degrees C)
-28.50
-29.00
-29.50
-30.00
-30.50
-31.00
-31.50
-32.00
-32.50
Minoan Warming
Roman Warming
Medieval Warming
Little Ice Age
Data: R.B. Alley, The Younger Dryas cold interval as viewed from central Greenland. Journal of Quaternary Science Reviews 19:213-226
Years Before Present (1950 AD)
95
208
346
494
655
827
990
1156
1304
1562
1739
1940
2116
2314
2511
2716
2922
3121
3343
3582
3817
4042
4294
4521
4771
5024
5275
5562
5855
6144
6442
6743
7043
7369
7695
8029
8385
8748
9120
9489
9925
David Lappi
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Global warming during the twentieth century occurred in two pulses, between 1910–1940 and 1975–2000, at gentle rates of a little more than 1.5°C/century (British Meteorological Office, 2013). In contrast, natural warming at some individual meteorological stations during the 1920s proceeded at rates of up to 4°C/decade or more (Chylek *et al.*, 2004). The first period (1910–1940), having occurred prior to the build-up of greenhouse gases in the atmosphere, must represent natural variability. Measurements made during the late twentieth century warming are likely exaggerated by inadequate correction for the urban heat island effect (DeLaat and Maurellis, 2004; McKitrick and Michaels, 2004, 2007).

Modern Warming Is Not Unprecedented

IPCC's second false postulate is that the late twentieth century warm peak was of greater magnitude than previous natural peaks. Comparison of modern and ancient rates of natural temperature change is difficult because of the lack of direct measurements available prior to 1850. However, high-quality proxy temperature records from the Greenland ice core for the past 10,000 years demonstrate a natural range of warming and cooling rates between +2.5 and -2.5 °C/century (Alley, 2000; Carter, 2010, p. 46, Figure 7), significantly greater than rates measured for Greenland or the globe during the twentieth century.

Glaciological and recent geological records contain numerous examples of ancient temperatures up to 3°C or more warmer than the peak reported at the end of the twentieth century. During the Holocene, such warmer peaks included the Egyptian, Minoan, Roman, and Medieval warm periods (Alley, 2000). During the Pleistocene, warmer peaks were associated with interglacial oxygen isotope stages 5, 9, 11, and 31 (Lisiecki and Raymo, 2005). During the Late Miocene and Early Pliocene (6–3 million years ago) temperature consistently attained values 2–3°C above twentieth century values (Zachos *et al.*, 2001).

Figure 12 summarizes these and other findings about surface temperatures that appear in Chapter 4 of *Climate Change Reconsidered II: Physical Science.*

Figure 12
Key Facts about Surface Temperature

- Whether today's global surface temperature is seen to be part of a warming trend depends upon the time period considered.

- Over (climatic) time scales of many thousand years, temperature is cooling; over the historical (meteorological) time scale of the past century temperature has warmed. Over the past 18 years, there has been no net warming despite an increase in atmospheric CO_2 of 8 percent – which represents 34 percent of all human-related CO_2 emissions released to the atmosphere since the industrial revolution.

- Given an atmospheric mixing time of ~1 year, the facts just related represent a test of the dangerous warming hypothesis, which test it fails.

- Based upon the HadCRUT dataset favored by IPCC, two phases of warming occurred during the twentieth century, between 1910–1940 and 1979–2000, at similar rates of a little more than 1.5°C/century. The early twentieth century warming preceded major industrial carbon dioxide emissions and must be natural; warming during the second (*prima facie,* similar) period might incorporate a small human-related carbon dioxide effect, but warming might also be inflated by urban heat island effects.

- Other temperature datasets fail to record the late twentieth century warming seen in the HadCRUT dataset.

- There was nothing unusual about either the magnitude or rate of the late twentieth century warming pulses represented on the HadCRUT record, both falling well within the envelope of known, previous natural variations.

- No empirical evidence exists to support the assertion that a planetary warming of 2°C would be net ecologically or economically damaging.

Source: "Chapter 4. Observations: Temperatures," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

CO_2 Does Not Lead Temperature

IPCC's third false postulate is that increases in atmospheric CO_2 precede, and then force, parallel increases in temperature. The remarkable (and at first blush, synchronous) parallelism that exists between rhythmic fluctuations in ancient atmospheric temperature and atmospheric CO_2 levels was first detected in polar ice core samples analyzed during the 1980s. From the early 1990s onward, however, higher-resolution sampling has repeatedly shown these historic temperature changes precede the parallel changes in CO_2 by several hundred years or more (Mudelsee, 2001; Monnin *et al.,* 2001; Caillon *et al.,* 2003; Siegenthaler *et al.,* 2005).

Ice core records show seven periods during which CO_2, methane (CH_4) and temperature increased and then decreased. In all seven cycles, the reported changes in CO_2 and CH_4 lagged the temperature changes and could not, therefore, have caused them (Soon, 2007). Early estimates (Revelle and Seuss, 1957) found temperature-caused out-gassing of ocean CO_2 increases atmospheric CO_2 concentrations by about 7% per EC of temperature rise; later laboratory testing placed it at about 5% (Petit *et al.,* 1999). The relationship calculated from lab data and found in the ice core data is quantitatively perfect, meaning there is precisely the amount of CO_2 in the atmosphere as a function of temperature over the 800,000-year ice core record that there should be – in accordance with the ratio measured experimentally (Robinson, Robinson, and Soon, 2007).

The only departure in the relationship between temperature and atmospheric CO_2 in the historical record is in the recent values, with CO_2 rising far beyond the temperature-dependent equilibrium value. This is because so much CO_2 is being put into the atmosphere from non-ocean sources. It will eventually revert to the equilibrium values, with the reversion occurring with a half life of about seven years, as has been determined by several investigators (Segalstad, 1998).

Solar Influence Is Not Minimal

IPCC's fourth false postulate is that solar forcings are too small to explain twentieth century warming. Having concluded solar forcing alone is inadequate to account for twentieth century warming, IPCC authors infer CO_2 must be responsible for the remainder. Nonetheless, observations indicate variations occur in total ocean–atmospheric meridional heat transport and that these variations are driven by changes in solar radiation rooted in the intrinsic variability of the Sun's magnetic activity (Soon and Legates, 2013).

Incoming solar radiation is most often expressed as Total Solar Insolation (TSI), a measure derived from multi-proxy measures of solar activity (Hoyt and Schatten, 1993; Willson, 2011; Scafetta and Willson, 2013). The newest estimates, from satellite-borne ACRIM-3 measurements, indicate TSI ranged between 1360 and 1363 Wm^{-2} between 1979 and 2011, the variability of ~3 Wm^{-2} occurring in parallel with the 11-year sunspot cycle. Larger changes in TSI are also known to occur in parallel with climatic change over longer time scales. For instance, Shapiro *et al.* (2011) estimated the TSI change between the Maunder Minimum and current conditions may have been as large as 6 Wm^{-2}.

Temperature records from circum-Arctic regions of the Northern Hemisphere show a close correlation with TSI over the past 150 years, with both measures conforming to the ~60–70-year multidecadal cycle. In contrast, the measured steady rise of CO_2 emissions over the same period shows little correlation with the strong multidecadal (and shorter) ups and downs of surface temperature around the world.

Finally, IPCC ignores x-ray, ultraviolet, and magnetic flux variation, the latter having particularly important implications for the modulation of galactic cosmic ray influx and low cloud formation (Kirkby, *et al.*, 2011). Figure 13 summarizes these and other findings about solar forcings from Chapter 3 of *Climate Change Reconsidered II: Physical Science.*

Figure 13
Key Facts about Solar Forcing

- Evidence is accruing that changes in Earth's surface temperature are largely driven by variations in solar activity. Examples of

solar-controlled climate change epochs include the Medieval Warm Period, Little Ice Age, and Early Twentieth Century (1910–1940) Warm Period.

- The Sun may have contributed as much as 66 percent of the observed twentieth century warming, and perhaps more.
- Strong empirical correlations have been reported from around the world between solar variability and climate indices including temperature, precipitation, droughts, floods, streamflow, and monsoons.
- IPCC models do not incorporate important solar factors such as fluctuations in magnetic intensity and overestimate the role of human-related CO_2 forcing.
- IPCC fails to consider the importance of the demonstrated empirical relationship between solar activity, the ingress of galactic cosmic rays, and the formation of low clouds.
- The respective importance of the Sun and CO_2 in forcing Earth's climate remains unresolved; current climate models fail to account for a plethora of known Sun-climate connections.
- The recently quiet Sun and extrapolation of solar cycle patterns into the future suggest a planetary cooling may occur over the next few decades.

Source: "Chapter 3. Solar Forcing of Climate," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

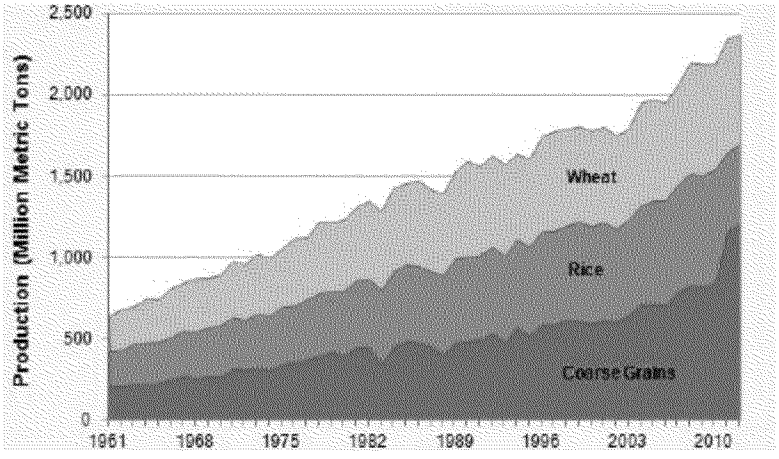
Warming Would Not Be Harmful

IPCC's fifth false postulate is that warming of 2°C above today's temperature would be harmful. This claim was coined at a conference organized by the British Meteorological Office in 2005 (DEFRA, 2005).

The particular value of 2°C is entirely arbitrary and was proposed by the World Wildlife Fund, an environmental advocacy group, as a political expediency rather than as an informed scientific opinion. The target was set in response to concern that politicians would not initiate policy actions to reduce CO_2 emissions unless they were given a specific (and low) quantitative temperature target to aim for.

Multiple lines of evidence suggest a 2°C rise in temperature would not be harmful to the biosphere. The period termed the Holocene Climatic Optimum (c. 8,000 ybp) was 2–3°C warmer than today (Alley, 2000), and the planet attained similar temperatures for several million years during the Miocene and Pliocene (Zachos *et al.*, 2001). Biodiversity is encouraged by warmer rather than colder temperatures (Idso and Idso, 2009), and higher temperatures and elevated CO_2 greatly stimulate the growth of most plants (Idso and Idso, 2011). Figure 14 shows the substantial rise in world grain production since 1961, a trend that would seem unlikely if rising CO_2 levels produced more harms than benefits to the biosphere.

Figure 14
World Grain Production, 1961–2012



Source: Christy, 2016, citing U.N. Food and Agriculture Organization.

Despite its widespread adoption by environmental NGOs, lobbyists, and governments, no empirical evidence exists to substantiate the claim that 2°C of warming presents a threat to planetary ecologies or human well-being. Nor can any convincing case be made that a warming will be more

economically costly than an equivalent cooling (either of which could occur for natural reasons), since any planetary change of 2°C magnitude in temperature would result in complex local and regional changes, some being of economic or environmental benefit and others being harmful.

* * *

We conclude neither the rate nor the magnitude of the reported late twentieth century surface warming (1979–2000) lay outside normal natural variability, nor was it in any way unusual compared to earlier episodes in Earth's climatic history. Furthermore, solar forcings of temperature change are likely more important than is currently recognized, and evidence is lacking that a 2°C increase in temperature (of whatever cause) would be globally harmful.

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6

Unreliable Circumstantial Evidence

Key points in this chapter include the following:

- Melting of Arctic sea ice and polar icecaps is not occurring at "unnatural" rates and does not constitute evidence of a human impact on climate.

- Best available data show sea-level rise is not accelerating. Local and regional sea levels continue to exhibit typical natural variability – in some places rising and in others falling.

- The link between warming and drought is weak, and by some measures drought has decreased over the twentieth century. Changes in the hydrosphere of this type are regionally highly variable and show a closer correlation with multidecadal climate rhythmicity than they do with global temperature.

- No convincing relationship has been established between warming over the past 100 years and increases in extreme weather events. Meteorological science suggests just the opposite: A warmer world will see more mild weather patterns.

- No evidence exists that current changes in Arctic permafrost are other than natural or are likely to cause a climate catastrophe by releasing

methane into the atmosphere.

Introduction

IPCC's third line of reasoning, summarized in Figure 2 in Chapter 3, consists of circumstantial evidence regarding natural phenomena known to vary with temperature. The examples IPCC chooses to report invariably point to a negative impact on plant and animal life and human well-being. When claims are made that such phenomena are the result of anthropogenic global warming, almost invariably at least one of the following three requirements of scientific confidence is lacking:

(1) *Correlation does not establish causation.* Correlation of, say, a declining number of polar bears and a rising temperature does not establish causation between one and the other, for it is not at all unusual for two things to co-vary in parallel with other forcing factors.

(2) *Control for natural variability.* We live on a dynamic planet in which all aspects of the physical and biological environment are in a constant state of flux for reasons that are entirely natural (including, of course, temperature change). It is wrong to assume no changes would occur in the absence of the human presence. Climate, for example, will be different in 100 years regardless of what humans do or don't do.

(3) *Local temperature records that confirm warming*. Many studies of the impact of climate change on wildlife simply assume temperatures have risen, extreme weather events are more frequent, etc., without establishing that the relevant local temperature records conform to the postulated simple long-term warming trend.

All five of IPCC's claims relying on circumstantial evidence listed in Figure 2 in Chapter 3 are refutable.

Melting Ice

IPCC claims unusual melting is occurring in mountain glaciers, Arctic sea

ice, and polar icecaps. But what melting is occurring in mountain glaciers, Arctic sea ice, and polar icecaps is not occurring at "unnatural" rates and does not constitute evidence of a human impact on the climate. Both the Greenland (Johannessen *et al.*, 2005; Zwally *et al.*, 2005) and Antarctic (Zwally and Giovinetto, 2011) icecaps are close to balance. The global area of sea ice today is similar to that first measured by satellite observation in 1979 (Humlum, 2013) and significantly exceeds the ice cover present in former, warmer times.

Valley glaciers wax and wane on multidecadal, centennial, and millennial time-scales, and no evidence exists that their present, varied behavior falls outside long-term norms or is related to human-related CO_2 emissions (Easterbrook, 2011). Figure 15 summarizes the findings of Chapter 5 of *Climate Change Reconsidered II: Physical Science* regarding glaciers, sea ice, and polar icecaps.

Figure 15
Key Facts about the Cryosphere

- Satellite and airborne geophysical datasets used to quantify the global ice budget are short and the methods involved in their infancy, but results to date suggest both the Greenland and Antarctic Ice Caps are close to balance.

- Deep ice cores from Antarctica and Greenland show climate change occurs as both major glacial-interglacial cycles and as shorter decadal and centennial events with high rates of warming and cooling, including abrupt temperature steps.

- Observed changes in temperature, snowfall, ice flow speed, glacial extent, and iceberg calving in both Greenland and Antarctica appear to lie within the limits of natural climate variation.

- Global sea-ice cover remains similar in area to that at the start of satellite observations in 1979, with ice shrinkage in the Arctic Ocean since then being offset by growth around Antarctica.

- During the past 25,000 years (late Pleistocene and Holocene) glaciers

around the world have fluctuated broadly in concert with changing climate, at times shrinking to positions and volumes smaller than today.

- This fact notwithstanding, mountain glaciers around the world show a wide variety of responses to local climate variation and do not respond to global temperature change in a simple, uniform way.

- Tropical mountain glaciers in both South America and Africa have retreated in the past 100 years because of reduced precipitation and increased solar radiation; some glaciers elsewhere also have retreated since the end of the Little Ice Age.

- The data on global glacial history and ice mass balance do not support the claims made by IPCC that CO_2 emissions are causing most glaciers today to retreat and melt.

Source: "Chapter 5. Observations: The Cryosphere," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Sea-Level Rise

IPCC claims global sea level is rising at an enhanced rate and swamping tropical coral atolls. But the best available data show sea-level rise is not accelerating (Houston and Dean, 2011). The global average sea level continues to increase at its long-term rate of 1–2 mm/year globally (Wöppelmann *et al.*, 2009). Local and regional sea levels continue to exhibit typical natural variability – in some places rising and in others falling. Unusual sea-level rise is therefore not drowning Pacific coral islands, nor are the islands being abandoned by "climate refugees."

The best available data show dynamic variations in Pacific sea level vary in accord with El Niño-La Niña cycles, superimposed on a natural long-term eustatic rise (Australian Bureau of Meteorology, 2011). Island coastal flooding results not from sea-level rise, but from spring tides or storm surges in combination with development pressures such as borrow pit digging or groundwater withdrawal. Persons emigrating from the islands are

doing so for social and economic reasons rather than in response to environmental threat.

Another claim concerning the effect of climate change on oceans is that increases in freshwater runoff into the oceans will disrupt the global thermohaline circulation system. But the range of natural fluctuation in the global ocean circulation system has yet to be fully delineated (Srokosz *et al.*, 2012). Research to date shows no evidence for changes that lie outside previous natural variability, nor for any malign influence from increases in human-related CO_2 emissions. See Figure 16 for more findings about climate change and oceans from Chapter 6 of *Climate Change Reconsidered II: Physical Science.*

Figure 16
Key Facts about Oceans

- Knowledge of local sea-level change is vital for coastal management; such change occurs at widely variable rates around the world, typically between about +5 and -5 mm/year.

- Global (eustatic) sea level, knowledge of which has only limited use for coastal management, rose at an average rate of between 1 and 2 mm/year over the past century.

- Satellite altimeter studies of sea-level change indicate rates of global rise since 1993 of more than 3 mm/year, but complexities of processing and the infancy of the method preclude viewing this result as secure.

- Rates of global sea-level change vary in decadal and multidecadal ways and show neither recent acceleration nor any simple relationship with increasing CO_2 emissions.

- Pacific coral atolls are not being drowned by extra sea-level rise; rather, atoll shorelines are affected by direct weather and infrequent high tide events, ENSO sea-level variations, and impacts of increasing human populations.

- Extra sea-level rise due to heat expansion (thermosteric rise) is also unlikely given that the Argo buoy network shows no significant ocean warming over the past nine years (Knox and Douglass, 2010).

- Though the range of natural variation has yet to be fully described, evidence is lacking for any recent changes in global ocean circulation that lie outside natural variation or were forced by human CO_2 emissions.

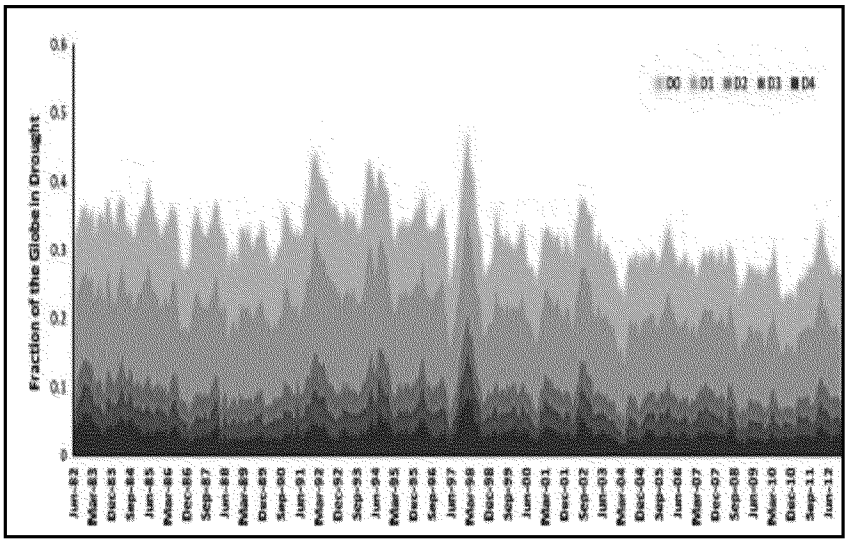
Source: "Chapter 6. Observations: The Hydrosphere," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Droughts, Floods, and Monsoons

IPCC claims droughts, floods, and monsoon variability and intensity are increasing. But the link between warming and drought is weak, and pan evaporation (a measurement that responds to the effects of several climate elements) decreased over the twentieth century (Roderick *et al.*, 2009). Huntington (2008) concluded on a globally averaged basis precipitation over land increased by about 2 percent over the period 1900–1998. However, changes in the hydrosphere of this type are regionally highly variable and show a closer correlation with multidecadal climate rhythmicity than they do with global temperature (Zanchettin *et al.*, 2008). Figure 17 shows the absence of a trend toward more drought conditions between 1982 and 2012.

Monsoon intensity correlates with variations in solar activity rather than increases in atmospheric CO_2, and both the South American and Asian monsoons became more active during the cold Little Ice Age and less active during the Medieval Warm Period (Vuille *et al.*, 2012), suggesting there would be less volatility if the world becomes warmer. See Figure 18 for more facts about monsoons, droughts, and floods presented in Chapter 6 of *Climate Change Reconsidered II: Physical Science.*

Figure 17
Global Areal Extent of Five Levels of Drought for 1982–2012



Notes: Dryness is indicated in percentile rankings with D0 < 30, D1 < 20, D2 < 10, D3 < 5 and D4 < 2 percentile of average moisture availability. *Source*: Christy, 2016, citing Hao *et al.*, 2014.

Figure 18
Key Facts about Monsoons, Droughts, and Floods

- Little evidence exists for an overall increase in global precipitation during the twentieth century independent of natural multidecadal climate rhythmicity.

- Monsoon precipitation did not become more variable or intense during late twentieth century warming; instead, precipitation responded mostly to variations in solar activity.

- South American and Asian monsoons were more active during the cold Little Ice Age and less active during the Medieval Warm Period. Neither global nor local changes in streamflow have been linked to CO_2 emissions.

- The relationship between drought and global warming is weak, since severe droughts occurred during both the Medieval Warm Period and the Little Ice Age.

Source: "Chapter 6. Observations: The Hydrosphere," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

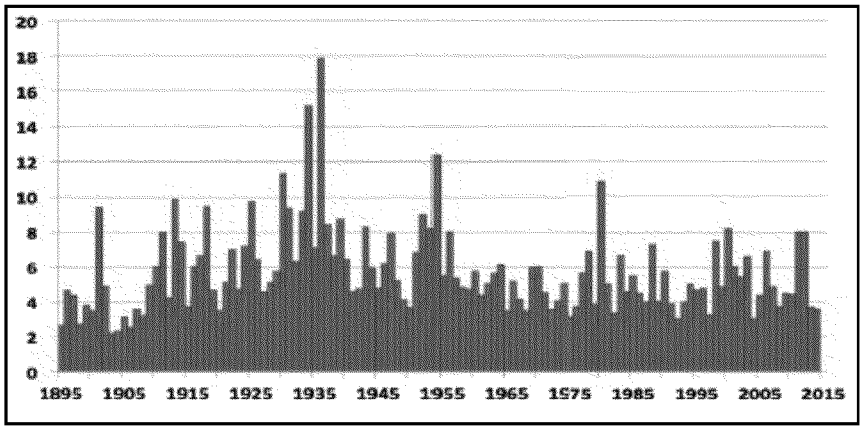
Extreme Weather

IPCC does not object when persons, such as former U.S. Vice President Al Gore, cite its reports in support of claims that global warming is leading to more, or more intense, wildfires, rainfall, storms, hurricanes, and other extreme weather events. IPCC's latest *Summary for Policymakers* is filled with vivid warnings of this kind, even though in 2012 an IPCC report acknowledged that a relationship between global warming and wildfires, rainfall, storms, hurricanes, and other extreme weather events has not been demonstrated (IPCC, 2012).

In no case has a convincing relationship been established between warming over the past 100 years and increases in any of these extreme weather events (Alexander *et al.,* 2006; Khandekar, 2013; Pielke Jr., 2014). Instead, the number and intensity of extreme events vary, and they wax and wane from one place to another and often in parallel with natural decadal or multidecadal climate oscillations. Basic meteorological science suggests a warmer world would experience fewer storms and weather extremes, as indeed has been the case in recent years.

Figure 19 shows there has been no trend toward more days of extreme heat in the U.S. since 1895. Figure 20 summarizes key facts on this subject presented in Chapter 7 of *Climate Change Reconsidered II: Physical Science.*

Figure 19
Average Number of Daily High Temperatures in the U.S. Exceeding 100°F per year 1895–2014



Notes: Average from 982 stations of the USHCN database (NOAA/NCEI, prepared by JRChristy). *Source*: Christy, 2016.

Figure 20
Key Facts about Extreme Weather Events

- Air temperature variability decreases as mean air temperature rises, on all time scales.

- Therefore the claim that global warming will lead to more extremes of climate and weather, including of temperature itself, seems theoretically unsound; the claim is also unsupported by empirical evidence.

- Although specific regions have experienced significant changes in the intensity or number of extreme events over the twentieth century, for the globe as a whole no relationship exists between such events and global warming over the past 100 years.

- Observations from across the planet demonstrate that droughts have not become more extreme or erratic in response to global warming. In most

cases, the worst droughts in recorded meteorological history were much milder than droughts that occurred periodically during much colder times.

- There is little to no evidence that precipitation will become more variable and intense in a warming world; indeed some observations show just the opposite.

- There has been no significant increase in either the frequency or intensity of stormy weather in the modern era.

- Despite the supposedly "unprecedented" warming of the twentieth century, there has been no increase in the intensity or frequency of tropical cyclones globally or in any of the specific ocean basins.

- The commonly held perception that twentieth century warming was accompanied by an increase in extreme weather events is a misconception fostered by excessive media attention and has no basis in facts.

Source: "Chapter 7. Observations: Extreme Weather," *Climate Change Reconsidered II: Physical Science* (Chicago, IL: The Heartland Institute, 2013).

Thawing Permafrost

IPCC claims unusual thawing of Boreal permafrost or sub-seabed gas hydrates is causing warming due to methane release. It is true that over historic time, atmospheric methane concentration has increased from about 700 ppb in the eighteenth century to the current level of near 1,800 ppb. However, the increase in methane concentration levelled off between 1998 and 2006 at around 1,750 ppb, which may reflect measures taken at that time to stem leakage from wells, pipelines, and distribution facilities (Quirk, 2010). More recently, since about 2007, methane concentrations have started to increase again, possibly due to a combination of leaks from new

shale gas drilling and Arctic permafrost decline.

The contribution of increased methane to radiative forcing since the eighteenth century is estimated to be only 0.7 Wm^{-2}, which is small. And in any case, no evidence exists that current changes in Arctic permafrost are other than natural. Most of Earth's gas hydrates occur at low saturations and in sediments at such great depths below the seafloor or onshore permafrost that they will barely be affected by warming over even one thousand years.

* * *

We conclude no unambiguous evidence exists for adverse changes to the global environment caused by human-related CO_2 emissions. In particular, the cryosphere is not melting at an enhanced rate; sea-level rise is not accelerating; no systematic changes have been documented in evaporation or rainfall or in the magnitude or intensity of extreme meteorological events; and an increased release of methane into the atmosphere from permafrost or sub-seabed gas hydrates is unlikely.

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7

Policy Implications

Key findings in this section include the following:

- Rather than rely exclusively on IPCC for scientific advice, policymakers should seek out advice from independent, nongovernment organizations and scientists who are free of financial and political conflicts of interest.

- Individual nations should take charge of setting their own climate policies based upon the hazards that apply to their particular geography, geology, weather, and culture.

- Rather than invest scarce world resources in a quixotic campaign based on politicized and unreliable science, world leaders would do well to turn their attention to the real problems their people and their planet face.

To date, most government signatories to the UN's Framework Convention on Climate Change have deferred to the monopoly advice of IPCC in setting their national climate change policies. Nearly 30 years since IPCC began its work in 1988, it is now evident this approach has been mistaken. One result has been the expenditure of hundreds of billions of dollars implementing energy policies that now appear to have been unnecessary, or at least ill-timed and ineffective.

Rather than rely exclusively on IPCC for scientific advice,

policymakers should seek out advice from independent, nongovernment organizations and scientists who are free of financial and political conflicts of interest. The Chinese Academy of Sciences took an important step in this direction by translating and publishing an abridged edition of the first two volumes in NIPCC's *Climate Change Reconsidered* series (CAS, 2013).

Climate change, whether man-made or not, is a global phenomenon with very different effects on different parts of the world (Tol, 2011). Individual nations should take charge of setting their own climate policies based upon the hazards that apply to their particular geography, geology, weather, and culture – as India has started to do by setting up an advisory Indian Network on Comprehensive Climate Change Assessment (INCCCA) (Nelson, 2010).

The theoretical hazard of dangerous human-caused global warming is but one small part of a much wider climate hazard – extreme natural weather and climatic events that Nature intermittently presents us with, and always will (Carter, 2010). The 2005 Hurricane Katrina disaster in the United States, the 2007 floods in the United Kingdom, and the tragic bushfires in Australia in 2009 demonstrate the governments of even advanced, wealthy countries are often inadequately prepared for climate-related disasters of natural origin.

Climate change as a natural hazard is as much a geological as a meteorological issue. Geological hazards are mostly dealt with by providing civil defense authorities and the public with accurate, evidence-based information regarding events such as earthquakes, volcanic eruptions, tsunamis, storms, and floods (which represent climatic as well as weather events), and then planning to mitigate and adapt to the effects when such events occur.

The idea that there can be a one-size-fits-all global solution to address future climate change, such as recommended by the United Nations in the past, fails to deal with real climate and climate-related hazards. It also turned climate change into a political issue long before the science was sufficiently advanced to inform policymakers. A better path forward was suggested by Ronald Brunner and Amanda Lynch: "We need to use adaptive governance to produce response programs that cope with hazardous climate events as they happen, and that encourage diversity and innovation in the search for solutions. In such a fashion, the highly contentious 'global warming' problem can be recast into an issue in which every culture and community around the world has an inherent interest"

(Brunner and Lynch, 2010).

There is some evidence world leaders are reconsidering past decisions. China, India, Russia, and other countries are making it clear they will not blindly follow the path of reducing the use of fossil fuels in the vain hope of having an almost indiscernible effect on climate some time in the twenty-second or twenty-third centuries. A writer for *Nature*, commenting before the December 2015 Conference of the Parties (COP-21) of the UN Framework Convention on Climate Change, reported in May 2015,

> The negotiations' goal has become what is politically possible, not what is environmentally desirable. Gone is a focus on establishing a global, "top down" target for stabilizing emissions of a carbon budget that is legally binding. The Paris meeting will focus on voluntary 'bottom up' commitments by individual states to reduce emissions. The global climate target is being watered down in the hope of getting any agreement in Paris. The 2°C warming limit need only be kept "within reach." The possibility of using "ratcheting mechanisms" keeps hopes alive of more ambitious policies, but such systems are unlikely to achieve the desired outcomes. Strict measuring, reporting and verification mechanisms are yet to be agreed (Geden, 2015, p. 27).

Michael Levi, a senior fellow for the Council on Foreign Relations, wrote in June 2015 about the changing expectations of world leaders. His points in brief: (1) Developed countries are no longer pushing for binding emissions reduction commitments, whether for themselves or developing countries; (2) the emphasis has shifted from reducing emissions in order to mitigate future climate change to helping nations adapt to whatever the future climate might look like; (3) the goals declared at the UN's next meeting (in Paris in December 2015) will be too far in the future to matter to anyone; and (4) the widely discussed pledge of giving developing countries $100 billion a year is going to consist largely of relabeling foreign aid and private funding already going to those countries (Levi, 2015).

If Geden's and Levi's observations are true, this is all very good news indeed. The world appears to be backing away from a disaster of its own making, caused by lobbyists and campaigners and interest groups steering public policy in the wrong direction.

Policymakers should recognize that the human impact on the global

climate remains a scientific puzzle, perhaps the most difficult one science has ever faced. The scientific debate is far from over. Despite appeals to a "scientific consensus" and claims from even the president of the United States that "climate change is real, man-made, and dangerous," the truth is we simply don't know if climate change is a problem that needs to be addressed. The best available evidence points in a different direction: The human impact on climate is small relative to natural variability, perhaps too small to be measured. Rather than invest scarce world resources in a quixotic campaign based on politicized and unreliable science, world leaders would do well to turn their attention to the real problems their people and their planet face.

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Conclusion

The most important fact about climate science, often overlooked, is that scientists disagree about the environmental impacts of the combustion of fossil fuels on the global climate. There is no survey or study showing "consensus" on the most important scientific issues, despite frequent claims by advocates to the contrary.

Scientists disagree about the causes and consequences of climate for several reasons. Climate is an interdisciplinary subject requiring insights from many fields. Very few scholars have mastery of more than one or two of these disciplines. Fundamental uncertainties arise from insufficient observational evidence and disagreements over how to interpret data and how to set the parameters of models. The Intergovernmental Panel on Climate Change (IPCC), created to find and disseminate research finding a human impact on global climate, is not a credible source. It is agenda-driven, a political rather than scientific body, and some allege it is corrupt. Finally, climate scientists, like all humans, can be biased. Origins of bias include careerism, grant-seeking, political views, and confirmation bias.

Probably the only "consensus" among climate scientists is that human activities can have an effect on local climate and that the sum of such local effects could hypothetically rise to the level of an observable global signal. The key questions to be answered, however, are whether the human global signal is large enough to be measured and if it is, does it represent, or is it likely to become, a dangerous change outside the range of natural variability? On these questions, an energetic scientific debate is taking place on the pages of peer-reviewed science journals.

In contradiction of the scientific method, IPCC assumes its implicit hypothesis – that dangerous global warming is resulting, or will result, from human-related greenhouse gas emissions – is correct and that its only duty is to collect evidence and make plausible arguments in the hypothesis's favor. It simply ignores the alternative and null hypothesis, amply supported by empirical research, that currently observed changes in global climate

indices and the physical environment are the result of natural variability.

The results of the global climate models (GCMs) relied on by IPCC are only as reliable as the data and theories "fed" into them. Most climate scientists agree those data are seriously deficient and IPCC's estimate for climate sensitivity to CO_2 is too high. We estimate a doubling of CO_2 from pre-industrial levels (from 280 to 560 ppm) would likely produce a temperature forcing of 3.7 Wm^{-2} in the lower atmosphere, for about ~1°C of *prima facie* warming. The recently quiet Sun and extrapolation of solar cycle patterns into the future suggest a planetary cooling may occur over the next few decades.

In a similar fashion, all five of IPCC's postulates, or assumptions, are readily refuted by real-world observations, and all five of IPCC's claims relying on circumstantial evidence are refutable. For example, in contrast to IPCC's alarmism, we find neither the rate nor the magnitude of the reported late twentieth century surface warming (1979–2000) lay outside normal natural variability, nor was it in any way unusual compared to earlier episodes in Earth's climatic history. In any case, such evidence cannot be invoked to "prove" a hypothesis, but only to disprove one. IPCC has failed to refute the null hypothesis that currently observed changes in global climate indices and the physical environment are the result of natural variability.

Rather than rely exclusively on IPCC for scientific advice, policymakers should seek out advice from independent, nongovernment organizations and scientists who are free of financial and political conflicts of interest. NIPCC's conclusion, drawn from its extensive review of the scientific evidence, is that any human global climate impact is within the background variability of the natural climate system and is not dangerous.

In the face of such facts, the most prudent climate policy is to prepare for and adapt to extreme climate events and changes regardless of their origin. Adaptive planning for future hazardous climate events and change should be tailored to provide responses to the known rates, magnitudes, and risks of natural change. Once in place, these same plans will provide an adequate response to any human-caused change that may or may not emerge.

Policymakers should resist pressure from lobby groups to silence scientists who question the authority of IPCC to claim to speak for "climate science." The distinguished British biologist Conrad Waddington wrote in 1941,

> It is … important that scientists must be ready for their pet theories to turn out to be wrong. Science as a whole certainly cannot allow its judgment about facts to be distorted by ideas of what ought to be true, or what one may hope to be true (Waddington, 1941).

This prescient statement merits careful examination by those who continue to assert the fashionable belief, in the face of strong empirical evidence to the contrary, that human CO_2 emissions are going to cause dangerous global warming.

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About the Authors

Dr. Craig D. Idso is founder and chairman of the Center for the Study of Carbon Dioxide and Global Change. Since 1998, he has been the editor and chief contributor to the online magazine *CO2 Science*. He is the author of several books, including *The Many Benefits of Atmospheric CO2 Enrichment* (2011) and *CO2, Global Warming and Coral Reefs* (2009). He earned a Ph.D. in geography from Arizona State University, where he lectured in meteorology and was a faculty researcher in the Office of Climatology.

Dr. Robert M. Carter was a stratigrapher and marine geologist with degrees from the University of Otago (New Zealand) and University of Cambridge (England). He was the author of *Climate: The Counter Consensus* (2010) and *Taxing Air: Facts and Fallacies about Climate Change* (2013). Carter's professional service included terms as head of the Geology Department, James Cook University, chairman of the Earth Sciences Panel of the Australian Research Council, chairman of the national Marine Science and Technologies Committee, and director of the Australian Office of the Ocean Drilling Program. He passed away in January 2016.

Dr. S. Fred Singer is one of the most distinguished atmospheric physicists in the United States. He established and served as the first director of the U.S. Weather Satellite Service, now part of the National Oceanic and Atmospheric Administration (NOAA), and earned a U.S. Department of Commerce Gold Medal Award for his technical leadership. He is coauthor, with Dennis T. Avery, of *Unstoppable Global Warming Every 1,500 Years* (2007, second ed. 2008) and many other books. Dr. Singer served as professor of environmental sciences at the University of Virginia, Charlottesville from 1971 to 1994 and is founder and chairman of the nonprofit Science and Environmental Policy Project. He earned a Ph.D. in physics from Princeton University.

About NIPCC

The Nongovernmental International Panel on Climate Change (NIPCC) is what its name suggests: an international panel of nongovernment scientists and scholars who have come together to understand the causes and consequences of climate change. Because we are not predisposed to believe climate change is caused by human greenhouse gas emissions, we are able to look at evidence the Intergovernmental Panel on Climate Change (IPCC) ignores. Because we do not work for any governments, we are not biased toward the assumption that greater government activity is necessary.

NIPCC traces its roots to a meeting in Milan in 2003 organized by the Science and Environmental Policy Project (SEPP), a nonprofit research and education organization based in Arlington, Virginia. SEPP, in turn, was founded in 1990 by Dr. S. Fred Singer, an atmospheric physicist, and incorporated in 1992 following Dr. Singer's retirement from the University of Virginia. NIPCC is currently a joint project of SEPP, The Heartland Institute, and the Center for the Study of Carbon Dioxide and Global Change.

NIPCC has produced eight reports to date:

Nature, Not Human Activity, Rules the Climate
Climate Change Reconsidered: The 2009 Report of the Nongovernmental International Panel on Climate Change (NIPCC)
Climate Change Reconsidered: 2011 Interim Report
Climate Change Reconsidered II: Physical Science
Climate Change Reconsidered II: Biological Impacts
Scientific Critique of IPCC's 2013 'Summary for Policymakers'
Commentary and Analysis on the Whitehead & Associates 2014 NSW Sea-Level Report
Why Scientists Disagree About Global Warming

These publications and more information about NIPCC are available at www.climatechangereconsidered.org.

About The Heartland Institute

The Heartland Institute is a national nonprofit research and education organization based in Arlington Heights, Illinois. We are a publicly supported charitable organization and tax exempt under Section 501(c)(3) of the Internal Revenue Code.

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Heartland has a full-time staff of 39. Joseph Bast is cofounder, president, and CEO. Dr. Herbert Walberg is chairman of the 10-member Board of Directors. Approximately 250 academics participate in the peer review of its publications and more than 200 elected officials pay annual dues to serve on its Legislative Forum.

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"Probably the most widely repeated claim in the debate over global warming is that '97% of scientists agree' that climate change is man-made and dangerous. This claim is not only false, but its presence in the debate is an insult to science."

With these words, the distinguished authors of *Why Scientists Disagree About Global Warming: The NIPCC Report on Scientific Consensus* begin a detailed analysis of one of the most controversial topics of the day. Do most scientists agree on the causes and consequences of climate change? Is it really only a small fringe of the scientific community that believes global warming is not a crisis?

The authors make a compelling case against claims of a scientific consensus. The purported proof of such a consensus consists of sloppy research by nonscientists, college students, and a highly partisan Australian blogger. Surveys of climate scientists, even those heavily biased in favor of climate alarmism, find extensive disagreement on the underlying science and doubts about its reliability.

Why do scientists disagree? The authors point to four reasons: a conflict among scientists in different and often competing disciplines; fundamental scientific uncertainties concerning how the global climate responds to the human presence; failure of the United Nations' Intergovernmental Panel on Climate Change (IPCC) to provide objective guidance to the complex science; and bias among researchers.

What does the science actually say about global warming? The authors offer a succinct summary of the real science of climate change based on their previously published comprehensive review of climate science in a volume titled *Climate Change Reconsidered II: Physical Science.* They recommend policymakers resist pressure from lobby groups to silence scientists who question the authority of IPCC to claim to speak for "climate science." They conclude with a quotation from the distinguished British biologist Conrad Waddington:

> *It is … important that scientists must be ready for their pet theories to turn out to be wrong. Science as a whole certainly cannot allow its judgment about facts to be distorted by ideas of what ought to be true, or what one may hope to be true.*

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From: Joseph Bast
Sent: Fri 6/16/2017 10:58:25 PM
Subject: This is the best essay on climate change published so far in 2017: To Put America First Is to Put Our Planet's Climate First

This is the most complete, accurate, and persuasive answer to climate change alarmism to be published so far in 2017. Congratulations to the authors, Willie Soon and Istvan Marko, and those who helped.

Have a great weekend!

Joe

http://www.breitbart.com/big-government/2017/06/16/america-first-climate/

MARKO, SOON, ET AL: To Put America First Is to Put Our Planet's Climate First

by Willie Soon and István Markó16 Jun 201723

The article below was contributed by Istvan Marko, J. Scott Armstrong, William M. Briggs, Kesten Green, Hermann Harde, David R. Legates, Christopher Monckton of Brenchley, and Willie Soon.

On June 2, 2017, in a *Letter regarding US withdrawal from Paris climate agreement* addressed to the MIT community, Professor Rafael Reif, president of MIT, criticized President Trump's decision to exit the Paris Climate Accords. In this refutation, we propose to clarify the scientific understanding of the Earth's climate and to dispel the expensively fostered popular delusion that man-made global warming will be dangerous and that, therefore, the Paris Agreement would be beneficial.

Professor Reif wrote, "Yesterday, the White House took the position that the Paris climate agreement – a landmark effort to combat global warming by reducing greenhouse gas emissions – was a bad deal for America."

There is no science unambiguously establishing that CO_2 is the chief cause of the warming observed since the end of the Little Ice Age. The opposite has been repeatedly demonstrated. Ice cores have revealed that changes in CO_2 concentration follow, rather than precede, changes in temperature. During the last deglaciation, the latest high-resolution records show atmospheric CO_2 lagging temperature by 50 to 500 years. Our enterprises and industries return to the air some of the CO_2 that was formerly present there, and some warming may be expected. That warming will be small and beneficial.

Professor Humlum and colleagues have demonstrated that changes in CO_2 concentration follow changes in temperature after about 8-11 months. The time-lag between changes in temperature and consequent changes in CO_2 concentration are caused by outgassing of CO_2 from the oceans when they warm and uptake by the oceans as they cool. In addition, the growth rate of the atmospheric CO2 has been slowing recently, linked to an enhanced terrestrial biosphere uptake. Our contribution to atmospheric CO_2 adds to the effect of these fluctuations, but it does not add much. One of us (Harde 2017) has reached similar conclusions.

Professor Reif's assertion that global temperatures can be regulated by an international agreement to atone for our sins of emission is, therefore, at odds with scientific knowledge regarding cause and effect. King Canute's warning to his English courtiers in 1032 A.D. that even the divinely anointed monarch could not command sea level should be heeded by bombastic intergovernmental agencies a millennium later. The professor's assertion is, moreover, logically invalid, since the Paris agreement permits China and India to industrialize without limit on their emissions.

Besides, the Paris agreement is not binding. Under its terms, no nation is compelled to sin no more, and many – even including Germany and Denmark, the leaders in renewable energies – now appear unlikely to meet the agreement's targets. The Paris agreement is, in practice, a political tool for suppressing growth and redistributing wealth. Dr. Rajendra Pachauri, former chairman of the IPCC, said, in resigning in 2015, that the environment was his "religion," and Ms. Christiana Figueres, executive secretary of the U.N. Framework Convention on Climate Change until last year, openly stated in 2015 that the goal was to overturn capitalism — in her words, "to change the economic development model that has been reigning for at least 150 years, since the industrial revolution."

Professor Reif writes, "The scientific consensus is overwhelming."

The late author Michael Crichton, in his Caltech Michelin Lecture 2003, said, "In science consensus is irrelevant. … There is no such thing as consensus science. If it's consensus, it isn't science. If it's science, it isn't consensus. Period." Doubt is the seedcorn of science. Consensus is a political notion which, when pleaded, indicates that the pleader is totalitarian. As Abu Ali ibn al-Haytham said in the eleventh century:

The seeker after truth [his splendid definition of the scientist] does not place his faith in any mere consensus, however venerable or widespread. Instead, he subjects what he has learned of it to his hard-won scientific knowledge, and to investigation, inspection, inquiry, checking, checking and

checking again. The road to the truth is long and hard, but that is the road we must follow.

The alleged "consensus" is nothing more than an agreement that the weather has warmed in the past 300 years. Yet the quantum and attribution of warming are hotly debated among climatologists. Even today, measuring global temperature is subject to errors, biases, missing data, and subjective adjustments.

The estimation of global average temperature from satellite data is relatively new and employs a completely different temperature measurement method from the older methods. Nevertheless, the satellite data and balloon data have provided essentially identical estimates. Neither displays a worrying trend. Both are increasingly at odds not only with the surface temperature records, all of which have been adjusted *ex post facto* so as to show more warming than the original raw data showed, but also with the alarming projections of the serially unreliable computer models of climate on which the U.N.'s Intergovernmental Panel on Climate Change profitably but misguidedly relies.

Scientists agree that climate changes. It has done so since the first wisps of the Earth's atmosphere formed, but they disagree on the causes of climate changes, including the mild warming since the Little Ice Age. Legates et al. (2015), for example, found that only 0.3 percent of 11,944 peer-reviewed articles on climate and related topics, published during the 21 years of 1991 to 2011, had explicitly stated that recent warming was mostly man-made.

Professor Reif wrote, "As human activities emit more greenhouse gases into the atmosphere, the global average surface temperature will continue to rise, driving rising sea levels and extreme weather."

In the last 20 years, we have released more than a third of all the CO_2 produced since the beginning of the industrial period. Yet global mean surface temperature has remained essentially constant for 20 years, a fact that has been acknowledged by the IPCC, whose models failed to predict it. NOAA's *State of the Climate* report for 2008 said that periods of 15 years or more without warming would indicate a discrepancy between prediction and observation – i.e., that the models were wrong. Just before the recent naturally occurring el Niño event raised global temperature, there had been 18 years and 9 months without any global warming at all.

The climate models relied upon by the IPCC and the politicians they advise have predicted warming at about twice the rate observed during the past 27 years, during which the Earth has warmed at 0.4 °C, about half of the 0.75 °C 27-year warming rate implicit in IPCC's explicit 1990 prediction that there would be 1.0 °C warming from 1990-2025.

Table 1 Observed global warming, 1990-2016, compared with IPCC predictions made in 1990

Source	Observations (°C) over 27 full years					IPCC predictions		
Dataset	NCEI	HadC	**Mean**	RSS	UAH	Min.	Mid	Max.
Linear trend, 1990-2016	0.49	0.47	**0.41**	0.36	0.32	0.53	**0.75**	1.13
Centennial equivalent trend	1.81	1.73	**1.48**	1.35	1.18	1.94	**2.78**	4.17

Green and Armstrong (2014) conducted longer-term validation tests of the models and found that their forecasts were much less accurate than assuming there had been no global warming at all. The relative inaccuracy of the IPCC projections increased with longer (multi-decadal) horizons. Even forecasts of natural global cooling at a rate of 1 ºC per century were much more accurate over long periods than the IPCC's projections of dangerous man-made global warming.

Ten years ago, Al Gore asserted that global temperatures had reached a dangerous "tipping point," with extreme warming imminent and unavailable. Professor Scott Armstrong challenged Mr. Gore to a ten-year bet based on the Green-Armstrong-Soon (2009)) scientific no-change forecast of global mean temperatures.

Mr. Gore declined the bet, but theclimatebet.com website keeps track of how the bet would have turned out. With the ten-year life of the bet due to end at the end of this year, the cumulative monthly error in the IPCC's business-as-usual 0.3 ºC per decade prediction is 22 percent larger than the error from the benchmark prediction of no warming at all.

Why does Professor Reif continue to champion the notion of dangerous manmade global warming when it is so greatly at odds with observation?

Professor Reif wrote, As human activities emit more greenhouse gases into the atmosphere, the global average surface temperature will continue to rise, driving rising sea levels and extreme weather."

The average sea level rise since 1870 has been 1.3-1.5 mm (about a twentieth of an inch) per year. Professor Nils-Axel Mörner, a renowned sea-level researcher who has published more than 500 peer-reviewed articles on this topic, has been unable to find observational evidence that supports the models' predictions of dramatically accelerating sea level rise.

Professor Reif wrote, "As human activities emit more greenhouse gases into the atmosphere, the global average surface temperature will continue to rise, driving rising sea levels and extreme weather."

Observations during the last few decades indicate that extreme events, including tornadoes and hurricanes, have been decreasing, rather than increasing, both in number and in intensity. Moreover, the total accumulated cyclonic energy has also been declining. As MIT Emeritus Professor Richard Lindzen has explained, the decline in storminess is a consequence of reduced

temperature differentials between the tropics and exo-tropics that arise when global average temperatures are warmer.

Professor Reif wrote, "As the Pentagon describes it, climate change is a "threat multiplier" because its direct effects intensify other challenges, including mass migrations and zero-sum conflicts over existential resources like water and food."

Milder temperatures and increased CO_2 levels green the planet, instead of browning it. Deserts are retreating, and vegetation cover has increased throughout recent decades. The production of maize, wheat, rice, and soybeans is at a record high. More CO_2 in the air helps plants by CO_2 fertilization. Our planet has seen more than 20 percent greening during the past three decades, half of which is due to the action of CO2.

Forecasts of droughts are also not borne out by experience. For example, since the now-former Australian Chief Climate Commissioner Professor Tim Flannery warned that dams would no longer fill owing to lack of rain, Australia has been subjected to a series of dramatic floods and overflowing dams.

Governments' naïve belief in Professor Flannery's warnings appear to have led to policy actions and omissions that exacerbated flooding and failed to take full advantage of the rainfall when it came. The most comprehensive recent study of the worldwide extent of droughts (Hao et al., 2014) found that for 30 years the percentage of the Earth's land mass under drought or severe drought has been declining.

Though the U.N. Environment Program had published in 2005 a document predicting 50 million climate refugees by 2010, to date there have been no *bona fide* climate refugees. Nor has mass migration owing to global warming been observed. The one person recognized as a climate refugee had his demand rejected [CITE] by the Supreme Court of New Zealand. He has returned to his island home, where he remains safe from inundation.

Professor Reif wrote, "The carbon dioxide our cars and power plants emit today will linger in the atmosphere for a thousand years."

The average residence time of a CO_2 molecule in the Earth's atmosphere is about four to seven years. Taking into account multiple exchanges leads to an estimate of a mean lifespan of 40 years (Harde 2017). Rather than a problem, carbon dioxide in the atmosphere is the prime nutrient for plants. Indeed, plants grow more strongly when CO_2 concentrations are much higher than they currently are, which is why commercial greenhouses add CO_2 to the air. The current CO_2 concentration is higher than for 800,000 years, but it is far lower than at almost any time in the previous history of our planet.

Nor is CO_2 a pollutant. It is a colorless, odorless gas that is not toxic to humans and other animals even at concentrations much higher than we are currently experiencing. It is also one of the most important fuels for phytoplankton, which use carbon dioxide for energy and that release oxygen. Up to 75 percent of the oxygen present in the air originates in the phytoplankton photosynthetic water-splitting process.

Moreover, during the Paleozoic and Mesozoic eras, there were long periods during which the levels of CO_2 were much higher than today, but the temperatures were far colder. We are not aware of any explanation that squares the man-made global warming theory with that fact.

Professor Reif wrote, "In 2016 alone, solar industry employment grew by 25 percent, while wind jobs grew 32 percent."

Growing jobs by subsidy is easy, provided that one cares nothing for the far greater number of jobs destroyed by the additional taxation, energy price hikes, or public borrowing necessary to pay for the subsidy. Several studies have shown that the creation of one "green" job results in the loss of two jobs elsewhere in the economy. Despite all those subsidies, solar power accounts for 0.9 percent and wind generation for 5.6 percent of total U.S. electricity production. Electricity itself is a small fraction of total energy consumption, including transportation, industrial processes, and heating.

The so-called alternative energy companies survive through heavy subsidies and supportive regulations. For example, SunEdison received $1.5 billion in subsidies and loan guarantees, and yet it was compelled to file for bankruptcy. Solyndra is another example. So-called "renewable" energy is cripplingly expensive to the customer but is often unprofitable even after massive subsidies from taxpayers.

Europe is suffering from political rejection of fossil fuels: energy prices have soared, millions of poor people are unable to pay their energy bills, and energy-intensive businesses are relocating to where energy is cheaper. Theirs is not an example the U.S. should wish to follow.

By withdrawing from the Paris agreement, President Trump did a wonderful thing for America and the world. He showed that advocacy masquerading as science should not be the basis for political decisions. He showed that to put America first is to put the planet first. And, by rejecting the non-problem of man-made global warming, he began the long and necessary process of waking up the likes of Professor Reif to the fact that the diversion of time, effort, and trillions of dollars away from real environmental problems and towards the bogus but (to MIT) profitable non-problem of supposedly catastrophic global warming is as bad for the planet as it is for true science.

From: Joseph Bast
Sent: Thur 6/15/2017 4:34:48 PM
Subject: Detroit News: Trump right to withdraw from Paris Climate Treaty

http://www.detroitnews.com/story/opinion/2017/06/15/trump-paris-agreement-burnett/102869224/

Detroit News
6/15/17

Trump's Paris climate choice puts America first

By: H. Sterling Burnett, the Heartland Institute

In a much-anticipated decision, President Donald Trump kept his campaign promise by announcing recently that the United States will withdraw from the Paris climate agreement negotiated by 195 countries in December 2015. Under the agreement, the United States is required to cut its carbon-dioxide emissions 28 percent below 2005 levels by 2025, and to provide billions of dollars in funding to the Green Climate Fund, which is administered by the United Nations.

The emission cuts required by the Paris agreement would have forced the closure of many of the least-expensive power plants nationwide over the next decade, raising energy prices at a time of tepid economic growth and sky-high deficits. The low energy prices created by America's low-cost, abundant coal, oil and natural gas and the growth of those and related industries was responsible for almost all the economic growth that occurred during the Obama years.

A study by NERA Economic Consulting cited by Trump in his announcement of the Paris pull-out estimated if the United States were to meet its carbon-dioxide emissions reduction obligations under the Paris climate agreement, it would cost the economy nearly $3 trillion, with the United States losing 6.5 million industrial jobs by 2040, including 3.1 million in the manufacturing sector.

Trump's withdrawal is good news for the auto industry and the communities dependent on it, as they would have likely been hit the hardest by the Paris agreement's mandates. Withdrawing from the Paris accord allows Trump to revise the motor-fuel efficiency standards imposed by the Obama administration that ratcheted up fuel-economy standards to levels that soon would make most U.S. automobiles — and most cars from around the world — either unaffordable or would force Americans to drive only the smallest of subcompact cars.

The powerful sedans, sports cars and SUVs produced in Detroit would be unable to meet the 54-mile-per-gallon standard imposed by Obama and would eventually become extinct, leaving consumers with less freedom to choose the vehicle that best fits their needs. Obama's costly federal fuel-economy standards shoehorn everyone into underpowered, small, less-safe vehicles.

When he pulled the United States out of the Paris agreement, Trump rightly noted the agreement was unfair to Americans, allowing major economic and/or geopolitical competitors such as China, India and Russia — all of which are among the world's largest greenhouse-gas emitters — to continue growing their emissions while the United States makes cuts, making their economies comparatively more attractive to investment.

The United States — which has through technological innovation reduced its greenhouse-gas emissions 12 percent since 2006, more than any other country — would under the Paris agreement have to continue cutting emissions. You heard that right: Under the Paris agreement, many of the countries that emit the largest amounts of greenhouse gasses get to keep growing their fossil-fuel use and spewing emissions while the United States, the country that has done the most to reduce emissions, is forced to restrict its energy use more and pay billions to the Green Climate Fund.

And what gain would we get for all this pain? Virtually nothing, as the Paris climate agreement would do little to prevent future warming. A 2016 Massachusetts Institute of Technology study shows if all member nations meet their Paris obligations, it would only reduce global temperature rise by less than 0.2 degrees Celsius by 2100. The U.N. Environment Programme (UNEP) also found the treaty would have a negligible impact on climate change. A 2016 UNEP report showed even if all the parties to the agreement meet their promised emissions targets, the Paris agreement will result in less than half the greenhouse-gas cuts required to halt global temperature at an upper limit of 2 degrees C.

Leadership requires doing what's right even when the majority disagrees. Trump's decision to withdraw from the Paris accord displayed true leadership. Trump chose not to follow climate lemmings off the cliff to long-term economic decline, standing alone among the world's leaders as the one person brave enough to call the accord what it truly is: harmful and ineffective.

The Paris climate agreement has never been about protecting the environment; it is an economic treaty aimed at transferring wealth from the poor and working class in developed countries to well-off international bureaucrats and corrupt leaders in developing countries.

Trump is a breath of fresh air in the White House, a president whose primary mission is to promote Americans' interests and aspirations for a better life. Au revoir, Paris, and good riddance to a bad treaty.

H. Sterling Burnett, Ph.D. is a research fellow on energy and the environment at The Heartland Institute.

From: Joseph Bast
Sent: Fri 6/2/2017 4:01:51 PM
Subject: How will Trump remove the U.S. from the Paris Accord?

Friends,

I was very pleased to receive the invitation to attend President Trump's Rose Garden presentation announcing the U.S. withdrawal from the Paris Accord. I'm not a big fan of traveling to Washington DC, or showing up at political events, or of politicians generally or specifically, but it was a historic moment and a touching gesture to be invited to attend. Thank you to all who made it possible and made me feel welcome there.

Christopher Monckton wrote to a group of us:

One question not answered in Trump's speech was whether the U.S. had given, or would give, formal notice to the French Government as depositary state of the Paris treaty, or (preferably) to the U.N. as depositary state of the Framework Convention. Giving one year's notice under the Framework Convention gets us out of Paris too. Giving notice under Paris takes three years and still leaves us in the Convention. But I'm afraid it's far from clear that Trump has done or will do either. - Christopher

The Viscount Monckton of Brenchley
Hobbit Court, Dyrham, Chippenham, SN14 8HE
Tel. 0117 937 4155: cell Ex. 6 - Personal Privacy
Ex. 6 - Personal Privacy

Perhaps someone on the bcc line of this message can answer the implied question.

President Trump and Administrator Pruitt were emphatic that the U.S. is leaving the accord and will stop implementation immediately. Since there are no enforcement mechanisms in the agreement, stopping implementation should not result in any sanctions, at least not sanctions arising from the accord itself.

I wonder… what if President were now to submit a letter withdrawing from the UNFCCC?

Since he left unclear exactly how the U.S. would withdraw, he could simply say that he and his advisor decided withdrawal from UNFCCC was the fastest and best way to withdraw from the Paris Accord, a position many of us have advocated for. It would be consistent with his public remarks. For 99% of the public, the difference between withdrawing from the UNFCCC and Paris Accord is high weeds and just more blah, blah, blah. It would produce huge legal and tactical advantages down the road, helping make possible implementation of the America First Energy Plan.

No doubt the left, including legacy media and the political class in the U.S. and abroad, would go crazy over such an announcement… for a week or two. They would spend a lot of time trying to explain the difference between UNFCCC and the Paris Accord, why it matters, etc. etc. In politics, if you are explaining, you are losing. And they've already "shot their wad," as we like to say here in the Heartland, by going nuclear over yesterday's announcement. So what else can they throw at this president?

Is it possible? There is a fine line, I suppose, between brilliant and insane.

Joe

Joseph Bast

President

The Heartland Institute

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Support Heartland today!

From: Joseph Bast
Sent: Wed 5/31/2017 10:36:10 PM
Subject: Fred Palmer in Breitbart: Mr. President, keep the campaign pledge to withdraw from Paris.

From: Billy Aouste
Sent: Wednesday, May 31, 2017 3:24 PM
To: Heartland Institute Users
Cc: Fred Palmer
Subject: Fred Palmer in Breitbart

Fred Palmer in Breitbart

http://www.breitbart.com/big-government/2017/05/31/fred-palmer-paris-climate-agreement-and-the-america-first-energy-plan/

Billy Aouste

Media Specialist

The Heartland Institute

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5/31/17
Breitbart

Paris Climate Agreement and the 'America First' Energy Plan

By: Fred Palmer, the Heartland Institute

President Donald Trump delivered one of his most important campaign speeches at the Williston Basin Petroleum Conference in Bismarck, North Dakota on May 26, 2016. During the headlines-making speech, Trump presented his "America First Energy Plan," a fundamentally different path for the U.S. fossil-fuel industry.

Trump's plan called for a significant expansion of the oil, natural gas, and clean-coal industries. In the same speech, the future president pledged to withdraw from the Paris Climate Agreement, which had been signed by President Barack Obama in 2016. The Paris agreement calls for America to drastically reduce its carbon-dioxide emissions in the name of slowing or preventing human-caused climate change.

During the eight years of the Obama administration, the federal government put into place a series of regulations designed to reduce and ultimately eliminate fossil fuels as an American energy source, and the Paris agreement was meant to continue Obama's anti-fossil-fuel legacy in the future.

Policies that aim to reverse and disparage CO2 use have always been popular in the media, among ensconced government bureaucrats, and in academic circles, but they are anathema to the men and women who work in industry and agriculture. In my view, Trump is in the White House today largely because of that North Dakota energy speech. And if you doubt it, take a look at an election map showing the results of the 2016 presidential race. You'll see that 84 percent of the nation is colored red, with huge majorities of Trump voters residing in America's Heartland.

The Heartland and its various industries have for many decades depended on fossil fuels in one form or another, and the people living there know it, which is bad news for anti-energy Democrats, who could remain out of power in the Heartland for a decade or more.

Both the Trump speech and his plan were roundly criticized by media elites, academics, and those who make a living regulating people's lives. Their argument has been and remains today that Trump's America First Energy Plan is proof the president is ignorant about the supposed benefits of limiting fossil-fuel production and the potential of the alternative-energy market. There is also a lot of anger that's derived from Trump's rejection of policies that aim to fight climate change by reducing CO2. But on both scores, it's the elites that are the ignorant ones.

Ramping up fossil-fuel production will spur economic growth, and thus help to balance the budget; fund infrastructure projects; and allow all Americans to enjoy a higher quality of life.

A massive world market is eager to see the United States increase its production and energy exports. Billions of people around the world go without energy every day, and billions more people will soon be living in the same countries where energy poverty is currently endemic. America's fossil-fuel industries could help these people enjoy the prosperity and comfort of a middle-class lifestyle and all the benefits that come with it, including living longer.

Trump understands the potential for fossil fuels better than any American political leader in modern history. He has made the media and the eco-left crazy because he has refused to

embrace their vision of apocalyptic global warming. That, in their eyes, is the president's cardinal sin, but the Heartland sees it as a virtue.

The president's call to withdraw from Paris was as sound as his support for policies that would help the country secure energy dominance. Of course, not everyone agrees. Some Republicans, including people within Trump's own team, believe America should "stay in Paris." This would be a massive mistake. Paris is an impediment to human development. Using fossil fuels to power the world is the only realistic way to bring billions of people out of poverty and provide affordable and abundant energy for the billions more that will soon join us on Earth.

As I compose this today the news is full of stories that President Trump does indeed intend to keep the campaign pledge to withdraw from Paris. All praise, Mr. President, and please adhere to this path even as the Swamp, the Europeans and the major media all try to dishonestly shame you into staying in Paris.

Stay on the course that recognizes the Paris agreement incorrectly demonizes carbon and CO2 emissions. Stay on the course that recognizes the Paris agreement is deeply flawed as it would put the world on a path to eliminate the use of fossil fuels.

Americans and people everywhere would be deeply harmed by staying in Paris. While the lawyers and experts figure out how to the undo the legal and diplomatic labyrinth the Obama team put in place to protect his flawed legacy, the American people, the world community and the natural environment will all benefit as Team Trump manages our energy policy and vast fossil fuel resources to fulfill their America First Energy Plan.

Fred Palmer (fpalmer@heartland.org) *is a senior fellow for energy policy at The Heartland Institute, a free-market think tank founded in 1984 and based in Arlington Heights, Illinois.*

From: Joseph Bast
Sent: Wed 5/31/2017 1:35:39 PM
Subject: Fingers crossed re announcement on Paris today... and good piece by Jon Utley at American Conservative

http://www.theamericanconservative.com/articles/submit-the-paris-treaty-to-the-senate/

Submit the Paris Treaty to the Senate

It's the best way out of the climate morass.

By Jon Basil Utley • May 30, 2017

The so-called Paris "Treaty" has all sorts of grounds for complicated lawsuits to restrict America's new found energy independence and growing massive natural-gas production. We need to get out from under it. Yet a weakened President Trump is hesitating while the global-warming lobby tries desperately to confound the issues.

There have recently been stories raising concerns about how South Pole ice might one day melt and raise sea levels. But this because ice has been increasing at the South Pole. (See my earlier article for details on South Pole ice and new cold weather records in Asia.)

It is seldom mentioned that the "Treaty" received nearly unanimous support among developing nations because they were promised billions per year to pay for cutbacks on their energy production. As *Bloomberg* verified, "many poor nations signed up to the treaty largely because of a promise of $100 billion a year of 'climate aid' from rich nations, starting from 2020." Of course, most of this money is supposed to come from Washington and Obama committed a billion for it before leaving office.

Similarly, European support can be understood in terms of the feared political backlash from voters (Germans are paying over 30 euro-cents per kilowatt hour for electricity, nearly three times what Americans pay) if questions are raised about the hundreds of billions their governments have spent subsidizing solar and wind power.

There is also a vital constitutional issue of senatorial "advice and consent." There is no question that the Paris Agreement was a treaty. Obama knew he would not get the votes in the Senate to pass it. The precedent of so committing America to such an agreement without a Senate vote should not be allowed to stand. A report by the Competitive Enterprise Institute lays out the reasons:

The Paris Climate Agreement is a treaty by virtue of its costs and risks, ambition compared to

predecessor climate treaties, dependence on subsequent legislation by Congress, intent to affect state laws, U.S. historic practice with regard to multilateral environmental agreements, and other common-sense criteria.

CEI's analysis further explains:

A majority of states have sued to overturn the Obama Environmental Protection Agency's end-run around Congress, the Clean Power Plan, which is also the centerpiece of the U.S. NDC (nationally determined contributions) under the Paris Agreement. Yet, the CPP is only a start. All of Obama's adopted and proposed climate policies would only achieve about 51 percent of just the first NDC, and the Paris Agreement requires parties to promise more "ambitious" NDCs every five years.

The Republican Senate will not vote to approve the treaty. That would end any case for its legal validity. Fear that a vote might be filibustered so that some future leftist administration could eventually resubmit it for ratification is bogus. In fact, it would be a constant thorn in the side of the Left for future elections. Remember another real motive for them is for Washington to have growing bureaucratic control over the states and citizenry. All sorts of new government powers could be claimed as a way of controlling climate change. Fears of this would give conservatives a constant election issue by keeping the issue alive.

The current risks of doing nothing are explained in another article:

Environmental pressure groups and several state attorneys general have begun to prepare lawsuits in federal court to block withdrawal of the "Clean Power" Plan and other greenhouse gas rules. One argument that they have already put forward is that these rules cannot be withdrawn because they are part of our international commitment under the Paris Climate Treaty. Failing to withdraw from Paris thus exposes key parts of your deregulatory energy agenda to unnecessary legal risk. The AGs revealed in a recruiting letter that they also plan other lawsuits "ensuring that the promises made in Paris become reality.

Bjorn Lomborg explains the flaws of the treaty in *USA Today*:

In truth, Trump's action just exposes what we have known for a while: The Paris Agreement is not the way to solve global warming. Even if every nation fulfilled everything promised — including Obama's undertakings — it would get us nowhere near achieving the treaty's much-hyped, unrealistic promise to keep temperature rises under 1.5 degrees Celsius.

Further obfuscating the issues is the constant barrage about the ease of moving to so called "clean energy." Actually "wind and solar are supplying less than 1% of global energy demand….wind provided 0.46% of global energy consumption in 2014, and solar and tide combined provided 0.35%." Higher reported numbers for renewables include wood burning, dung and such.

With all the complications, the best way to ice the treaty is to put it before the Senate for ratification. Failure there will once and for all end any legal grounds for implementing it.

Jon Basil Utley is publisher of The American Conservative.

From: Joseph Bast
Sent: Tue 5/30/2017 8:57:02 PM
Subject: Heartland Institute Experts React to Reports President Trump Will Pull U.S. Out of Paris Climate Treaty

From: Billy Aouste
Sent: Tuesday, May 30, 2017 2:50 PM
To: Heartland Institute Users
Subject: FW: Heartland Institute Experts React to Reports President Trump Will Pull U.S. Out of Paris Climate Treaty

Good Afternoon Everyone,

The following press release is scheduled to go out to 11,643 Environment and Energy contacts.

Sincerely,
Billy

THE HEARTLAND INSTITUTE
HEARTLAND.ORG

Heartland Institute Experts React to Reports President Trump Will Pull U.S. Out of Paris Climate Treaty

President Donald Trump tweeted last week from the G7 summit that he will make a decision this week on whether to leave or stay in the Paris Climate Treaty. Reports in the past few days say he has told "confidants" he will withdraw from the agreement, negotiated by President Barack Obama at the Conference of the Parties (COP-21) in Paris in December 2015.

The Heartland Institute has long urged President Trump to withdraw. A special webpage outlining Heartland's work on the subject – including footage from its "counter conference" at COP-21 – can be found here.

The following statements from environment and energy policy experts at The Heartland Institute

– a free-market think tank – may be used for attribution. For more comments, refer to the contact information below. To book a Heartland guest on your program, please contact Media Specialist Billy Aouste at media@heartland.org and 312/377-4000 or (cell) 847/445-7554.

"President Trump would make exactly the right call by deciding to withdraw the United States from the Paris Climate Treaty. Staying in would make it impossible to implement his America First Energy Plan. Staying in would result in U.S. taxpayers and consumers paying hundreds of billions of dollars in higher taxes and higher energy costs solely for the benefit of crony capitalists in the 'renewable' energy industry and Third World dictators. Staying in would not benefit the global environment one whit, but instead, by impoverishing millions of people, would have exactly the opposite effect.

"In the next few days, Donald Trump can show he has what it takes to become one of America's greatest presidents. Let's hope he swings hard and aims for the upper deck, and that the men and women around him, both in the White House and in Congress, have the courage and intelligence to support his decision."

Joseph Bast
President
The Heartland Institute
jbast@heartland.org
312/377-4000

"Donald Trump was elected president to return the United States to a path where our fossil fuel resources are unleashed to power our future and drive our prosperity. The vehicle is the fossil-fuels-based America First Energy Plan, now U.S. policy under the Trump administration. President Trump recognizes that the anti-fossil-fuel Paris Accord set by President Obama is a disastrous plan for working men and women and the country itself – and he pledged to discard it in the presidential campaign.

"Paris was the product of President Obama mimicking the Al Gore approach to energy and carbon. Obama abused the formidable power of the presidency to drive an agenda to eliminate fossil fuel use in the name of a phantom vision based on everything but sound science and common sense. The Obama approach was to make energy in the U.S. scarce and expensive, resulting in real suffering for working men and women.

"President Trump has understood this from the start, and it appears he will make the absolutely correct and necessary decision to withdraw from Paris. That move will generate great praise for rejecting Paris and what it stands for. Under President Trump's leadership, America and American energy will be great again, and the American people will be the beneficiaries."

Fred Palmer
Senior Fellow, Energy Policy
The Heartland Institute

fpalmer@heartland.org
312/377-4000

"President Trump appears poised to take an important, concrete step to putting America First by withdrawing the United States from the Paris Climate Accord and enacting energy policy that reflects his desire to foster economic growth.

"Dismantling the Clean Power Plan, a key component of the United States' commitment under the Paris Accord, is an important step to ensuring low energy prices in the United States and making American manufacturing competitive in the global marketplace."

Isaac Orr
Research Fellow, Energy and Environment Policy
The Heartland Institute
iorr@heartland.org
312/377-4000

"*Adieu* Paris! If in fact President Trump pulls the U.S. out of the Paris Climate Agreement, it will be another big win for taxpayers, consumers, and energy producers in flyover country. producers in flyover country. Angela Merkel and what is left of the E.U. are not happy (itself a victory), but fake science and globalism would take a big hit with this move.

"The president's strong statements at the G7 conference, followed by this increasingly likely decision, show that the U.S. is not going to be the sugar daddy for this climate scam. The Paris Climate Agreement and the U.N. Framework Convention on Climate Change will collapse without the U.S. willing to pick up the tab. "Building on the fresh leadership at EPA and the departments of Interior and Energy, getting out of the Paris Agreement will show that we are moving in the right direction. In a word, *gagnant*."

Bette Grande
Research Fellow, Energy Policy
The Heartland Institute
governmentrelations@heartland.org
312/377-4000

Ms. Grande represented the 41st District in the North Dakota Legislature from 1996 to 2014.

"Proponents of the Paris treaty acknowledge that it won't have a noticeable effect on global temperatures even if the signees adhere to its conditions, which is in itself an exceedingly unlikely scenario. They have thus resorted to appeals to self-interest, claiming nations will experience huge windfalls from investments in green energy. The evidence shows, however, that government-mandated or -subsidized investments in green tech make energy vastly more expensive and cost many more jobs than they allegedly create.

"The great French economist Frédéric Bastiat pointed out the foolishness of breaking windows in

order to employ people to fix them: It ignores the diversion of resources from other, better uses. The Paris agreement is window-breaking on a global scale."

S.T. Karnick
Director of Publications
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"I hope the U.S. withdraws from the Paris Agreement on climate change. Then countries like Canada, which follow America on this file, will be more likely to get out as well."

Tom Harris
Executive Director, International Climate Science Coalition
Ottawa, Canada
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The Heartland Institute is a 33-year-old national nonprofit organization headquartered in Arlington Heights, Illinois. Its mission is to discover, develop, and promote free-market solutions to social and economic problems. For more information, visit our Web site or call 312/377-4000.

From: Joseph Bast
Sent: Tue 5/30/2017 1:53:53 PM
Subject: Get out of Paris: Ted Cruz: at CNN, Cliff Forrest in WSJ

Two good pieces…

Joe

https://amp.cnn.com/cnn/2017/05/29/opinions/withdraw-paris-accord-opinion-cruz/index.html

Ted Cruz: Trump should withdraw from Paris climate pact

By Ted Cruz

Updated 9:22 AM EDT, Tue May 30, 2017

Editor's Note: (Ted Cruz represents Texas in the United States Senate. The views expressed in this commentary are his own.)

(CNN) Following a successful international tour and the G-7 Summit in Italy, President Trump has an opportunity to relieve our nation of the unfair and economically devastating requirements of the Paris Agreement, the United Nations climate treaty he pledged to rip up during the campaign.

And as soon as possible, President Trump should act on -- and keep -- his campaign promise.

The agreement, signed by the Obama administration last year, would commit the United States to drastically reducing its carbon emissions while allowing some countries to increase theirs. This, all while doing nothing to meaningfully decrease global temperatures.

According to a recent National Economic Research Associates Economic Consulting study, the Paris Agreement could obliterate $3 trillion of GDP, 6.5 million industrial sector jobs and $7,000 in per capita household income from the American economy by 2040. Meeting the 2025 emissions reduction target alone could subtract $250 billion from our GDP and eliminate 2.7 million jobs. The cement, iron and steel, and petroleum refining industries could see their production cut by 21% 19%, and 11% respectively.

Not only would these unfair standards reduce American job growth and wages and increase monthly utility costs for hardworking families, they would fundamentally disadvantage the United States in the global economy. The result: our economic output would lag while other countries continued to expand their GDPs.

The agreement's proponents market it as a panacea for addressing the impacts of climate change, but at its core, it is about increasing government control -- over the economy, the energy sector and nearly every aspect of our daily lives. It represents the exact misguided, top-down, government-knows-best approach that American voters resoundingly rejected in 2016.

We cannot pursue a path that puts American workers first if we cripple a fossil fuel energy sector that generates 82% of the energy consumed in the United States. The coal industry alone supplies almost one-third of America's electric power -- with an increasing amount of clean coal-burning technology becoming available.

America is poised to become a net energy exporter over the next decade. We should not abandon that progress at the cost of weakening our energy renaissance and crippling economic growth.

And let's not forget the massive utility cost increases the agreement would entail. The Clean Power Plan, a major component of fulfilling the agreement, would spike energy costs for working and middle-class Texans by 16% by 2030, according to the Economic Reliability Council of Texas, the entity that operates the electric grid for much of our state.

We simply cannot afford an agreement that puts thousands of Americans out of work, increases their energy costs and devastates our core industries.

In return for crippling our economy, the Paris Agreement would do next to nothing to impact global temperatures. Under the EPA's own models, if all carbon emissions in America were basically eliminated, global temperatures would only decrease by less than two-tenths of a degree Celsius.

While the agreement would have a negligible impact on temperatures, America would be putting itself at a competitive disadvantage. That's because while the Obama administration irresponsibly committed America to immediate, real cuts in emissions, our global economic competitors would have no such handicap. In fact, Russia is permitted to increase its emissions approximately 50% and China and India have no meaningful cap on emissions until 2030.

This disparity among the countries' pledges inflicts real losses on our economy now while our rivals continue to grow, industrialize and diversify at their own pace with no implementation costs. In the meantime, the agreement would force American taxpayers to subsidize alternative energy at the expense of clean coal, nuclear power and natural gas -- energy resources that actually work for our economy and our environment.

The Paris Agreement would also handicap America in the global race for new sources of energy. Russia has committed financial and military assets to the Arctic to stake its claim to the region's vast deepwater mineral, oil and gas deposits. China is also exploring and trading for Arctic oil and gas. Meanwhile, American liquefied natural gas struggles with logistical costs that weaken its competitiveness.

By allowing our rivals to increase their cooperation and strategic leverage around the world -- pressuring our allies and partners, harming domestic job creators and materially reducing our prestige and influence in the process --- the agreement would damage America's national security as much as our economic security. The emission cuts that the US would have to make today, and the resultant costs for our own energy firms, would weaken our ability to battle our rivals on an equal footing in the drive for untapped energy sources.

Efforts to unwind some of the deal's more onerous regulations are welcomed, but that is not enough. Unless the US completely withdraws, the Paris Agreement will continue to cause sustained harm to our security and economy, and it keeps the door open for future administrations to use it as means to impose more costly and ineffective energy regulations.

We should not let a deal subject to the whims of future administrations or Congresses hang like a wet blanket over our economy -- driving up energy prices, devastating our industrial base and bolstering our rivals.

I hope President Trump will take the opportunity before him to fulfill the commitment he made and withdraw America from the Paris Agreement.

---

https://www.wsj.com/articles/the-business-case-for-paris-is-bunk-1496095937

The 'Business Case' for Paris Is Bunk

The climate accord is a boon—yet pulling out would be unfair?

By Cliff Forrest

May 29, 2017 6:12 p.m. ET

245 COMMENTS

As President Trump weighs whether to withdraw from the Paris Agreement on climate change, some have tried to present a "business case" for why the U.S. should stay in. An economic windfall would come with the early and aggressive investment in alternative energy that the accord mandates, or so the argument goes. The Paris Agreement's backers have told a very incomplete story and reached the wrong conclusion.

The economic merits of the Paris Agreement take on a different air when more fully considered. Climate-change advocates' bizarre premise is that economic gains will come from restricting access to the most abundant, reliable and affordable fuel sources. Never mind that this defies the experience of many European nations that have invested heavily in renewable energy. After "Germany's aggressive and reckless expansion of wind and solar," for example, the magazine Der Spiegel declared in 2013 that electricity had become "a luxury good." Apparently this time will be different.

There are a few interesting hypocrisies to consider as well. The commercial interests that strongly support the Paris Agreement typically have created programs to exploit, game or merely pass through the costs of the climate-change agenda. Many also maintain a green pose for marketing purposes. The classic example of this rent-seeking behavior was Enron, which in 1996 purchased Zond Energy Systems (now GE Wind) to complement its gas pipeline. Enron then set about lobbying its way to green-energy riches. It seems that Paris backers hope for a sudden public amnesia about the many businesses that use government to push out smaller competitors.

Green companies also argue that, beyond economic benefits, their ability to slow climate change helps contribute to the public good. To my knowledge, none declare a measurable impact on climate from their businesses or their desired policies.

Mr. Trump should keep in mind that the people calling for him to stick with the Paris Agreement largely did not support him during the campaign. Few would like to see him succeed now. As for his strongest supporters, they're the ones who will take the hit if he breaks his promise to withdraw.

Some countries have threatened to punish the U.S. if it pulls out of the accord. Rodolfo Lacy Tamayo, Mexico's undersecretary for environmental policy and planning, said in an interview with the New York Times: "A carbon tariff against the United States is an option for us." Countries imposing costs on their own industries through the Paris Agreement complain that they are at a disadvantage if the U.S. doesn't do the same. Apparently they didn't receive the talking points describing green energy as an economic boon for everyone involved.

So which is it? Does the Paris Agreement spur a U.S. economy otherwise unprepared to succeed in the 21st century? Or is the U.S. maintaining economic advantage by not subjecting itself to the accord's arduous requirements?

Mr. Trump's obligation is to do what is in America's best interest. Rejecting a confused and costly international agreement, with questionable benefits to climate, should be a slam dunk. Don't take my word for it: Just study the other side's arguments.

Mr. Forrest is CEO of Rosebud Mining.

From: Joseph Bast
Sent: Sun 5/28/2017 5:36:17 PM
Subject: A critique of "What happens if the U.S. withdraws from the Paris climate change agreement?" - Associated Press

Some of my comments below might be useful in defending the President's decision, should he make it, to withdraw from the Paris accord.

Joe

http://www.cbsnews.com/news/what-happens-if-the-u-s-withdraws-from-the-paris-climate-change-agreement/?ftag=CNM-00-10aab7e&linkId=38083675

What happens if the U.S. withdraws from the Paris climate change agreement?

WASHINGTON -- Earth is likely to reach more dangerous levels of warming even sooner if the U.S. retreats from its pledge to cut carbon dioxide pollution, scientists said. That's because America contributes so much to rising temperatures.

[Both sentences are meaningless. "More dangerous levels of warming" than in the past? The benefits of past warming exceeded the benefits, so those levels were not dangerous. "More dangerous" is therefore nonsensical. More dangerous than what is now forecast to occur in a century or two? Those forecasts are not scientific, are technically "scenarios" and not predictions, and are too speculative to compare and contrast.]

President Donald Trump, who once proclaimed global warming a Chinese hoax,

[Trump suggested the hype surrounding the global warming campaign could be fueled by the Chinese as part of their ongoing propaganda campaign against the U.S. and to create markets for its wind and solar industries. That's probably true, since the global warming movement resembles other Chinese disinformation programs.]

said in a tweet Saturday that he would make his "final decision" next week on whether the United States stays in or leaves the 2015 Paris climate change accord in which nearly every nation agreed to curb its greenhouse gas emissions.

Global leaders, at a summit in Sicily, have urged him to stay. Earlier in the week, Pope Francis

made that case with a gift of his papal encyclical on the environment when Trump visited the Vatican.

[Just a reminder, Pope Francis is not a climate scientist, but is a very liberal environmentalist who thinks capitalism is responsible for turning the planet into a "an immense pile of filth." He is being advised on the climate issue by far-left activists, not real climate scientists. His opinions on scientific and economic controversies are not binding on Catholics, and in fact are at odds with those of past Popes.]

In an attempt to understand what could happen to the planet if the U.S. pulls out of Paris, The Associated Press

["The Associated Press" most likely refers to Seth Borenstein, a radical environmentalist pretending to be a reporter. He has been called out for his bias and misrepresentation of the truth many times.]

consulted with more than two dozen climate scientists and analyzed a special computer model scenario designed to calculate potential effects.

[Anyone paying attention to the climate change debate knows "special computer model scenario" is code for a newly tuned model based on assumptions and unreliable data designed to arrive at politically acceptable forecasts. Of course this new model provides support for the US staying in the Paris agreement… that is what it was tuned to find. The NIPCC produced a devastating critique of computer models.]

Play VIDEO

Defense Secretary James Mattis on climate change, Paris accord

Scientists said it would worsen an already bad problem and make it far more difficult to prevent crossing a dangerous global temperature threshold.

[No, some scientists (but mostly nonscientists) dependent on government grants or working for environmental advocacy groups claim this. Most scientists either disagree or don't have an opinion on the subject. See Chapter 1 of *Why Scientists Disagree About Global Warming.* See also the "skeptical" scientists who appear here.]

Calculations suggest it could result in emissions of up to 3 billion tons of additional carbon dioxide in the air a year. When it adds up year after year, scientists said that is enough to melt ice sheets faster, raise seas higher and trigger more extreme weather.

[Even the IPCC disagrees with most or all of this, saying in its latest report that significant sea level rise and more extreme weather are unlikely or cannot be predicted with certainty. See here. This claim is also dependent on the residence time of CO2 in the atmosphere, which probably is much less than alarmists believe. See here.]

"If we lag, the noose tightens," said Princeton University climate scientist Michael Oppenheimer, co-editor of the peer-reviewed journal Climatic Change.

[Michael Oppenheimer is "an activist first, a scientist a distant second." He was an environmental activist working for Environmental Defense Fund who went back to college to get a Ph.D. so he could pretend to be a climate scientist. He should never be quoted in a real news story as a climate scientist.]

One expert group ran a worst-case computer simulation of what would happen if the U.S. does not curb emissions, but other nations do meet their targets. It found that America would add as much as half a degree of warming (0.3 degrees Celsius) to the globe by the end of century. [Right… see above about models.]

Scientists are split on how reasonable and likely that scenario is.

[Wow, a concession that there isn't "overwhelming consensus" on one model or one forecast? This sentence is the tip of an iceberg of truth.]

Many said because of cheap natural gas that displaces coal and growing adoption of renewable energy sources, it is unlikely that the U.S. would stop reducing its carbon pollution even if it abandoned the accord, so the effect would likely be smaller.

[So the U.S. is reducing its "carbon pollution" and this trend is likely to continue regardless of Paris. Other countries are increasing their emissions and would continue regardless of Paris, since the goals set in Paris are supposedly nonbinding. What, then, is the accord supposed to achieve? About the only thing "for sure" about the Paris accord is that it would commit the U.S. to sending hundreds of billions of dollars on renewable energy (with virtually no impact on emissions or climate) and to third world countries. What does America get out of this agreement? Nothing at all.]

Play VIDEO

Lessons from Holland on fighting rising sea levels

Others say it could be worse because other countries might follow a U.S. exit, leading to more emissions from both the U.S. and the rest.

Another computer simulation team put the effect of the U.S. pulling out somewhere between 0.1 to 0.2 degrees Celsius (0.18 to 0.36 degrees Fahrenheit).

While scientists may disagree on the computer simulations they overwhelmingly agreed that the warming the planet is undergoing now would be faster and more intense.

The world without U.S. efforts would have a far more difficult time avoiding a dangerous threshold: keeping the planet from warming more than 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial levels.

[Why is 2 degrees C a "dangerous threshold"? We're half-way there and see no dangerous impacts so far. And the latest estimates of climate sensitivity and atmosphere residence time suggest human emissions are unlikely to ever cause 2 degrees or more of warming, with or without treaties and efforts to reduce emissions. (See Figure 5 starting on page 66 of *Why Scientists Disagree*.) So this is all just fake news.]

The world has already warmed by just over half that amount -- with about one-fifth of the past heat-trapping carbon dioxide emissions coming from the United States, usually from the burning of coal, oil and gas.

So the efforts are really about preventing another 1.6 degrees Fahrenheit (0.9 degrees Celsius) from now.

39 PHOTOS

Stunning photos of climate change

"Developed nations - particularly the U.S. and Europe - are responsible for the lion's share of past emissions, with China now playing a major role," said Rutgers University climate scientist Jennifer Francis. "This means Americans have caused a large fraction of the warming."

Even with the U.S. doing what it promised under the Paris agreement, the world is likely to pass that 2 degree mark, many scientists said.

But the fractions of additional degrees that the U.S. would contribute could mean passing the threshold faster, which could in turn mean "ecosystems being out of whack with the climate, trouble farming current crops and increasing shortages of food and water," said the National Center for Atmospheric Research's Kevin Trenberth.

[Kevin Trenberth is another bad apple who ought not be presented as an objective or independent climate scientist.]

Climate Interactive, a team of scientists and computer modelers who track global emissions and pledges, simulated global emissions if every country but the U.S. reaches their individualized goals to curb carbon pollution. Then they calculated what that would mean in global temperature, sea level rise and ocean acidification using scientifically-accepted computer models.

By 2030, it would mean an extra 3 billion tons of carbon dioxide in the air a year, according to the Climate Interactive models, and by the end of the century 0.3 degrees Celsius of warming.

"The U.S. matters a great deal," said Climate Interactive co-director Andrew Jones. "That amount could make the difference between meeting the Paris limit of two degrees and missing it."

Climate Action Tracker, a competing computer simulation team, put the effect of the U.S. pulling out somewhere between 0.1 to 0.2 degrees Celsius (0.18 to 0.36 Fahrenheit) by 2100. It uses a scenario where U.S. emissions flatten through the century, while Climate Interactive has them rising.

One of the few scientists who plays down the harm of the U.S. possibly leaving the agreement is John Schellnhuber, the director of the Potsdam Institute for Climate Impact Research and the scientist credited with coming up with the 2 degree goal.

"Ten years ago (a U.S. exit) would have shocked the planet," Schellnhuber said. "Today if the U.S. really chooses to leave the Paris agreement, the world will move on with building a clean and secure future."

Not so, said Texas Tech climate scientist Katharine Hayhoe: "There will be ripple effects from the United States' choices across the world."

[Katharine Hayhoe is another bad apple who ought not be presented as an independent or credible climate scientist. However, she might be correct this time. If the U.S. drops out of Paris, other nations are likely to follow our lead and the world-wide war on fossil fuels might actually come to an end.]

Joe

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From: Joseph Bast
Sent: Thur 5/18/2017 1:34:22 PM
Subject: H. Sterling Burnett in the Detroit News: Escaping the Paris Climate Agreement

FYI.

http://www.detroitnews.com/story/opinion/2017/05/18/paris-climate/101815198/

Billy Aouste

Media Specialist

The Heartland Institute

3939 North Wilke Road

Arlington Heights, IL 60004

Detroit News
5/18/17

Escaping the Paris Climate Agreement

By: H. Sterling Burnett, the Heartland Institute

As a candidate for president, Donald Trump said he would withdraw the United States from the Paris climate agreement and called it a bad deal for America. In an April speech in Harrisburg, Penn., Trump reiterated this claim, saying the Paris climate agreement in its current form hurts America. Despite his continued opposition, however, it remains unclear whether a withdrawal is in the nation's future.

It's time for this administration to keep its promise, by getting the U.S. out of this flawed, costly agreement.

Some in Trump's team have reportedly said if the United States' commitments are restructured there might be a path to stay in the Paris climate agreement. While there may be a better deal to be had — after all, the Obama administration could hardly have negotiated a worse deal for Americans — there is no deal that would be good for the country. Even Trump can't put lipstick on this very ugly pig.

While our economic competitors, such as China and India, do not have to limit their fossil-fuel use under the agreement, the U.S. is required to make steep cuts, which are estimated to cost our economy trillions of dollars over the life of the agreement without providing any appreciable environmental benefits. Additionally, a deal isn't possible without the U.S. paying into the political slush fund called the Green Climate Fund, which Trump promised to halt payments to. What is gained by staying in? Nothing.

The question is not whether Trump should keep his word and withdraw from the Paris agreement; it's simply a matter of choosing the best way to do so. There are three options.

The first way to cancel America's participation in the Paris climate agreement — and the one that most directly satisfies Trump's campaign commitment — is simply to withdraw the United States' signature entirely. Under the Paris agreement, any country can withdraw from the agreement by giving written notice of a decision to do so to the U.N. secretary general. Unfortunately, under the terms of the agreement, Trump can't give such notice until the agreement has been in place for three years, which means the earliest withdrawal date is Oct. 5, 2019.

Making matters worse, the withdrawal does not become effective until one year after the written notice is delivered. This means even if Trump determines to withdraw from the Paris agreement today, the country will remain stuck with its terms for a minimum of almost four years, and while America remains a party to the agreement, it is obligated to keep its commitments. Because the four-year withdrawal period will not run out until after Trump's first term is over, should he decide not to run for president again or should he run for re-election and lose, the next president could simply recommit the United States to the agreement with a simple signature.

The second way to scotch America's commitments under the Paris climate agreement would be

for Trump to submit it to the Senate for formal approval as a treaty. This is what Obama should have done in the first place. To become a binding treaty, the Senate would have to approve the Paris climate agreement by a two-thirds vote. If the agreement loses the treaty vote — and it likely would in a full vote of the Senate — the deal is canceled.

However, nothing requires the Senate to hold an up-or-down vote on the Paris climate agreement if Trump submits it to them. Using the Senate filibuster rules, Senate Democrats could block the treaty from ever coming up for a vote. Such a move is likely, since the vast majority of Democrats support the Paris agreement. Under this scenario, the treaty would remain pending, leaving a future Senate to decide its fate.

The easiest way for Trump to end U.S. participation in Paris and all international climate agreements would be for him to remove the country's signature from the U.N. Framework Convention on Climate Change (UNFCCC), signed by President George H.W. Bush in 1992. Article 25 of the UNFCCC allows any state party to the convention to withdraw, without further obligation, upon giving one year's notice. Withdrawing from UNFCCC would cancel the United States' obligations to all other United Nations-brokered climate agreements made subsequent to UNFCCC, because they are all built on it.

This would be the best and easiest way to get out of the Paris climate agreement, and it would help to prevent future burdensome climate agreements.

Mr. President, whichever path you choose, please keep your promise and withdraw the United States from the Paris agreement, placing it firmly in the dustbin of history — where it belongs.

H. Sterling Burnett, Ph.D., is a research fellow on energy and the environment at the Heartland Institute.

From: Joseph Bast
Sent: Mon 5/8/2017 9:59:09 PM
Subject: National Black Chamber of Commerce letter to President Trump on Paris
NBCC open letter to President on Paris.pdf

This is important, but will be carefully hidden by the liberal media.

Black business leaders who don't buy into the Democratic Party's victimhood tactics are paying attention to what President Trump is doing on energy policy. Pulling out from the Paris Climate Treaty and citing among the reasons the negative effects of higher energy costs on small and minority-owned businesses would be another beat on the drum calling for black leaders to abandon the failing Democratic Party.

Joe

Joseph Bast

President

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Open Letter to President Trump

May 5, 2016

The President
The White House
1600 Pennsylvania Avenue, N.W.
Washington, DC 20500

Dear Mr. President:

You were swept into office on a tide of campaign promises that were aimed at ushering America into an era of renewed prosperity, leadership, and strength. Since taking office, you have kept the faith of American voters and honored those promises through your actions. On behalf of the millions of African Americans who have a stake in the businesses represented by the National Black Chamber of Commerce, I respectfully call on you today to keep yet another critical promise to the American people: Withdraw the United States from the Paris Agreement on climate change.

Our nation's families and businesses depend on affordable, reliable energy every single day. It is the lifeblood of our economy, it is fundamental to our modern society, and it is essential to our future strength, security, and growth. Our continued participation in the Paris Agreement, however, threatens to undermine that very foundation of our strength.

Remaining in the Paris Agreement will keep us party to a deal that was skewed against America and her allies from the start. Regardless of whether the United States' Intended Nationally Determined Contribution (INDC) remains at the current 26 to 28 percent emissions reduction target, the Agreement itself unfairly demands stringent measures from the U.S. and other developed nations – measures that experts estimate will cost trillions of dollars and hundreds of thousands of jobs – while allowing nations like China and India to continue increasing their emissions and moving their economies forward.

The U.S. will always have a seat at the table with the United Nations and, given our membership in the UNFCCC, with entities such as the Green Climate Fund. What we cannot afford, however, is to willingly sacrifice our place as global economic leader to appease international

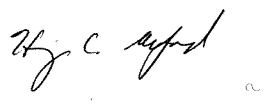
bureaucrats who would seek to dictate what kinds of energy we use in America and how, when, and why we use them.

We applaud you for taking important steps during the first 100 days of your presidency to begin dismantling many of the economically harmful energy regulations – couched as environmental policies, although they would provide minimal environmental benefits – put forward by the previous administration.

Our entry into the Paris Agreement, however, was predicated on exactly those policies. Keeping the United States a party to the Agreement would thus only serve to legitimize those misguided mandates and regulations. Furthermore, doing so would provide credibility to a deal that seeks to better the economic fortunes of our international competitors at the expense of America's strength and standing in the global marketplace. That's something we can't afford.

Thank you for your consideration, and I look forward to your decision on this very important issue in the coming weeks.

Respectfully,



Harry C. Alford
President/CEO

From: Joseph Bast
Sent: Wed 5/10/2017 1:29:34 PM
Subject: Tom Harris on withdrawing from the Paris accord on the Lars Larson Show, broadcast on 102 radio stations

Here it is: https://youtu.be/1TJTXS_wMTA.

Joe

Joseph Bast

President

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From: Joseph Bast
Sent: Tue 5/9/2017 2:45:53 PM
Subject: Tom Harris: "Killing The Paris Agreement Is Not Enough"

Friends,

Outstanding piece by Tom Harris at Daily Caller.

This really is a case where cutting the tail off the dog all at once, rather than an inch at a time, is the right move. Withdrawal from the UNFCCC, something the old diplomatic guard and crony capitalists say is impossible, is the right thing to do now. It would be the shot heard around the world and bring the whole AGW house of cards tumbling down.

Tom can be reached at tom.harris@climatescienceinternational.net or

Tom Harris, B. Eng., M. Eng. (Mech.)

Executive Director,

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Joe

http://dailycaller.com/2017/05/08/killing-the-paris-agreement-is-not-enough/

Killing The Paris Agreement Is Not Enough

Tom Harris

Executive Director, Climate Science Coalition

5:50 PM 05/08/2017

If President Donald Trump merely pulls the United States out of the Paris Agreement on climate change, it will be like cutting the head off a dandelion. It will look good for a while until equally bad agreements quickly grow back when a Democrat occupies the White House again. Trump needs to dig up the roots of Paris—the 1992 U.N. climate treaty—if he is to keep his campaign promise to "stop all payments of the United States tax dollars to U.N. global warming programs."

Trump can, and should, get the U.S. out of the Paris Agreement, of course. Besides the scientifically unfounded objective of "holding the increase in the global average temperature to well below 2°C above pre-industrial levels," as if we had a global thermostat, the agreement lets so-called developing countries almost entirely off the hook despite the fact that non-OECD countries are now the greatest source of energy related emissions. Consider the agreement's emission targets for the U.S. versus China, currently the world's largest emitter, for example:

- The Obama administration agreed to an economy-wide target of reducing U.S. greenhouse gas (82% of which is carbon dioxide (CO_2)) emissions by 26%-28% below its 2005 level in 2025.
- China agreed "to achieve the peaking of CO_2 emissions around 2030" and to other measures such as those designed to increase the share of non-fossil fuels in primary energy consumption. Taking into consideration expected economic growth in China and other factors, their target translates into about a 70% *increase* above its 2005 level in 2025.

Yet writing in the Chicago Tribune, Paul Bodnar, a Special Assistant to former-President Obama and a key architect of the 2014 U.S.-China deal (which has the same emission targets as Paris), echoes the position of many opinion leaders when he asserted, "The Paris Agreement…puts China, India, and other emerging markets on equal footing with the United States."

Obviously, nothing could be further from the truth. It will not even be necessary for developing nations to meet their weak Paris emission targets anyway. They have an out-clause, one not applicable to developed countries.

The Paris Agreement starts:

"The Parties to this Agreement, being Parties to the United Nations Framework Convention on Climate Change [FCCC], hereinafter referred to as 'the Convention',…"

"The Convention," referenced 51 times in the Paris Agreement, is the foundation of the agreement. It is the 1992 U.N. climate treaty signed by President George H. W. Bush at the Earth Summit in Rio de Janeiro and later was ratified by the U.S. Senate. It sets the ground rules for many U.N. climate agreements, including Paris.

Ignored by environmental groups and their allies in the media is Article 4 in the FCCC, which states:

"Economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."

Actions that significantly reduce CO2 emissions would entail dramatically cutting back on the use of coal, the source of most of the developing world's electricity. As coal is usually the least expensive source of power, reducing CO2 output by restricting coal use would undoubtedly interfere with development priorities.

So developing countries almost certainly won't do it, citing FCCC Article 4 as their excuse. President Rodrigo Duterte of the Philippines (his country gets almost a third of its power from coal) gave us a preview of what we should expect when he said last July:

"You are trying to stymie [our growth] with an agreement … That's stupid. I will not honor that."

Climate treaty supporters have speculated that the inclusion of a new phrase added to the agreements in 2014—that countries' responsibilities will be decided "in light of different national circumstances"—will impose tougher requirements on poor nations as they develop.

This is naïve.

Article 4 has been the foundation of all UN climate negotiations, and developing countries will not allow this to change. Chinese negotiator Su Wei made this clear when he explained his

government's position that the purpose of the Paris Agreement is to "reinforce and enhance" the FCCC, not rewrite it.

Before leaving office, Obama did his best to 'Trump-proof' his climate change agenda; even giving $1/2 billion to the U.N. climate fund in his last three days. Trump needs to Democrat-proof his agenda and clearly, the best way to do that is to withdraw from the FCCC completely, which he can do without Senate approval. Unlike Paris, which stipulates that the earliest a country can quit the agreement is November 2020, withdrawal from the FCCC is allowed with one year's notice. And both Article 25 of the FCCC and Article 28 of the Paris Agreement concur—once a signatory exits the Convention, they are out of all agreements that are based on the FCCC, including Paris.

If all the president does is withdraw from the Paris Agreement, then not only will the U.S. still be stuck with huge bills from the U.N.'s Green Climate Fund and other misguided FCCC-based initiatives, but Trump will be leaving the door wide open for future Democratic presidents to easily get the U.S. back into another Paris. This is precisely what happened in Canada.

In 2011, the Conservative government withdrew from the Kyoto Protocol but did not withdraw from the FCCC. So when the Conservatives lost power in 2015, it was easy for the new Liberal government to agree to another FCCC-based treaty—the Paris Agreement. The agreement starts, "This Agreement shall be open for signature … by States … that are Parties to the Convention." Therefore, had Canada no longer been party to the Convention, signing on to Paris would have been more difficult.

As with most weeds, a thick, healthy lawn, mowed high, is your best defense against dandelions. Similarly, the best defense against expensive and unwarranted climate change agreements is healthy, open debate, independent of political correctness. Trump has done Americans a great service by encouraging the debate. Now, he has to finish the job and pull the Paris weed out by its roots by withdrawing the U.S. from the FCCC.

Tom Harris is executive director of the Ottawa, Canada-based International Climate Science Coalition.

From: Joseph Bast
Sent: Fri 6/30/2017 5:45:43 PM
Subject: Letter to the editor supporting Sec. Perry just published in Texas

Nice letter to the editor by Tom Harris defending Sec. Perry:

http://www.mystatesman.com/news/opinion/letters-the-editor-july-2017/t6mXKt0M1h0XVfnsPwdyOI/

Re: June 23 article, "Perry defends his stance on climate change, budget."

Environmentalists often present Al Gore's stance on climate change as an irrefutable truth. But scientific theories are not truth; they are educated opinions based on interpretations of observations and so can be wrong. Philosophers since ancient times have understood that observations cannot establish truth. This is especially the case in the complex field of climate science.

So, Energy Secretary Rick Perry was right to ask Sen. Al Franken, D-Minn., during the Senate Energy and Natural Resources Committee hearing about President Trump's 2018 energy department budget request, "Don't you think it's OK to have this conversation about the science of climate change … What's wrong with being a skeptic?"

Nothing, of course. Real science is all about skepticism. I wish more politicians had the courage to say this.

TOM HARRIS, EXECUTIVE DIRECTOR OF THE INTERNATIONAL CLIMATE SCIENCE COALITION, OTTAWA, ONTARIO, CANADA

--
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Note: To help ICSC cover its operating expenses, please go here: http://tinyurl.com/3ttkw82.

From: Joseph Bast
Sent: Sun 8/6/2017 2:50:23 PM
Subject: Nature magazine discusses Heartland's role in "Red Team"

FYI. Evidence we are flying over the right target.

Joe

http://www.nature.com/news/fears-rise-for-us-climate-report-as-trump-officials-take-reins-1.22391

Nature 548, 15–16 (03 August 2017) doi:10.1038/548015a

Fears rise for US climate report as Trump officials take reins

Officials at the US Environmental Protection Agency are consulting global-warming sceptics as they weigh up a technical review.

By Jeff Tollefson

A sweeping US government report on the state of climate-change science is nearing the finish line, but researchers who wrote it aren't ready to relax just yet. Federal scientists have twice reviewed the roughly 600-page document — which examines everything from shifting weather patterns to rising sea levels — as have the US National Academies of Sciences, Engineering, and Medicine. Just one hurdle remains, but it may be the highest: final sign-off by top officials in President Donald Trump's administration, many of whom are sceptical of climate science.

Although there have not yet been any signs of trouble, researchers are keeping a close eye on how the White House and federal agencies handle the science report — a technical prelude to the fourth National Climate Assessment, a legally mandated analysis of the causes and impacts of global warming that is due in 2018.

Many climate scientists are particularly uneasy about the potential for interference by the US Environmental Protection Agency (EPA), one of 13 agencies that must approve the science report before its expected release in November. EPA administrator Scott Pruitt, who rejects well-established climate science, has raised the possibility of organizing an adversarial 'red team–blue

team' review of such research. And he has help from the Heartland Institute, a think tank in Chicago, Illinois, that promotes scepticism about climate change.

"We can't allow science to be held hostage," says Donald Wuebbles, a climate scientist at the University of Illinois at Urbana-Champaign and co-chair of the report. "I'm hopeful it won't get to that, because it would look really bad for the administration to fight this."

It wouldn't be the first time that a Republican president had sought to stymie the United States' national climate-assessment process. The administration of George W. Bush came under fire for ignoring the first National Climate Assessment, which was released by then-President Bill Clinton in 2000. After the Bush administration subsequently missed the legal deadline in 2004 to complete a second assessment, environmentalists sued the government in federal court to compel the report's release — and won.

The message of the latest science report — that human-caused global warming poses urgent problems for the United States — isn't likely to sit well with the White House. The Trump administration has sought to repeal environmental regulations and cut climate research. Energy secretary Rick Perry has joined Pruitt in questioning climate science. And Pruitt's chief of staff, Ryan Jackson, once worked for Senator James Inhofe (Republican, Oklahoma), a prominent climate sceptic.

"It would look really bad for the administration to fight this."

"This is going to be the first big test in the climate arena," says Tammy Dickinson, who led the energy and environment division at the White House Office of Science and Technology Policy (OSTP) under president Barack Obama. One major issue, she adds, is that Trump has yet to fill many positions at the OSTP — which has coordinated work on the last three government climate assessments — or high-level science posts at federal agencies that work on climate change.

At the EPA, rank-and-file staff say that they haven't been told who will sign off on the science report, or how the OSTP will manage the final review process. Agency scientists told *Nature* that climate change has become taboo in their discussions with EPA leadership. The fact that agency leaders have consulted with climate sceptics has only added to the confusion.

One EPA official, who asked for anonymity because of career concerns, provided *Nature* with two lists circulating among Pruitt's team that seem to have been compiled by the Heartland Institute. One list, labelled "climate scientists", contains the names of more than 140 people, including many climate sceptics; the second names several dozen climate economists.

The Heartland Institute would not comment on the documents, but a spokesman confirmed that Heartland has provided the EPA with names of people for a climate science 'red team'. Many agency researchers assume that Pruitt will use the lists to assemble that team, but some fear that it could be used to identify candidates for empty slots on the EPA's Board of Scientific Counselors, which advises the agency's research arm. An EPA spokeswoman declined to comment on the lists or the science report.

For the anonymous official, the question now is whether the adversarial approach embodied by the 'red team' idea will drive the Trump administration to delay the science report. "They are aware of the report," the official says. "We don't know what they are going to do." Then there is the broader national climate assessment, which will delve into questions that have profound implications for government policy, such as how coastal communities should respond to rising seas. That document is expected to go out to federal agencies this month.

Pruitt will have to be careful how he handles both documents, says Kyla Bennett, a former EPA ecologist who now works for the watchdog group Public Employees for Environmental Responsibility in North Easton, Massachusetts. The EPA could ignore the climate report's findings while implementing policies that affect the oil, gas and coal industries, which Trump has vowed to protect and promote. But if the administration pushes regulations that ignore mainstream climate science, Bennett says, it is likely to face lawsuits from environmental and science groups.

"The EPA is supposed to be using the best science out there," she says. "They can't just suddenly say the Earth is flat, CO_2 is not a pollutant and coal is the best thing for the world."

Joseph Bast

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From: Joseph Bast
Sent: Mon 7/17/2017 11:40:27 PM
Subject: H. Sterling Burnett in Breitbart on China as a "climate leader"

Another good piece.

Joe

http://www.breitbart.com/big-government/2017/07/17/h-sterling-burnett-china-will-never-climate-leader-unless-payoff/

Breitbart
7/17/17

China Will Never Be a Climate Leader — Unless There Is a Payoff

By: H. Sterling Burnett, the Heartland Institute

Many of the stories on radio, television, and in print issued following President Donald Trump's decision to pull the United States out of the costly Paris climate agreement claimed America's absence from the accord means China has ascended as one of the world's leaders in the battle against human-caused climate change.

Indeed, just hours after Trump's announcement, at a summit aimed at promoting closer economic ties between China and the European Union (EU), Chinese Prime Minister Li Keqiang and the president of the European Council, Donald Tusk, stood proudly before a multitude of reporters to denounce Trump's decision and announce Europe and China would forge ahead with the Paris climate agreement.

Good luck with that!

The United States has led the world in reducing greenhouse-gas emissions, and it wasn't due to regulations or the Paris climate agreement. The natural-gas revolution—which has largely been made possible by fracking, a process demonized by many of the same people who support the Paris agreement—has significantly cut carbon-dioxide emissions. Over the past decade, CO2 emissions have fallen by more than 12 percent. This incredible decline should continue in future years, too, because natural-gas-related companies and products are improving their efficiency

daily.

By contrast, China's CO2 emissions surpassed U.S. emissions 15 years before they were expected to (more than a decade ago). China is now, by a substantial margin, the largest emitter of greenhouse gases in the world.

It's true China's per-capita emissions are declining, but that happens in virtually every country whose citizens experience the kind of higher personal income levels we're now seeing in China, because people become more willing to pay for costlier environmental amenities as they gain access to more wealth.

Because economic growth in China has slowed considerably and to limit its horrific air pollution problems, China is reducing the rate at which its coal use has grown in recent years, but it is not reducing total coal use or its carbon-dioxide emissions. China has also significantly reduced its state-established targets for new solar installations, diverting the solar panels previously slated to be used in the domestic market to the export market, flooding Europe and the United States with below-cost solar panels that have put many domestic manufacturers out of business.

Additionally, it's worth noting China regularly takes its massive wind farms offline during times of low demand for electricity, and it has built many turbines that are not even linked to the grid, generating power that ends up getting distributed to no one. These turbines are similar to China's ghost cities, many of which were built to artificially drive economic growth. They still dot the Chinese countryside, uninhabited and falling into disrepair. It should be remembered all those ghost wind turbines and cities required *a lot* of concrete, steel, and fossil fuels to construct—adding to China's carbon-dioxide emissions.

China is also promoting the construction of coal-fired power plants across the globe, building or financing large plants on the African continent and in India, Indonesia, Iran, Mongolia, Pakistan, Turkey, and Vietnam. China is exporting its carbon-dioxide emissions, allowing it to escape much of the blame regularly hurled by environmentalists at governments believed to be destroying the planet.

Under the terms of the Paris accord, China doesn't have to agree to cut its emissions. In fact, China admits its emissions will peak by at least 2030. But what matters is not *when* they peak but the level at which they do so. If they peak at double or quadruple what China's carbon-dioxide emissions are today, then all the emissions cuts made by the rest of the world won't offset the contributions made by China to the globe's total carbon-dioxide concentration level.

Indeed, the sham marriage between China and the European Union over the Paris climate agreement lasted less than a day—even shorter than the nine days it took for Cher to file for divorce from Gregg Allman!

China scuttled the proposed joint communiqué that would have been issued by it and the European Union announcing their planned climate cooperation, because the Chinese government had serious disagreements about trade issues, including the European Union's refusal to drop its World Trade Organization investigations into allegations China has been dumping below-cost steel into European markets. As with so many of the climate disasters hyped by alarmists, the planned joint commitment to the Paris climate agreement ultimately failed to materialize because national priorities overcame joint action.

How can the largest emitter of carbon dioxide in the world—one committed to growing emissions for the foreseeable future—be a leader in emissions reductions? It can't. The environmentalists and global bureaucrats propagating such a notion are, at best, engaging in wishful thinking that is motivated by their hatred of Trump. Americans should reject this hogwash!

H. Sterling Burnett, Ph.D. (hburnett@heartland.org)is a research fellow on energy and the environment at The Heartland Institute, a nonpartisan, nonprofit research center headquartered in Arlington Heights, Illinois.

From: Joseph Bast
Sent: Fri 7/7/2017 4:28:24 PM
Subject: Heartland on President Trump's Poland speech

http://american-exceptionalism.org/trump-defends-western-values-in-speech-to-the-polish-people/

Trump Defends Western Values in Speech to the Polish People

By Sam Karnick

In a speech in Warsaw, Poland today, U.S. President Donald Trump powerfully asserted an unabashed belief in Western (indeed, Christian) values and expressed a traditional American sense of optimism and determination in promising to defend those values and the people who hold them:

I declare today for the world to hear that the West will never, ever be broken. Our values will prevail. Our people will thrive. And our civilization will triumph.

The speech demonstrates a rather surprising mastery of rhetoric, using a visit to a foreign nation to emphasize the commonalities of the two nations' struggle for liberty while continually directing a strong defense of American values to the audience at home in the United States. In addition to his usual pithy, simple wording, Trump includes some longer sentences, less-familiar words, and more complex thoughts than U.S. audiences are accustomed to hearing from him.

…

It's an extraordinary speech. What is most interesting of all is that it strikes us as unusual for an American president openly to defend Western civilization from its detractors both within and outside. Instead of an apology tour or a crusade to bring democracy to nations where it has no chance of surviving, Trump goes to another nation and praises the heroism of the common people in defending their homeland and fighting to retain their religion, language, and traditional institutions. In so doing, he clearly endorses such endeavors for his own nation.

In observing that the strength of a nation is in the character of its people, Trump is telling his own country just where we have gone wrong and how we can get right again: "So, together, let us all fight like the Poles—for family, for freedom, for country, and for God." Yes, let's.

Joe

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Support Heartland today!

From: Joseph Bast
Sent: Thur 6/29/2017 2:24:03 PM
Subject: Trump is right about alternative energy: Des Moines Register

http://www.desmoinesregister.com/story/opinion/columnists/2017/06/28/why-trump-right-wind-power-and-his-detractors-wrong/435598001/

Des Moines Register
6/29/17

Why Trump is Right About Wind Power and His Detractors Are Wrong

By: Isaac Orr and Fred Palmer, The Heartland Institute

President Donald Trump has come under fire from wind-energy advocates for comments he made during a recent speech in Cedar Rapids. While promoting his "America First" energy plan, Trump stated, "I don't want to just hope the wind blows to light up your homes and your factories … as the birds fall to the ground."

Predictably, wind advocates and liberal news outlets were quick to point out that 36.5 percent of the electricity generated in Iowa in 2016 came from wind — the highest percentage of any state — and they took issue with his comment about birds. However, these criticisms are missing the point. Wind energy is less reliable and more expensive than coal or natural gas, and despite high rates of wind power, carbon-dioxide emissions have increased in Iowa at a time when they have fallen in 33 other states.

All these factors raise the question: What does anyone gain from subsidizing wind power?

Most of Iowa's electricity needs are met thanks to coal-fired power plants, which accounted for 47 percent of all the electricity generated in the state in 2016. (Nuclear accounted for approximately 9 percent and the remainder was powered by natural gas.)

Coal is the primary means of generating electricity in the Hawkeye State because the average wind turbine in Iowa produces electricity only approximately 34 percent of the time. Whether Iowa gets large amounts of electricity from wind power is immaterial; the turbines sit idle 66 percent of the time, and when they are idle, coal shoulders the load. Trump was 100 percent correct to say coal, not wind, keeps the lights on in homes and factories.

Wind is also much more expensive than traditional forms of power, such as coal and natural gas, because of high construction and maintenance costs. Electricity generated from wind is 2.7 times more expensive than electricity produced at existing coal-fired power plants and greater than 3.1 times more expensive than existing natural-gas plants.

Further, claims suggesting wind power is somehow cost competitive with coal and natural gas are pure fantasy — unless one factors in the generous tax credits lavished on wind producers. The federal government grants wind producers federal tax credits of 2.4 cents per kilowatt hour (kWh), and the state of Iowa provides an additional 1.5 cents per kilowatt hour generated on wind farms. In total, the tax credits reaped are 3.9 cents/kWh. It is these tax credits, not the inherent economics of wind turbines, that stimulate growth.

You don't have to take our word for it, either. Warren Buffett, the world-famous owner of Berkshire Hathaway and MidAmerican Energy, which owns the largest wind farms in Iowa, once candidly stated: "On wind energy, we get a tax credit if we build a lot of wind farms. That's the only reason to build them. They don't make sense without the tax credit."

How is it that wind advocates consider wind a "sustainable" form of energy when it is hopelessly dependent on transfusions of funds in the form of federal and state tax incentives for financial solvency?

Adding insult to injury, despite having the highest percentage of electricity generated from wind in the country, Iowa's carbon-dioxide emissions increased by 5.2 percent from 2000 to 2014. During the same period, 33 other states saw their CO2 emissions decline. Isn't reducing CO2 emissions the whole point of building wind farms in the first place?

While the Washington Post and the wind lobby jumped on Trump's comments about birds, there are far more serious issues regarding wind energy that are not being discussed, and that is truly a disservice to the country.

Regardless of whether wind turbines kill more birds than cats, buildings, or other forms of energy, we need to talk about why wind is not a benefit to electricity consumers and repeal policies that promote the expansion of wind and solar at the expense of more-affordable, more-reliable options.

Isaac Orr is a research fellow specializing in energy and environmental policy at The Heartland Institute, a free-market think tank founded in 1984. Fred Palmer is a senior fellow for energy policy at the institute. Contact: IOrr@heartland.org

From: Joseph Bast
Sent: Fri 7/14/2017 8:49:26 PM
Subject: Sterling Burnett: NY Magazine Climate Doomsaying Follows Familiar, Badly Mistaken Pattern

This article will appear at *The Federalist* shortly, thought you'd like to see it first.

True believers scream the loudest as their movements wane… the global warming movement is dying fast. Articles like "The Uninhabitable Earth" are simply proof of this.

Joe

From: Jim Lakely
Sent: Friday, July 14, 2017 2:51 PM
To: Heartland Institute Users
Cc: Tim Huelskamp; Ex. 6 - Personal Privacy- Huelscamp Gmail Edward Hudgins
Subject: Op-ed Burnett: NY Magazine Climate Doomsaying Follows Familiar, Badly Mistaken Pattern

Good afternoon, Heartlanders.

Below is a 1,747-word op-ed by Sterling Burnett written on spec and by request of *The Federalist*.

-Jim

NY Magazine Climate Doomsaying Follows Familiar, Badly Mistaken Pattern

By H. Sterling Burnett, Ph.D.

More than 100 years ago, it was not uncommon to find people, usually men, standing on street corners of major cities holding large placards or signs proclaiming, "Repent, the End is Near." Most people crossed the street to avoid these doomsayers and their rants

of the impending destruction of Earth. Nowadays, such latter-day prophets of the apocalypse lead government agencies—or even entire governments—are invited to testify in the halls of Congress, and write lengthy jeremiads in *New York Magazine*, as David Wallace-Wells did on July 9.

In his article, "The Uninhabitable Earth," Wallace-Wells issues numerous dire warnings, following in a long line of seers of impending planetary climate doom who have proclaimed only radical action in the form of abandoning the use of fossil fuels can save the planet.

For instance, in his 2006 review of Al Gore's book/movie *An Inconvenient Truth*, James Hansen, former director of NASA's Goddard Institute for Space Studies, warned, "We have, at most, 10 years—not 10 years to decide upon action, but 10 years to alter fundamentally the trajectory of global greenhouse emissions … We have reached a critical tipping point. It will soon be impossible to avoid climate change with far-ranging undesirable consequences."

In 2009, Hansen revised his prediction of doom for the worse, writing, "The dangerous threshold of greenhouse gases is actually lower than what we told you a few years ago. Sorry about that mistake. If the world does not make a dramatic shift in energy policies over the next few years, we may well pass the point of no return." (Hansen's tipping point date passed has already passed twice.)

Also in 2009, Gordon Brown, who was then serving as the prime minister of the United Kingdom, informed countries attempting to negotiate binding, steep greenhouse-gas emissions reductions at a United Nations-sponsored climate conference in Copenhagen, "There are now fewer than 50 days to set the course of the next 50 years and more. If we do not reach a deal at this time, let us be in no doubt: Once the damage from unchecked emissions growth is done, no retrospective global agreement in some future period can undo that choice. By then, it will be irretrievably too late."

Of course, no deal was reached, so by Brown's own logic, it's too late to save us.

Wallace-Wells puts his warning of doom this way: "It is, I promise, worse than you think.

If your anxiety about global warming is dominated by fears of sea-level rise, you are barely scratching the surface of what terrors are possible, even within the lifetime of a teenager today. ... Indeed, absent a significant adjustment to how billions of humans conduct their lives, parts of the Earth will likely become close to uninhabitable, and other parts horrifically inhospitable, as soon as the end of this century … no matter how well-informed you are, you are surely not alarmed enough."

Wallace-Wells blends speculation with misstated facts, misdirection, and overstated claims to weave a nightmarish scenario of the end of the world if humans don't repent of their sinful use of fossil fuels.

Antarctica Adding Ice

His paper is too long for a point-by-point refutation, so I'll address just a few important comments briefly. One niggling issue arises when Wallace-Wells describes the recent calving of an iceberg the size of Delaware from the fourth-largest ice shelf in Antarctica. Wallace-Wells hints this widely publicized event was due to global warming, but it wasn't. The scientists have been tracking this collapse for more than a decade and say it is due to natural causes. Indeed, scientists expect the ice shelf the iceberg broke off from to continue *growing*.

Why? Well it turns out, contrary to climate model projections Antarctica has been adding tens of thousands of tons of ice each year for millennia. A study by NASA published in the *Journal of Glaciology* shows snow in Antarctica began a long-term accumulation 10,000 years ago and is adding much more ice to the continent each year than it is losing.

NASA's analysis reveals Antarctica experienced a net gain of 112 billion tons of ice annually from 1992 to 2001, slowing to 82 billion tons of ice per year between 2003 and 2008. As a result, Antarctica is reducing sea level rise by 0.23 millimeters per year. More recent research shows the ice mass on the East Antarctic ice sheet, which is 1,000 percent larger than the declining West Antarctic ice sheet, is adding ice, has been stable for an estimated 600 years, and is likely to remain stable for at least 500 years more.

Wallace-Wells also simply misstates the facts concerning rising temperatures. Wallace-

Wells claims "last month's satellite data show the globe warming, since 1998, more than twice as fast as scientists had thought." Even Penn State climate researcher Michael Mann, one of the most visible advocates for the theory humans are causing dangerous climate change, says this claim is "just not true."

The truth is data from global satellites, weather balloons, and even the highly doctored ground based temperature measurements demonstrate the amount and rate of global warming over the past half century is considerably lower than the average predictions of climate models. In fact, Mann says Wallace-Wells' article consistently overstates even the extreme projections of climate models, calling the *NY Magazine* article a "doomist framing" of climate science.

Wallace-Wells scares readers with the claim warming threatens to melt the frozen tundra, unleashing torrents of the powerful greenhouse-gas methane that has lain trapped for eons in the permafrost into the atmosphere, significantly raising Earth's temperature.

However, Mann's response to this claim is the science "doesn't support the notion of a 'planet-melting methane bomb.'" Among the reason's Wallace-Well's methane claims are so outlandish is any methane released would be gradual, and methane has a relatively short atmospheric life. (It's removed from the atmosphere less than 10 years after introduction.)

Wallace-Wells claims many of Earth's regions would become uninhabitable because of increased global temperature, but those statements do not hold up to scrutiny. Any temperature rise driven by anthropogenic forces will not be uniform in nature. Rather, the coldest, least-hospitable places—under the theory, anyway—are likely to warm the most, with temperate regions along and around the equator expected to experience little if any increase in temperature.

Warming Saves Lives

Making cold places moderately warmer makes them more suitable for life and better for agriculture. A 2015 article in *The Lancet* examined health data from 384 locations in 13 countries, accounting for more than 74 million deaths. The authors determined cold weather, directly or indirectly, kills 1,700 percent more people than hot weather. As Jane Brody, the author of *The New York Times* story discussing the article noted, "Over time, as global temperatures rise, milder winter temperatures are likely to result in fewer cold-related deaths, a benefit that could outweigh a smaller rise in heat-caused mortality."

In short, for health, cold weather is bad, hot weather is good. Get it?

Even heat-related deaths in a warmer world should decline, as wealthier future generations in developing countries increasingly gain access to modern health care and

adopt technologies such as air conditioning, which have made places such as Arizona, Nevada, Texas, and New Mexico habitable for millions of people. Despite often extreme heat, and the fact more people live in the Southwest than at any time in the past, fewer people die from heat-related illnesses than ever before.

Flawed Farm Report

And then there is what I take to be the biggest fib in the *NY Magazine* article: a claim in the section titled "The End of Food" that alleges crops will increasingly fail and famine and starvation will increase in a warmer world.

Even as the world has warmed over the past 150 years, crops—including staple grains and cereals like rice, corn, and wheat—have regularly set records year over year. You heard that right; during the period of purported dangerous warming, crop yields have increased and starvation and malnutrition have fallen dramatically. This should not surprise anyone who understands agronomy and plant biology. Most of the warming experienced has reduced nighttime lows in the winter, rather than increasing daytime highs in the summer. Fewer frosty nights is better for agriculture, as it extends the growing season.

Additionally, the increasing levels of carbon dioxide in the atmosphere have contributed to a general greening of Earth. Many crop and non-crop plants evolved when carbon-dioxide levels were much higher than they are today and thus do better (grow faster and bigger) when carbon-dioxide increases. Copious amounts of research confirm this. Because carbon-dioxide improves plant growth, greenhouse operators artificially add it to their greenhouses. They also regularly artificially heat their greenhouses, because despite the increased carbon-dioxide concentrations, the optimum temperature is not reached with the addition of carbon dioxide and sunlight alone.

Further, it's also worth noting that under higher carbon-dioxide conditions, plants use water more efficiently. Even as temperatures rise, they lose less water to transpiration, leaving more of it for fruit, root, and leaf growth.

One study involving 32 researchers who represented nine countries published in *Nature Climate Change*—using three long-term satellite-derived leaf area index (LAI) records and 10 global ecosystem models—found, from 1982 through 2009, "a persistent and widespread increase of growing season integrated LAI (greening) over 25% to 50% of the global vegetated area, whereas less than 4% of the globe shows decreasing LAI (browning)."

They traced this global greening directly to the carbon-dioxide fertilization effect, which they said explains 70 percent of the observed greening. This has been confirmed by satellites, which show areas of desert are being reclaimed by vegetation because of increasing carbon-dioxide levels.

I guess the scientists consulted by Wallace-Wells missed all the research demonstrating carbon dioxide is good for plants!

I don't often agree with Michael Mann, but concerning Wallace-Wells' "The Uninhabitable Earth," his conclusion is spot on: "The article argues that climate change will render the Earth uninhabitable by the end of this century," Mann told the *Philadelphia Inquirer*. "Extraordinary claims require extraordinary evidence. The article fails to produce it."

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From: Joseph Bast
Sent: Mon 6/26/2017 5:25:46 PM
Subject: Rick Perry was right: CO2 is not the control knob of climate

https://www.heartland.org/news-opinion/news/rick-perry-was-right-on-cnbc-co2-is-not-the-control-knob-of-climate

Rick Perry Was Right on CNBC: CO2 Is not the Control Knob of Climate

June 23, 2017

By Jim Lakely

When you know what's going on – and know the science – you realize that it's Keith Seitter of the AMS who has some explaining to do, not Rick Perry.

To hear the corrupt, know-nothing mainstream media tell it, Energy Secretary Rick Perry really stepped in it when he said human emissions of carbon dioxide (CO2) is not the major driver of global warming. And, as usual with the MSM, it's not true. The story is merely fodder for a false narrative about Perry, and the state of climate science.

On Monday, CNBC "Squawk Box" host Joe Kernen asked the secretary whether he believes carbon dioxide "is the primary control knob for the temperature of the Earth and for climate." Perry's answer:

No, most likely the primary control knob is the ocean waters and this environment that we live in. … The fact is this shouldn't be a debate about, 'Is the climate changing, is man having an effect on it?' Yeah, we are. The question should be just how much, and what are the policy changes that we need to make to effect that?

Perry's answer is miles ahead, and smarter, than his predecessors in the Obama administration – who merely parroted the bromides of the climate alarmism industry, and never looked under the hood of the science.

Is CO2 the "control knob" of the climate? No. Are the oceans? Well … that's complicated. No serious scientist, uncorrupted by the CO2-is-to-blame racket, would say there is a single "control knob" that controls the climate. So, on this point, Perry is 100 percent correct. And CNBC is not the ideal place for a deeper discussion of how the earth's oceans absorb and release heat and CO2 as part of a very complex planetary ecosystem that we are decades away from fully understanding, if ever. Perry had 15 seconds to answer. Give him a break – and points to him for getting closer than any Obama-era cabinet official.

Yet, of course, HuffPost and other MSM outlets made a phony *big deal* about Perry's answer. They lifted up a ridiculous outrage letter by Keith L. Seitter, executive director of the American Meteorological Society (AMS), which said it is "critically important" that Perry understand that greenhouse gas emissions from human activity are, indeed, the "primary driver" of climate change.

"This is a conclusion based on the comprehensive assessment of scientific evidence," Seitter wrote. "It is based on multiple independent lines of evidence that have been affirmed by thousands of independent scientists and numerous scientific institutions around the world. We are not familiar with any scientific institution with relevant subject matter expertise that has reached a different conclusion."

Well, if Seitter considers the AMS a "scientific institution," and I'm guessing he does, he's misrepresenting his own organization. According to a 2013 survey of the AMS:

Barely half of American Meteorological Society meteorologists believe global warming is occurring and humans are the primary cause, a newly released study reveals. The survey results comprise the latest in a long line of evidence indicating the often asserted global warming consensus does not exist.

Hmmm. A signatory of that AMS report is none other than Keith Seitter. Strange. Let's dig deeper.

The central question in the survey consisted of two parts: "Is global warming happening? If so, what is its cause?" Answer options were:

Yes: Mostly human

Yes: Equally human and natural

Yes: Mostly natural

Yes: Insufficient evidence [to determine cause]

Yes: Don't know cause

Don't know if global warming is happening

Global warming is not happening

Just 52 percent of survey respondents answered Yes: Mostly human. The other 48 percent either questioned whether global warming is happening or would not ascribe human activity as the primary cause.

So … the "conclusion based on the comprehensive assessment of scientific evidence," according to Seitter's own organization, is that there is *no conclusion* that

human-emitted CO2 is the “control knob” of climate. Is The Heartland Institute misinterpreting the data? Not according to climate scientist Judith Curry, who is no “denier.”

In summary, Heartland’s interpretation is not a misrepresentation of the actual survey results, although the authors and the AMS are interpreting the results in a different way. A better survey might have avoided some of the ambiguity in the interpretation, but there seems to be no avoiding the fact that the survey showed that 48% of the AMS professional members do not think that most of the warming since 1850 is attributable to humans.

When you know what’s going on – and know the science – you realize that it’s Keith Seitter who has some explaining to do, not Rick Perry.

From: Joseph Bast
Sent: Fri 5/26/2017 3:23:22 PM
Subject: Anatomy of a Deep State - WSJ - and would you like to be invited?

Friends,

Today's Wall Street Journal reports, in the article below, a meeting to be convened in June by EPA's "Science Integrity Official" that seems to lack individuals with, shall we say, "science integrity." I'm just starting to think about this, but…

* I have a list of about 300 scientists and economists who specialize in climate change and are not dependent on EPA grants, all with advanced degrees and with publications in the field, who perhaps could be invited to attend this meeting. You may have your own similar list.

* If you have advice on whether/how I might ask Francesca Grifo to invite these folks, please share it with me. I suppose a simple letter or email from me to her might get more attention if someone else on the Bcc line of this message were to provide insight into how it ought to be phrased, to whom it should be sent or cc'ed, etc.

* Please let me know if you would be interested in attending this meeting, and perhaps supply names and contact info for others who would be.

Joe

Joseph Bast

President

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https://www.wsj.com/articles/anatomy-of-a-deep-state-1495753640

Anatomy of a Deep State

The EPA's 'Science Integrity Official' is plotting to undermine Trump's agenda.

Kimberley A. StrasselMay 25, 2017 7:07 p.m. ET

ByKimberley A. Strassel

On May 8 a woman few Americans have heard of, working in a federal post that even fewer know exists, summoned a select group of 45 people to a June meeting in Washington. They were almost exclusively representatives of liberal activist groups. The invitation explained they were invited to develop "future plans for scientific integrity" at the Environmental Protection Agency.

Meet the deep state. That's what conservatives call it now, though it goes by other names. The administrative state. The entrenched governing elite. Lois Lerner. The federal bureaucracy. Whatever the description, what's pertinent to today's Washington is that this cadre of federal employees, accountable to no one, is actively working from

within to thwart Donald Trump's agenda.

There are few better examples than the EPA post of Scientific Integrity Official. (Yes, that is an actual job title.) The position is a legacy of Barack Obama, who at his 2009 inaugural promised to "restore science to its rightful place"—his way of warning Republicans that there'd be no more debate on climate change or other liberal environmental priorities.

Team Obama directed federal agencies to implement "scientific integrity" policies. Most agencies tasked their senior leaders with overseeing these rules. But the EPA—always the overachiever—bragged that it alone had chosen to "hire a senior level employee" whose only job would be to "act as a champion for scientific integrity throughout the agency."

In 2013 the EPA hired Francesca Grifo, longtime activist at the far-left Union of Concerned Scientists. Ms. Grifo had long complained that EPA scientists were "under siege"—according to a report she helped write—by Republican "political appointees" and "industry lobbyists" who had "manipulated" science on everything from "mercury pollution to groundwater contamination to climate science."

As Scientific Integrity Official, Ms. Grifo would have the awesome power to root out all these meddlesome science deniers. A 2013 Science magazine story reported she would lead an entire Scientific Integrity Committee, write an annual report documenting science "incidents" at the agency, and even "investigate" science problems—alongside no less than the agency's inspector general.

And get this: "Her job is not a political appointment," the Science article continues, "so it comes with civil service protections." Here was a bureaucrat with the authority to define science and shut down those who disagreed, and she could not be easily fired, even under a new administration.

Ms. Grifo perhaps wasn't too busy in the Obama years, since EPA scientists were given carte blanche to take over the economy. She seems to have been uninterested when EPA scientists used secret meetings and private email to collude with environmental groups—a

practice somewhat lacking in scientific integrity.

She has been busier these past few months. In March the Sierra Club demanded that the EPA's inspector general investigate whether the agency's newly installed administrator, Scott Pruitt, had violated policy by suggesting carbon dioxide might not be the prime driver of global warming. The inspector general referred the matter to . . . the Scientific Integrity Official. So now an unelected, unappointed activist could pass judgment on whether the Senate-confirmed EPA chief is too unscientific to run his own agency. So much for elections.

There's also that "scientific integrity" event planned for June. Of the 45 invitations, only one went to an organization ostensibly representing industry, the American Chemistry Council. A couple of academics got one. The rest? Earthjustice. Public Citizen. The Natural Resources Defense Council. Center for Progressive Reform. Public Employees for Environmental Responsibility. Reporters Committee for Freedom of the Press. Environmental Defense Fund. Three invites alone for the Union of Concerned Scientists. Anyone want to guess how the meeting will go?

This is a government employee using taxpayer funds to gather political activists on government grounds to plot—let's not kid ourselves—ways to sabotage the Trump administration. Ms. Grifo did not respond to a request for comment.

Messrs. Pruitt and Trump should take the story as a hint of the fight they face to reform government. It's hard enough to overcome a vast bureaucracy that ideologically opposes their efforts. But add to the challenge the powerful, formalized resistance of posts, all across the government, like the Scientific Integrity Official. Mr. Obama worked hard to embed his agenda within government to ensure its survival. Today it is the source of leaks, bogus whistleblower complaints, internal sabotage.

Pitched battle with these folks is no way to govern. The better answer is dramatic agency staff cuts—maybe start with the post of Scientific Integrity Official?—as well as greater care in hiring true professionals for key bureaucratic posts. The sooner department heads recognize and take action against that deep state, the sooner this administration might begin to drain the swamp.

Write to kim@wsj.com.

Appeared in the May 26, 2017, print edition.

To: Sadler, Kelly J. EOP/WHO[**Ex. 6 - Personal Privacy**
From: Joseph Bast
Sent: Wed 5/24/2017 8:00:40 PM
Subject: FW: FW: Heartland Institute Experts React to President Trump's Fiscal Year 2018 Budget

FYI.

Joe

From: Billy Aouste
Sent: Wednesday, May 24, 2017 3:00 PM
To: Heartland Institute Users
Subject: FW: Heartland Institute Experts React to President Trump's Fiscal Year 2018 Budget

Good Afternoon Everyone,

The following press release will go out to 26,777 Chicago, Environment, Energy, Political, and regional press and media contacts.

Sincerely,
Billy

THE HEARTLAND INSTITUTE
HEARTLAND.ORG

Heartland Institute Experts React to President Trump's Fiscal Year 2018 Budget

President Donald Trump on Tuesday unveiled his budget for Fiscal Year 2018, which begins October 1. Mitch Mulvaney, director of the Office of Management and Budget, says the budget eliminates 66 federal agencies or programs, will save $26.7 billion this year, and will balance the budget in 10 years. However, the $4.1 trillion budget spends about the same as last year, including $639 billion on defense, a $52 billion increase. The blueprint also predicts the nation's economy will grow by 3 percent a year, a sharp increase from the average of the Obama administration of less than 2 percent.

Among the programs this budget cuts: Corporation for Public Broadcasting, National Endowment for the Arts, National Endowment for the Humanities, Low Income Home Energy Assistance Program (LIHEAP), HOME Investment Partnerships Program, National Wildlife

Refuge Fund, Energy Star and Voluntary Climate Programs, Green Climate Fund, and Global Climate Change Initiative.

The following statements from policy experts at The Heartland Institute – a free-market think tank – may be used for attribution. For more comments, refer to the contact information below. To book a Heartland guest on your program, please contact Media Specialist Billy Aouste at media@heartland.org and 312/377-4000 or (cell) 847/445-7554.

"President Trump's budget proposes many long overdue budget cuts, adding up to trillions in gross reductions from the baseline over the next 10 years. Trump proposes to balance the budget in 10 years entirely with those spending reductions, and no tax increases. The proposed budget in fact incorporates tax reform by sharply reducing tax rates, as well as repealing and replacing Obamacare, which would cut taxes by about $1 trillion over 10 years.

"Those policies, plus the spending cuts and President Trump's deregulation, are tremendously pro-growth – which makes the budget's increased growth assumptions actually quite conservative and likely to be exceeded in practice, as a long overdue, booming recovery from the 2008 recession finally ensues, correcting a central Obama failure. The end result of that would be to sharply reduce the national debt as a percent of GDP, down to 60 percent by the projections of Trump's Office of Management and Budget."

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Mr. Ferrara is the author of Power to the People: The New Road to Freedom and Prosperity for the Poor, Seniors, and Those Most in Need of the World's Best Health Care *(2015), and* The Obamacare Disaster *(2010).*

"Presidential budget proposals are best thought of as statements of principles, as opposed to actual economic plans, and President Trump's proposal is no different. Balancing the federal budget in 10 years is an audacious goal, but this proposal demonstrates the president's willingness to start down that road.

"Achieving that goal will, by necessity, require changing the largest driver of federal spending: entitlement spending. No amount of projected growth will hand-wave away that mathematical reality. At some point, either now or later, lawmakers will need to make tough choices, and perhaps break campaign promises, if it means coming to terms with the reality of federal debt by cutting or reforming entitlement program spending.

"The sooner this problem is dealt with, the easier it'll be for everyone, and Trump's proposal is a good starting place for lawmakers to use when figuring out how to do this. Lawmakers in

Congress should work with President Trump to fill in some of the proposal's question marks and unaddressed questions, but sticking to the proposal's outlines where feasible would definitely restore the proper role and size of the federal government."

Jesse Hathaway
Research Fellow, Budget and Tax Policy
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Managing Editor, *Budget & Tax News*
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"President Trump's budget proposal shows great care in establishing that the costs of government programs reflect their claimed benefits. Items such as means-testing of assistance to farmers, state sharing of Supplemental Nutrition Assistance Program spending, and the option of states receiving block grants of Medicaid funding can make a big difference in federal spending over time, without forcing any big changes in what the government does. The proposed budget would also increase military spending, though not nearly on the level of what President Ronald Reagan did.

"All of that points to the conservatism of the budget proposal. It would not change things greatly, except for slowing the rate of growth of government. That, however, is a positive change – and one that the president's political enemies will characterize as a dire threat to the nation's future. That reflects the sad state of the nation's current political culture."

S.T. Karnick
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"We've long needed to get the country's deficit and debt under control. This budget is a small start, but a start, nonetheless. Every member of the Senate and the House will have a pet project or program that he or she wants to protect from cuts. But let's hope they will put the demands of the Constitution – as well as the people's desire to limit the size of government and put the nation's fiscal house in order – above the desires of the special interests served by pork-barrel, special-interest spending.

"Climate programs are a great place to start since they slow economic growth and have no measurable payoff. If it is not a core function of government, the government shouldn't be funding it."

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"President Trump's proposed budget is a mixed bag for budget hawks. The president should be applauded for ending the wealth transfer from the middle-income citizens of the United States to wealthy dictators in developing nations in the name of the Green Climate Fund. However, his decision to increase military spending, and thus this budget's failure to actually reduce overall government spending, is disappointing, especially if Trump is serious about enacting ambitious tax reform."

Isaac Orr
Research Fellow, Energy and Environment Policy
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"Ironically, President Trump's proposed budget takes on risk by trying to play it safe with entitlement reform. Neither Social Security nor Medicare is sustainable in its current form. Maintaining the status quo on these programs is easy now, but it will soon be impossible.

"Reducing Medicaid spending is a viable approach to putting patients back in the driver's seat of their health care decisions, as opposed to third-party interlopers blocking the path to innovative health care solutions for the country's needy."

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To: Jesse Hathaway[JHathaway@heartland.org]; Aaron Stover[AStover@heartland.org]; Bette Grande[Bette@BetteGrande.com]; Craig Idso[cidso@co2science.org]; Dan Miller[Ex. 6 - Personal Privacy]; Donald Kendal[DKendal@heartland.org]; Fred Palmer (External)[Ex. 6 - Personal Privacy]; H. Sterling Burnett[HBurnett@heartland.org]; Isaac Orr[IOrr@heartland.org]; Jay Lehr[JLehr@heartland.org]; Jim Johnston (External)[Ex. 6 - Personal Privacy]; Jim Lakely[JLakely@heartland.org]; John Nothdurft[JNothdurft@heartland.org]; Peter Ferrara[PFerrara2@heartland.org]; Ron Arnold[Ex. 6 - Personal Privacy]; Russell Cook[Ex. 6 - Personal Privacy]; Sam Karnick[SKarnick@heartland.org]; Steve Goreham[Ex. 6 - Personal Privacy]; Timothy Benson[TBenson@heartland.org]; Tom Harris[tom.harris@sympatico.ca]
From: Joseph Bast
Sent: Wed 5/24/2017 1:50:57 PM
Subject: FW: What's in Trump's 2018 budget request for science?

http://www.sciencemag.org.ezp-prod1.hul.harvard.edu/news/2017/05/what-s-trump-s-2018-budget-request-science

What's in Trump's 2018 budget request for science?

By Science News StaffMay. 23, 2017 , 12:45 PM

President Donald Trump unveiled his full 2018 budget request to Congress today. The spending plan, for the fiscal year that begins 1 October, fleshes out the so-called skinny budget that the White House released this past March. That plan called for deep cuts to numerous research agencies. But it did not include numbers for some key research agencies, such as the National Science Foundation. *Science*Insider will be scouring today's budget documents for fresh details. Come back to our rolling coverage for analysis and reaction.

NIH spending slashed by 22%, overhead payments squeezed

As expected, the National Institutes of Health's (NIH's) budget would be slashed to $26.9 billion in the full Trump 2018 budget request. That is $7.7 billion less than NIH's final 2017 budget of $34.6 billion, or a 22% cut.

In a widely anticipated move that has already raised alarm bells at research institutes, a White House budget document states that "significant reductions" will come from slashing the overhead payments that NIH now pays to universities on top of the direct research costs for a project. These so-called indirect costs, which are paid at rates now negotiated between individual institutions and the government, currently comprise about 30% of NIH's total grant funding. The

variable indirect cost rates would be replaced with a uniform rate of 10% of total research costs for all NIH grants to reduce paperwork and "the risk for fraud and abuse," states a budget document for the Department of Health and Human Services (HHS).

A 10% cap would bring NIH's indirect costs rate "more in line" with the rate paid by private foundations such as the Bill & Melinda Gates Foundation, the overall budget document notes. NIH will also work to reduce regulatory burdens on grantees.

As in the "skinny" budget released earlier, the full NIH budget proposal eliminates the Fogarty International Center, which has a $72 million budget this year. But $25 million would be set aside for other institutes to fund some of the center's global health research and training.

In another structural change, the Agency for Healthcare Research and Quality, which received $324 million in direct funding this year, would be folded into NIH. It would become a new National Institute for Research on Safety and Quality funded at $272 million from NIH's budget, with an additional $107 million from an existing trust fund for patient-centered outcomes research.

One bright spot is that the proposal includes funding mandated by the 21st Century Cures Act for the Obama administration's Cancer Moonshot, Brain Research through Advancing Innovative Neurotechnologies (BRAIN) neuroscience initiative, and Precision Medicine Initiative's planned 1-million volunteer health study. As required by statute, those programs would receive $496 million in Cures funding in 2018, a 41% increase, from a mandatory funding stream separate from NIH's regular appropriation.

Unlike in previous years, HHS did not hold a budget press briefing where HHS officials usually answer reporters' questions about the proposal. At a House of Representatives hearing last week, one Democrat said the cuts would mean 5000 to 8000 fewer research grants in 2018.

United for Medical Research, a Washington, D.C.–based coalition which represents many biomedical research advocacy groups, decried the "drastic cuts" to NIH and called them "a significant blow to medical research." Tannaz Rasouli, senior director, public policy and outreach for the Association of American Medical Colleges in Washington, D.C., says her group is also concerned that the plan to "dismantle" AHRQ then "rebuild it from scratch" could disrupt research. Any restructuring would likely require involvement from Congress, she notes.

Both Republicans and Democrats on the committees overseeing NIH's budget have already called Trump's proposed cuts to NIH a nonstarter. "Thank goodness we don't expect Congress to take this budget seriously," says Jennifer Zeitzer, director of legislative relations for the Federation of American Societies for Experimental Biology in Bethesda, Maryland. – *Jocelyn Kaiser*

NASA cuts put carbon monitoring effort in crosshairs

The request for NASA would kill off a research program necessary for establishing effective

carbon monitoring in the United States and other countries, potentially jeopardizing the type of carbon accounting necessary to carry out the Paris climate agreement.

NASA's Carbon Monitoring System (CMS) was begun by congressional mandate in 2010 to develop methods for assessing the greenhouse gas emissions from forests and other natural carbon stocks. While much of the work the $10 million NASA program supports is focused on the United States, it also supports pilot technologies for eventual use in countries such as Colombia, Cambodia, Mexico, and Peru.

"These countries rely on this collaboration in order to monitor the forests better," says Pontus Olofsson, a physical geographer at Boston University who has worked on two CMS grants, including a project that tracks tropical forests through time, estimating carbon emissions down to the pixel. "It would be devastating not only for us but also these partner countries."

The science program currently supports a wide area of research, including airborne measures of Alaska's interior forests; prototype methane monitors for California regulators; satellite-based assessments of farming emissions; and studies of forest fires in the Amazon basin.

Cutting this research would not just cause short-term troubles. It would be a long-lasting setback to combating climate change, says David Victor, an expert on international climate policy at the University of California, San Diego

“These programs also lay the foundation for a future verification system,” Victor says. “ Serious treaties to make deep cuts in emissions will require verification, just as serious arms control agreements only work when commitments can be verification. The country needs to start building this capability if we are to be ready to manage the global climate problem.”

The cut appears to be part of a pattern, Olofsson adds. The request also calls for cuts in international climate programs such as SilvaCarbon, a forest assistance program supported by the U.S. Geological Survey and the U.S. Forest Service, and they are all links in a chain that is working toward providing effective measures of human-caused carbon dioxide emissions. SilvaCarbon, for example, relies on the NASA pilot projects for its collaborations, Olofsson says. "If you take out one piece, it's kind of hard for things to function."

The shuttered effort would be part of $59 million in proposed cuts to earth science research grants at the agency, alongside a plan to end five space-based projects: four missions that the agency detailed in March and the elimination of the troubled Radiation Budget Instrument, a tool that was set to fly on the JPSS-2 weather satellite to measure the incoming and outgoing energy of the planet. Overall, the budget of NASA’s earth science program would drop 8.9% from enacted 2017 levels, from $1.921 million to $1.754 million.

The full budget request otherwise closely matches the "skinny" budget proposed in March. Overall, the Office of Science would drop 1% from enacted 2017 levels, to $5.712 billion. Heliophysics would see its budget unchanged, while astrophysics would see a boost of 9%, from $750 million to $817 million. Planetary science, already a winner in the 2017 budget deal, would see its budget rise even higher, to $1.930 billion.

Robert Lightfoot, NASA's acting director, was upbeat in selling the proposal in a webcast, as befitting someone leading an agency that received $19.1 billion in proposed financing, a mere 2.8% drop from 2017 levels. "What this budget tells us to do is keep going," he said. "Keep doing what we're doing."

The proposed budget also retains plans to eliminate the agency's education office which, it says, "lacks sufficient outcome measures to assess the effectiveness of its programs." Congress has rejected past efforts to restructure that program. -- *Paul Voosen*

At DOE, big cuts at user facilities and a mixed message on ITER

The Trump administration would take an ax to the Department of Energy's (DOE's) Office of Science, the single largest funder of the physical sciences in the United States.

Spending for the office would fall 17% to $4.473 billion, the lowest level since 2008, *not* adjusting for inflation. The ax would fall on some research programs harder than others, however. In particular, DOE's work on biological and environmental research would fall by 43%, as the administration cuts or eliminates much of DOE's climate research.

The budget is far from a done deal; Congress still has to come up with its own spending plan for the next fiscal year, which begins 1 October. But even if it doesn't pass, the budget sends a troubling message, says one official at a DOE national laboratory who asked not to be named to avoid repercussions for the lab. "Basically, it says [science] is not important," the official says. "It says, 'We don't care if we have a leadership role in science and technology, we've got other priorities.'"

The Office of Science funds six research programs, and under the proposed budget all but one would take a significant cut.

Basic energy sciences (BES) funds research in chemistry, materials sciences, and condensed matter physics, and supports DOE's synchrotron light sources, neutron sources, and other user facilities. Long the rising star in the DOE portfolio, BES would see its budget fall 16.9% to $1.555 billion. And BES would lose several of its user facilities. For example, two of five nanoscience centers at the office's ten national labs would close and the Stanford Synchrotron-Radiation Lightsource would run for three months then be mothballed. All of BES's user facilities would see their budgets cut by 6-10%.

Similarly, the high energy physics program would receive a cut of 18.4% to $673 million. There, the cuts would largely come at the expense of research funding and the operations of existing facilities. For example, the administration would shave $20 million simply by running the accelerator complex at Fermi National Accelerator Laboratory for 1,800 hours in fiscal year

2018 instead of the 5,983s it ran in 2016 or the 4,800 hours that DOE consider optimal.

Nuclear physics would see its budget fall 19.1% to $503 million. Physicists in that program would be able to run their two major facilities, the Relativistic Heavy Ion Collider at Brookhaven National Laboratory in Upton, New York, and the Continuous Beam Electron Facility at the Thomas Jefferson National Accelerator Facility in Newport News, Virginia, for just 10 weeks apiece. The budget would also cut funding for construction of the Facility for the $730 million Rare Isotope Beams at Michigan State in East Lansing. The project is already 70% done, but DOE would "rebaseline" it, delaying its completion and, inevitably, increasing the total cost.

Fusion energy sciences would be cut by 18.4% to $310 million. Nevertheless, the administration seems ready to stay with ITER, the international fusion experiment under construction near Cadarache, France, as it allots $63 million for the project. That's far less than U.S. researchers need to stay on schedule for building their parts of the great machine and would effectively kill the U.S. project, the lab official says: "The words don't say, 'Withdraw from ITER, but for all practical purposes, the numbers do."

The biggest loser in the Trump budget is DOE's biological and environmental research (BER) program, whose budget would plummet 43% to $349 million. Much of that cut would come out of DOE's climate modeling research. The BER program contains two main components, biological systems sciences, which fund research such as genomics and advanced biofuel, and earth and environmental systems sciences (EESE), which funds research such as atmospheric monitoring and modeling. And EESE would suffer a cut of 61% to $123.6 million.

Among the DOE science programs, the one winner under the Trump budget would be the Advanced Scientific Computing Research (ASCR) program, which would receive an 11.6% boost to $722 million. But even there, the picture is complicated. Spending on computing research would actually fall, while ASCR would put $197 million toward DOE's exascale computing project--an effort to develop supercomputers than can execute 1 billion billion operations per second. Of course, with all the other cuts in DOE's science programs, it's not clear what all that extra computing power would be used to do.

NOAA details cuts to climate research in glowing terms

The request for the National Oceanic and Atmospheric Administration (NOAA) would drastically cut into the agency's climate research, shuttering a host of labs and programs. The agency released a detailed guide to these proposed cuts today — and described the programs on the chopping block in glowing terms that seemed to emphasize their value even as it proposed their elimination.

NOAA's Office of Oceanic and Atmospheric Research (OAR), one of the agency's primary research arms, would see its budget drop by 22%, from $514 million to $400 million, under the proposal. Despite these cuts, the proposal reads, the office would continue to "provide robust science that is instrumental to preventing the loss of human life, managing natural resources, and

maintaining a strong economy."

OAR's climate-focused program would see a cut of $31 million, with $21 million of it taken from support for competitive research grants. Cuts would also terminate "Arctic research focused on improvements to sea ice modeling and predictions that support the safety of fishermen, commercial shippers, cruise ships, and local communities," the agency notes.

The proposal would also eliminate the Air Resources Laboratory in Silver Spring, Maryland, ending its "research on air chemistry, mercury deposition, and atmospheric dispersion of harmful materials." Development of an atmospheric model that "has emergency response applications, including tracking mercury deposition and anthrax bioterrorism," would also end, it noted.

The agency would also kill Vortex-Southeast, a $5 million "program used to detect, respond to, and warn against tornadoes in the Southeastern United States." And it would eliminate the $1.9 million genomics program at the Atlantic Oceanographic and Meteorological Laboratory, which "supports coral monitoring and restoration, fisheries assessments for species such as Bluefin tuna larvae."

The agency requested $1.058 billion for the National Weather Service, down 6% from 2017. No need for $11 million for tsunami warning, it says — it will keep only one warning center open and eliminate support for preparedness and innovation research. The agency would also cut $5 million from its next-generation weather model, slowing "the transition of advanced modeling research into operations." And it would save another $5 million by terminating "all development, testing, and implementation of experimental products to extend operational weather outlooks … from 16 days to 30 days" — a priority of the recent weather bill passed by Congress.

All of these cuts, along with those detailed earlier in the administration's "skinny" budget, are likely to face a skeptical Congress that, in signing the recent government-financing deal for 2017, actually boosted the budget of OAR by 6.7%, and strongly supported most of the agency's other programs.

Indeed, the only coherence between the administration and Congress could be cuts to NOAA's satellite branch, the National Environmental Satellite, Data, and Information Service (NESDIS). The Trump proposal would drop the NESDIS budget by 17%, including an already planned cut of $318 million to the GOES-R geostationary satellite program. NOAA's two JPSS polar weather satellites would see small cuts, while the two polar satellites planned to follow in their wake — called the Polar Follow On — would face a cut of $189 million this year as NOAA rethinks the satellites' futures in the face of competition from constellations of small commercial satellites. -- *Paul Voosen*

Basic research takes big hit overall, but would grow at NASA, defense department

The White House wants to cut federal spending on basic research by 13%, or $4.3 billion, to $28.9 billion, according to the request.

Historically, the federal government has provided the bulk of the nation's spending on fundamental science, defined as studies undertaken without "specific applications towards processes or products in mind." In recent years, however, the share of basic research funding provided by the federal government has been slipping, from roughly 70% in 1960s and 1970s to an estimated 44% in 2015.

Under the request, just four agencies would see increases in basic research spending. (**There are two caveats**. First, the comparisons are with the 2016 funding levels; the final 2017 budget was enacted in early May, too late for inclusion in the president's request. Second, these numbers are smaller than the agency's overall research budget because of definitional issues.)

- The military's basic science account would get a 6%, $117 million boost to $2.24 billion. The Defense department is a major funding of academic basic research in mathematics, computer science, and engineering. (When compared to actual 2017 spending, however, it appears the 2018 request represents a 1.7% cut from the $2.28 billion the military is expected to spend on basic research this year.)
- Basic science at NASA would grow by 3%, or $100 million, to $3.71 billion.
- The Smithsonian Institution would get a 4%, or $8 million, boost to $226 million.
- The Veterans Affairs department would get a 1%, or $4 million jump to $394 million.

Other agencies would see cuts of between 11% and 19%. Some highlights:

- The Department of Health and Human Services (HHS), the parent agency of the National Institutes of Health (NIH), would lose $3.1 billion, a 19% drop to $12.8 billion. HHS is the nation's single largest funder of basic science, primarily in the biomedical arena.
- The Department of Energy's (DOE's) spending would drop by $690 million, or 15%, to about $4 billion. DOE is the nation's largest funder of basic research in the physical sciences.
- At the National Science Foundation (NSF), basic science would fall by $620 million, or 13%, to $4.3 billion. NSF is a major funding of basic research outside of biomedical science.
- Department of Agriculture spending would fall by $121 million, or 11%, to $952 million. – *David Malakoff*

Reactions: What people are saying about Trump's budget request

Scientific societies and other groups are weighing in on the budget request. Here's a sampling of reactions.

ITIF: budget should be "dead on arrival"

"Especially when it comes to areas ranging from scientific and engineering research to workforce education and skills, congressional leaders should declare the proposal 'dead on arrival," said Stephen J. Ezell, vice president of the Information Technology and Innovation Foundation in Washington, D.C.

"The United States has suffered for more than a decade from chronic underinvestment in basic science, research and development, and technology commercialization, and from insufficient support for small manufacturers. Further reducing federal investment in these kinds of foundational goods will set back the country even further—undermining economic growth, causing standards of living to stagnate, and putting prosperity at risk for future generations of Americans. Yet the administration's budget calls for a nearly 10 percent cut for non-defense R&D. The administration needs to recognize there is a big difference between wasteful spending and critical investments that ensure the U.S. economy, citizens, and businesses thrive. Targeted federal government programs of the sort the administration is suggesting Congress cut are widely used by even the most conservative Republican governors to help businesses in their states compete."

AAMC: "devastating"

Darrell G. Kirch, president and CEO of the Association of American Medical Colleges in Washington, D.C., issued a statement that called the deep cuts to NIH and other health programs "devastating."

"Cuts of this magnitude would slow or halt vital research that creates hope for millions of Americans fighting chronic and life-threatening diseases. Reducing NIH funding also would harm local and regional economies, resulting in hundreds of thousands of jobs lost both within and outside of the research community. On the world stage, America's standing as a leader in medical research would falter, possibly causing the best and brightest scientists to move to other nations with more robust research enterprises."

APA: vulnerable at risk

"This budget, if enacted, would jeopardize our nation's educational, scientific and health enterprises and limit access to critically needed mental and behavioral health services," said Antonio E. Puente, president of the American Psychological Society in Washington, D.C. "These cuts would disproportionately affect people living in poverty, people with serious mental illness and other disabilities, women, children, people living with HIV/AIDS, older adults, ethnic and racial minorities, immigrants, and members of the LGBTQ community."

AAAS: how did it come to this?

"I don't know how we've gotten to a stage where anyone would consider anything like this," said Rush Holt, CEO of AAAS in Washingotn, D.C. (publisher of *Science*Insider), during a teleconference. "Our preliminary numbers show that total research funding would decline by

16.8%," a hit that would "devastate America's science and technology enterprise."

But Holt hopes the bill won't live long outside of the White House, noting that early responses from members of congress suggest that, once again, Trump has failed to work closely with congress or federal agencies to produce a budget proposal likely to be approved. "It seems that this budget is put together on the basis of ideology and imaginary economics rather than hard facts about...what research is productive according to the agencies where the research is funded and done," Holt said. – *Lindzi Wessel*

Census Project: "woefully underfunds" preparations for 2020 count

The request for the Census Bureau "woefully underfunds preparations for the national census at a critical phase in the planning," stakeholders of the Census Project in Washington, D.C. said in a statement. The group includes include state and local governments, business and industry, civil rights and labor groups, housing and child advocates and research and professional organizations "that support a complete, fair and accurate census."

Here is the rest of their release:

> "With the delays in recruiting qualified talent to oversee the census planning at both the Census Bureau and the Department of Commerce, we hope Congress will not compound the problem by failing to provide sufficient FY 2018 funding for critical data collection and testing for 2020," said Phil Sparks of the Census Project. The administration budget proposes funding the Census Bureau at $1.524 billion for FY 2018, only a $54 million increase over 2017, lagging far behind comparable increases at this stage in advance of previous decennial head counts.
>
> Census observers have been concerned the Trump administration and Congress have minimized the significant challenges the bureau faces at this point in the decennial planning cycle and why Census needs an increase in funds now. "This is a recipe for disaster if we are to achieve a fair and inclusive national count mandated by our Constitution," said Sparks.
>
> The Census Bureau is facing a daunting array of workload challenges between now and the end of the decade, including the 2017 Economic Census, the annual American Community Survey of about 4 million households per year, and end-to-end testing of new designs for the 2020 decennial census, which will feature the first ever online response option.
>
> Congress must approve the FY 2018 appropriations by October 1 this year, on the eve of several key census field tests targeting 700,000 households in Rhode Island, Washington state and West Virginia to finalize operational designs for the 2020 count. Sparks said his group would strongly advocate Congress override the president's request and significantly increase the bureau's funding. "We may be facing an historic disaster unless Congress acts to save the census," Sparks added.

Science Coalition opposes "extreme" cuts

"The extreme funding cuts to science agencies and related programs included in the budget released today would harm America's research enterprise and our nation's leadership in scientific discovery. Basic scientific research, conducted at universities in communities across the country, is the smallest slice of the nation's R&D pie, yet it is the critical spark that ignites discovery and innovation in the United States.

"The return on the federal government's investment in research surrounds us. From life changing discoveries to innovations that produce new industries, and from building a STEM workforce to creating new jobs, science-driven innovation has been a powerful driver of the U.S. economy for decades."

UCAR worried about Earth science

"We are concerned that the administration's proposed cuts to research into the Earth system sciences will undermine the continued scientific progress that is so vitally needed to better protect the nation in the future from costly natural disasters," Antonio J. Busalacchi, the president of the University Corporation for Atmospheric Research (UCAR) in Boulder, Colorado, said in a statement. "This would have serious repercussions for the U.S. economy and national security, and for the ability to protect life and property. Such funding cuts would be especially unfortunate at a time when the nation is moving to regain its position as the world leader in weather forecasting."

"UCAR is extremely grateful to the bipartisan majorities in the House and Senate that voted to sustain research funding in the current fiscal year. We look forward to working with Congress in the months ahead to maintain the level of funding needed in the fiscal year 2018 budget to support essential Earth system science research."

Lung association: "Reject this budget"

"Congress must reject this budget," said Harold P. Wimmer, National President and CEO of the American Lung Association in Chicago, Illinois, in a statement. "Rather than putting America's health first, this budget instead puts the health and safety of all Americans—but especially our nation's most vulnerable, such as lower-income Americans, children and those living with a lung disease like asthma—in jeopardy."

ResearchAmerica!: "heavy handed"

"The president's proposed FY18 budget is an imbalanced, heavy-handed approach to bolstering national defense at the expense of other American priorities, including the research and innovation crucial to national security," said Mary Woolley, president and CEO of Research!America in Arlington, Virgnia. "Instead of weakening our nation with this approach, we urge the 115th Congress to negotiate a bipartisan budget deal that will ensure that both defense and non-defense priorities are sufficiently funded."

"Steep funding cuts for the federal health agencies are counterproductive at a time when innovative research is moving us closer to identifying solutions for rare diseases, new prevention strategies to protect Americans from deadly and costly conditions, advances in gene therapy, new technologies for understanding the brain, and treatments that harness the ability of our immune system to fight cancer."

UCS: "wrecking ball"

"President Trump's proposed budget takes a wrecking ball to agencies that protect our health, safety and environment," said Ken Kimmell, president of the Union of Concerned Scientists (UCS) in Cambridge, Massachussetts, in a statement. "His budget would gut the EPA, for example, taking our environmental cops off the beat and allowing those who would seek to pollute to get away with it. I also know from my experience heading a state environmental agency that states have neither the funds nor the staff to pick up the slack when federal enforcement is decimated."

"His budget would also stall out U.S. technological innovation and scientific research, and the country's capabilities to respond to extreme weather and national security threats. This is all while driving up the deficit to pay for massive military budget increases we don't need. The Department of Energy, for example, has an office that's breaking new ground on advanced energy technologies that could boost the U.S. economy significantly. But the president doesn't have the foresight to see the benefit of these types of programs."

AIBS: "stifles innovation"

"The Administration's budget request stifles innovation, future economic growth, and job creation," said Dr. Robert Gropp, co-executive director of The American Institute of Biological Sciences (AIBS) in Washington, D.C. "These deep cuts to scientific research and education programs will negatively impact our ability to improve public health and solve environmental problems for years to come."

"For years, Congress has demonstrated bipartisan support for investing in science. I encourage them to continue to invest in our nation's future by rejecting the President's budget requests for scientific research and education programs. We should be investing in research and science education, which are the keys to opportunity," Gropp added.

Biochemists: science investments would be lowest in 40 years

The budget, "if enacted, would significantly damage the nation's role as the global leader of research and innovation, and would roll back years of bipartisan support from Congress," said Benjamin Corb, public affairs director for the American Society for Biochemistry and Molecular Biology in Rockville, Maryland, in a statement. "The president's proposal brings NIH funding to a 17-year low, erasing not only the recent history of increases provided by Congress but also the budget growth of the late 1990s and early 2000s, at which time Congress doubled the NIH's budget. The proposed budget for NSF will reverse the basic research agency's growth to fiscal

year 2007 levels. Overall, the president's budget would bring total federal investments in scientific research spending to a 40-year low."

"Further, the president's budget, which cuts nondefense discretionary spending while significantly increasing defense spending eliminates the parity between defense and nondefense spending that has been a hallmark of America's recent fiscal policy."

Posted in:

- Science and Policy
- Trump administration

DOI: 10.1126/science.aal1224

From: Joseph Bast
Sent: Mon 7/10/2017 11:19:49 PM
Subject: Erdogan says U.S. stance stalls Turkish ratification of Paris climate deal | Reuters

H/T Willie, the rats are fleeing the ship. This is great news.

http://mobile.reuters.com/article/idUSKBN19T11R?utm_campaign=trueAnthem:+Trending+Content&utm_cont

Joe

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Support Heartland today!

From: Joseph Bast
Sent: Mon 7/10/2017 4:02:34 PM
Subject: Tim Ball and Tom Harris: Time to Debunk Misguided Science

Excellent piece.

Joe

http://www.thepostemail.com/2017/07/07/time-debunk-misguided-science-underlying-paris-climate-agreement/

Time to Debunk Misguided Science Underlying Paris Climate Agreement

"THE BIGGEST DECEPTION IN HISTORY"

by Dr. Tim Ball and Tom Harris, ©2017

Announcement from the White House made on December 12, 2015 on Paris climate change agreement

(Jul. 7, 2017) — On June 1, President Donald Trump announced that the United States would withdraw from the United Nations Paris Agreement on climate change. He correctly identified it as a very bad deal for America.

In July 1997, the U.S. Senate reached a similar conclusion about the U.N. climate change policy-making process in general. Senators from across the aisle unanimously endorsed the Byrd/Hagel resolution, which stated that America should not be a signatory to "any protocol to, or other agreement regarding, the United Nations Framework Convention on Climate Change [UNFCCC]…that would result in serious harm to the economy of the United States" and did not include emission reductions for developing countries that were similar to those imposed on the U.S.

This is why the Clinton administration never submitted the Kyoto Protocol, which is based on the UNFCCC, to the Senate for ratification. It is also why former President Barack Obama approved the Paris Agreement, which also rests on the UNFCCC, as an "executive agreement" instead of submitting it for Senate approval as required by the Constitution for international treaties. He knew that the Senate would reject Paris as not in America's best interests.

The Paris Agreement is not just bad for the U.S. According to Australian author and climate analyst Iain Aitken,

To achieve the goal agreed in Paris of a maximum 2°C increase in global temperatures above pre-industrial levels has been estimated to have a global cost of $17 trillion by 2040 (about 800 times more than was spent on all the Apollo missions to the moon) – and it would require carbon dioxide reductions about 100 times greater than those pledged in Paris."

So, even if the man-made climate change problem were real, the actions specified by the Paris Agreement would solve nothing. And since the climate alarm is not based on sound science, no treaty based on the UNFCCC makes any sense. Kyoto, Paris, Copenhagen, Durban, Cancun, Warsaw, and all the other U.N. climate deals are merely political solutions to a non-existent problem without scientific justification.

Yet the Washington Post-ABC News poll conducted last month showed that a majority of Americans opposed the President's decision to pull out of Paris. This is largely because most people are unable to differentiate between climate change propaganda, as promoted by the U.N. and activists such as Al Gore, and climate change science conducted by independent researchers.

Even pollsters who apparently support the climate scare recognize that public

knowledge about climate change is poor. For example, in their biased 2010 study "Americans' Knowledge of Climate Change," investigators from the Yale Project on Climate Change Communication created a multiple-choice test to examine, "what Americans understand about how the climate system works, and the causes, impacts, and potential solutions to global warming." They concluded, "In this assessment, only 8 percent of Americans have knowledge equivalent to an A or B, 40 percent would receive a C or D, and 52 percent would get an F."

The focus therefore must be on educating the public about the realities of climate science. This is especially important now since Trump is talking about the possibility of the U.S. agreeing to a new version of the Paris Agreement, but one "on better terms, fairer terms." There is no need for a deal at all since there never was a problem in the first place.

On June 30, Environmental Protection Agency (EPA) Administrator Scott Pruitt announced that he is launching a program to critique climate change science. He will apparently bring in experts from both sides of the debate in order to determine the actual state of the science, something the EPA should have done long before saddling industry with expensive climate change regulations. Global warming campaigners will do everything in their power to block Pruitt's review since it will demonstrate that, rather than being settled in favor of climate alarm as eco-activists claim, the science is still immature.

Those who created the global warming scare knew that 85% of the public would not understand the science and the remaining 15% would not question it. Pruitt must therefore use his evaluation to help the public understand what is, and what is not, known about climate change science.

He must also promote the concept that "being a skeptic…is quite alright," as Energy Secretary Rick Perry said last month. Indeed, science requires unfettered skepticism to advance. But the climate scare is more like an extreme religion than science at this point. And, when people start questioning such extreme belief systems, they rapidly lose the blind faith essential to the religion's survival.

Handled effectively, the EPA science evaluation should lead many in the public to ask their representatives, "Why are you supporting the expenditure of billions of tax dollars on such an uncertain cause when funds are desperately needed to address society's real, well understood issues?"

Aside from ignorance, or cowardice in the face of political correctness, politicians will have no answer. The climate scare, the biggest deception in history, will then be over.

Dr. Tim Ball is an environmental consultant and former climatology professor at the University of Winnipeg in Manitoba. Tom Harris is executive director of the Ottawa, Canada-based International Climate Science Coalition.

From: Joseph Bast
Sent: Thur 6/22/2017 6:55:51 PM
Subject: These two short clips from "Yes, Prime Minister" say everything you need to know about global warming

I hope you know I don't waste your time with frivolous articles, commentaries, or video clips. But these are amazing:

http://joannenova.com.au/2017/06/if-only-yes-prime-minister-re-elected-had-done-the-global-warming/

They are short (one about 3 minutes, one 9 minutes), simply astonishing, utterly accurate, and devastatingly honest about the politics of the issue. I don't know how anyone with a pulse can watch them and not laugh out loud at how ludicrous politicians, journalists, and some (not all) scientists appear to be when they pontificate on global warming.

Seriously, these clips do a better job explaining the state of the science and why politicians parrot the most extreme predictions and lies of the alarmists and make impossible-to-keep promises, even (or especially) when they know better, than any article or book or Powerpoint I have ever seen.

Many thanks to Joanne Nova for finding and posting them, and to Willie for bringing them to my attention.

One problem, though: I fear if President Trump and Steve Bannon watch these clips, Trump will announce the creation of a Presidential Commission on Global Warming and put Bannon in charge of it. It would be the clever thing to do, though not the wise thing. Much better is President Trump's current tactic of simply not mentioning global warming, even when talking about the Paris Accord. It wasn't, after all, really about global warming, was it?

Joe

To: Arthur Robinson[art@oism.org]; bill@censtrat.com[bill@censtrat.com]; Bob Buford[Ex. 6 - Personal Privacy]; Chuck Lang[Chuck_Lang@tripplite.com]; Daniel Hales[Ex. 6 - Personal Privacy]; Harley Moody[Ex. 6 - Personal Privacy]; Herbert Walberg[Ex. 6 - Personal Privacy]; Jeff Madden[Jeff.Madden@ironbridge.net]; Jere Fabick[jere.fabick@fabickcat.com]; Jim Johnston (External)[Ex. 6 - Personal Privacy]; Poppeck, Whitney[WPoppeck@williamblair.com]; Singer, Brian[BSinger@williamblair.com]
From: Joseph Bast
Sent: Mon 6/5/2017 5:57:06 PM
Subject: Heartland gets press attention regarding exit from the Paris Accord

Directors and a few friends,

Last week was quite a thrill, and the ride hasn't ended yet.

All week, tension rose as the President Trump reportedly pondered whether to keep a campaign promise to remove the U.S. from the Paris Global Warming Treaty. Heartland produced two or three news releases and op-eds *every day* along with an aggressive back-door communication effort urging the President to exit the Paris agreement… or even better, to exit the United Nations Framework Convention on Climate Change (UNFCCC), the underlying agreement that authorizes much of the U.S. involvement in international climate change efforts.

On Thursday morning, I got an invitation to be in the Rose Garden at 3:00 p.m. ET to be part of the audience when President Trump announced his decision. My assistant Wanda speedily made my travel arrangements and within the hour had me in a car heading to the airport. After delays and switching flights (I still hate flying on United Airlines), I arrived in Washington DC at 2:00 and made it to the Rose Garden at 2:30, just in time to wait in line for 30 minutes and then wait in the Rose Garden until the President appeared.

The Rose Garden is very pretty, the media are obnoxious, many of our friends from Heritage Foundation, Cato, and CEI were there. (The photo is of me talking with Steve Bannon afterwards… my back, my good side, is to the camera.) Most of us were experiencing our first trip to the Rose Garden, and there seemed to be a conspicuous absence of CEOs, lobbyists, and trade association types. I wondered when the last time so many "forgotten men and women" were invited to this special place. Even my heart, hardened as it is by years of disappointment with politicians, warmed up a bit for the occasion. Yes, it was an honor to be there.

The President's speech was terrific – he hit the ball out of the park by documenting the enormous cost and tiny benefits of staying in the agreement – and his decision to leave the Paris Accord – "as of today, the United States will cease all implementation of the non-binding Paris Accord and the draconian financial and economic burdens the agreement imposes on our country" – was a triumph of sound science and economics and a victory for the American people. As EPA admin. Scott Pruitt said afterwards, "America finally has a leader who answers only to the people – not to the special interests who have had their way for far too long." I'm happy to say I led the applause on several occasions, and even hooted and whistled a few times.

It is often said that victory has many parents while defeat dies an orphan. Many people can rightly claim to have played a role in bringing about this victory. The Heartland Institute – its donors, staff, directors, senior fellows, and policy advisors – poured millions of dollars and thousands of hours into making the case that global warming is not a crisis, more probably than any other think tank. We deserve some recognition, though the liberal media won't give us that. (The *New York Times,* for example, ran a lengthy piece titled "How G.O.P. Leaders Came to View Climate Change as Fake Science" without once mentioning us. Ha!) But that's fine. All the better that they be kept in the dark about how we won that battle, so they will be equally unprepared to fight us in the next battle.

Below are long lists of media coverage of and radio interviews of Heartland spokespersons regarding the Paris exit. As usual, these lists will grow over time as "hits" we missed are brought to our attention. You should feel free to stop reading here… I include the lists because electrons are free… but it's an impressive achievement, testimony to the effectiveness of Jim Lakely, Heartland's communications director, and our team of thinkers, writers, and speakers.

Best regards, please do what you can to support the president on this important matter, and thank you for your support.

Joseph L. Bast

President

The Heartland Institute

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The Heartland Institute

Press Coverage of Trump Decision to Exit Paris Accord

PRINT

On May 8, the *Washington Examiner* (DC; circ. 33,000) published a news story that mentioned the Heartland Institute titled "Dozens of Groups Press Trump to Exit Paris Climate Deal." The author wrote, "The Heartland Institute, Americans for Tax Reform, Americans for Prosperity, Heritage Action for America and the Heritage Foundation were some of the other groups that signed onto the letter."

On May 9, the *New York Times* (circ. 626,257) published an op-ed that mentioned the Heartland Institute titled "Trump Administration Delays Decision on Leaving Climate Pact." The author wrote, "On Monday, a coalition of about 40 conservative advocacy groups, some of which directly advised the Trump campaign and transition, signed a letter to Mr. Trump supporting Mr. Pruitt's view. Many of the signers have a history of denying the established science of climate change and lobbying against climate change policy, such as the Heartland Institute, Americans for Tax Reform and the Heritage Foundation."

On May 10, *Mother Jones* (circ. 205,182) published an op-ed that mentioned the Heartland Institute titled "What the Hell Is Going on With Trump's Delay on the All-Important Paris Decision?" The author wrote, "The few that are include 44 fossil fuel advocacy groups, as well as the far-right think tanks that promote climate change denial: the Heritage Foundation, the Heartland Institute, and the Competitive Enterprise Institute. A 'leave' decision would show that Bannon and Pruitt have considerable sway over Trump's decision-making."

On May 15, *Lethbridge Herald* (Lethbridge, Alberta; circ. 16,901) and the *Moultrie News* (Charleston, South Carolina; circ. 28,225) published an op-ed by Policy Advisor Tom Harris titled "Withdrawing From Paris Agreement Not Enough." He wrote, "To keep his campaign promise to "stop all payments of the United States tax dollars to UN global warming programs," Trump could work to get out of, or disregard, each of the UNFCCC agreements one by one. But this would result in years of conflict for the new administration. It is far better to be done with the hugely expensive and unscientific UNFCCC climate fiasco once and for all."

On May 17, the *Detroit News* (circ. 256,075) published an op-ed by Burnett titled "Escaping the Paris Climate Agreement." He wrote, "As a candidate for president, Donald Trump said he would withdraw the United States from the Paris climate agreement and called it a bad deal for America. In an April speech in Harrisburg, Penn., Trump reiterated this claim, saying the Paris climate agreement in its current form hurts America. Despite his continued opposition, however, it remains unclear whether a withdrawal is in the nation's future. It's time for this administration to keep its promise, by getting the U.S. out of this flawed, costly agreement."

On June 1, *USA Today* (circ. 2,203,610) published a news story that quoted Senior Fellow Fred Palmer titled "Climate Agreement Withdrawal: 'Trump Just Stepped on the Gas' Toward Catastrophe." The author wrote, "Fred Palmer of the free-market think tank Heartland Institute, which has received funding from oil and gas companies, said Trump will set the U.S. down a path 'where our fossil fuel resources are unleashed to power our future and drive our prosperity.' The 'anti-fossil-fuel Paris Accord .... is a disastrous plan for working men and women and the country itself – and he pledged to discard it in the presidential campaign,' Palmer said."

On June 1, *Le Monde* (France; circ. 331,837) published a news story that mentioned the Heartland Institute titled "Aux Etats-Unis, le Débat sur L'accord de Paris met en Evidence la Fracture sur le Climat."

On June 1, the *San Francisco Chronicle* (circ. 167,602) published an op-ed by Research Fellow Isaac Orr titled "Trump's Exit from Climate Accord Puts America First, for a Change." He wrote, "President Trump was right when he said in his speech announcing the decision to leave the Paris climate agreement he represents the people of Pittsburgh, not Paris. It's refreshing to have a president who puts American interests first and refuses to partake in symbolic gestures that would hamper the economy in exchange for nothing more than trivial reductions in future global temperature."

On June 2, *Libération* (France, circ. 79,662) published an op-ed that mentioned the Heartland Institute titled "Trump, Isolé Mais Pas si Seul."

On June 2, the *24 Heures* (Lausanne, Vaud, Switzerland; circ. 68,464) published a news story that mentioned the Heartland Institute titled "Derrière le Retrait de L'accord sur le Climat, le Poids Des Lobbys"

ONLINE

On May 9, *Triple Pundit* published an op-ed that mentioned the Heartland Institute titled "Corporate Interests Clash Over Paris Climate Agreement." The author wrote, "Critics pointed out that several of these organizations, including the American Energy Alliance, receive much of their funding from known climate action legislation opponents including the Koch brothers. Another co-signer of the letter, the Heartland Institute, was recently exposed for sending materials to school teachers that questioned the veracity of climate change science."

On May 10, *DeSmogBlog* and *Truthout* published an op-ed that mentioned the Heartland Institute titled "Conservative Groups Pushing Trump To Exit Paris Climate Deal Have Taken Millions From Koch Brothers, Exxon." The author wrote, "The groups, including the Competitive Enterprise Institute (CEI), The Heartland Institute and the Heritage Foundation, claim failing to withdraw from the treaty could put Trump's policy agenda of promoting fossil fuels at risk."

On May 26, *The Daily Signal* published an op-ed that quoted Palmer titled "The Possible Reasons Big Corporations Are So Eager for Trump to Break His Promise on Paris Climate

Deal." The author wrote, "Generally, larger energy companies have an advantage under the climate deal, said Fred Palmer, senior fellow for energy and climate at the Heartland Institute. 'Follow the money,' Palmer told The Daily Signal. 'There are companies that want to game the system of using [carbon dioxide] as a currency to make money.'"

On May 29, *The New American* published an op-ed that quoted Palmer titled "Trump Pressured to Stay in Paris Climate Agreement." The author wrote, "Fred Palmer, senior fellow for energy and climate at the conservative Heartland Institute, said: 'Follow the money. These are companies that want to game the system of using [carbon dioxide] as a currency to make money.'"

On May 30, *Breitbart* published a news story that mentioned Burnett titled "Left Unhinged." The author wrote, "H. Sterling Burnett, an environment and energy research fellow at the Heartland Institute, will discuss Trump's decision on the Paris Climate Agreement."

On May 31, *CGTN America* published a news story that mentioned Palmer titled "The Heat: The Future of the Paris Climate Accord." The author wrote, "To discuss Trump's decision and what it could mean for global climate change: Nathan King, CGTN correspondent; Michael Dorsey, co-founder and vice president of strategy at U.S. Climate Plan; Tao Zhang, founder and managing director of the green innovation and investment firm, Dao Ventures; Frederick Palmer, senior fellow for climate and energy at The Heartland Institute."

On June 1, *Fox News* published an op-ed by Burnett and Haskins titled "Trump's Paris Climate Decision Should be Celebrated by Democrats, Republicans and Independents." They wrote, "Despite the Paris agreement's immense costs, the treaty's proponents insist it is a necessary step forward in the alleged battle against human-caused climate change. But even the U.N. Environment Programme, a noted climate alarmist agency, admitted on its own website the treaty would deliver no meaningful environmental improvements."

On June 1, *The Daily Mail* published a news story that quoted Director of Communications Jim Lakely titled "'You Can Take it to the Bank He's Going to Withdraw': Climate Insider Says Trump WILL Pull out of Paris Within Hours (but Others Aren't So Sure)." The author wrote, "A spokesman for the Heartland Institute, Jim Lakely, said the conservative organization's president was headed to Washington for the ceremony at the invitation of the White House. 'I don't think they'd invite him if the Ivanka/Jared side of the tug-of-war on this issue won the argument,' he concurred."

On June 1, *Breitbart* and *Newsline* published a news story that quoted Research Fellow H. Sterling Burnett titled "Heartland Institute's H. Sterling Burnett Details Three Ways to Leave Paris Climate Agreement." The author wrote, "H. Sterling Burnett, Heartland Institute's Environment and Energy research fellow, was talking with Breitbart News Daily SiriusXM host Raheem Kassam as news broke that the Trump administration appears ready to withdraw from the Paris climate accord. 'If it's accurate, I'm heartened,' said Burnett."

On June 1, *People's Pundit Daily* published an op-ed that quoted Burnett titled "President Trump Will Reportedly Pull U.S. Out of Paris Climate Agreement." The author wrote, "In 2015, Dr. H. Sterling Burnett of the Heartland Institute says that Switzerland has joined Australia, Paraguay, and the United States in 'adjusting' their weather data in an effort to demonstrate a global warming impact."

On June 1, *The Daily Beast* published an op-ed that mentioned the Heartland Institute titled "Paris Climate Deal's Demise Means Steve Bannon Wins—and the Planet Loses." The author wrote, "Shah's assurances to those present on the call—including representatives from the American Enterprise Institute, the Heartland Institute, and the Competitive Enterprise Institute, all conservative or climate-skeptical think tanks—indicated the degree to which Trump's decision appealed to more ideological segments of the right-wing political world."

On June 1, *Green Tech Media* published an op-ed that quoted Palmer titled "World Leaders Shut Down Trump's Paris Climate Speech: 'There Is No Legal Basis for Anything'" The author wrote, "'God bless President Trump for this courageous step to make America great again and to advance the America First Energy Plan,' said Fred Palmer, senior fellow of energy policy at The Heartland Institute, an influential libertarian group that has denied the science of climate change."

On June 1, *Vox* published an op-ed that mentioned the Heartland Institute titled "Don't just blame Trump for quitting the Paris deal — blame the Republican Party." The author wrote, "Forty conservative think tanks or activist groups, including the Heritage Foundation, Grover Norquist's Americans for Tax Reform, the Koch brothers' Americans for Prosperity, and the longtime climate science–denying Heartland Institute, signed on to a similar letter calling on Trump to pull out."

On June 1, *Climate Central* published an op-ed that quoted Research Fellow Bette Grande titled

"Trump's Base the Big Winner from Paris Withdrawal." The author wrote, "After it was reported that Trump was preparing to pull out of the pact, Bette Grande, a researcher at the Heartland Institute, which opposes efforts to protect the climate, said in a supportive statement that "globalism would take a big hit" from the move. 'Angela Merkel and what is left of the E.U. are not happy (itself a victory).'"

On June 1, the National Resources Defense Council published an op-ed that mentioned the Heartland Institute titled "Companies Defend Paris Deal Because of Its Economic Benefits." The author wrote, "Perhaps not surprisingly, IECA is supported by the Koch Foundation and Nucor, which both fund climate denial through groups such as the Heartland Institute."

On June 2, *One News Now* published an op-ed that quoted Burnett titled "Climate Accord: U.S. Exits – Will China Fill the Void?" The author wrote, "'Here's the truth of the matter,' responds H. Sterling Burnett, Ph.D., of The Heartland Institute. 'If you're worried about greenhouse gas emissions, the U.S. has been the leader in reducing greenhouse gas emissions – and it hasn't been due to regulations. It hasn't been due to anything other than the natural gas revolution: fracking and the natural gas revolution.'"

On June 2, *E&E News* published a news story that mentioned Bast titled "The U.S. is Out of the Paris Agreement. What Now?" The author wrote, "An audience of conservatives clapped and took pictures as Trump made his announcement. Some hooted. Among them were prominent members of think tanks whose careers are rooted in questioning the accuracy of climate scientists. They included Joe Bast, president of the Heartland Institute, and Chris Horner and Myron Ebell, both of the Competitive Enterprise Institute." The article included a picture of Bast alongside Steve Bannon.

RADIO AND TV HITS

HEARTLAND FOLKS ON RADIO/TV TALKING PARIS CLIMATE TREATY

Date	Program	Expert
5/4/17	Rod Arquette Show (KNRS-AM/FM; Salt Lake City, Utah)	Isaac Orr
5/9/17	Lars Larson Show (Nationally Syndicated)	Tom Harris
5/11/17	Mornings with Ray Dunaway (WTIC-AM; Hartford, Connecticut)	Fred Palmer
5/21/17	The Answer (660-AM; Dallas, Texas)	H. Sterling Burnett
5/30/17	Drew Mariani Show (Nationally Syndicated)	John Nothdurft

5/31/17	China Global Television Network	Fred Palmer
5/31/17	Breitbart Daily News (Sirius/XM satellite, national radio)	H. Sterling Burnett
5/31/17	Rocky D Show (Nationally Syndicated)	Jim Lakely
5/31/17	Rob Port (WDAY-AM; Fargo, North Dakota)	Bette Grande
5/31/17	The Andy Caldwell Show (KUHL-AM; Santa Maria, California)	Tom Harris
5/31/17	The Bill Meyer Show (KMED-AM; Medford, Oregon)	Tom Harris
6/1/17	Fox & Friends (Fox News Channel)	Steve Milloy
6/1/17	One News Now (National Cable Network)	H. Sterling Burnett
6/1/17	Tim Constantine Show (WMEX-AM; Boston)	Tom Harris
6/1/17	Brian Mudd Show (WIOD-AM; Miami, Florida)	Tim Benson
6/1/17	Steve Gruber Show (WJIM-AM; Lansing, Michigan)	Tom Harris
6/1/17	Beth Schoenberg Show (Nationally Syndicated)	Jim Lakely
6/1/17	Steve Gruber Show (WJIM-AM; Lansing, Michigan)	H. Sterling Burnett
6/1/17	Sean Hannity Show (Nationally Syndicated)	Steve Goreham
6/1/17	WGN-TV (Chicago)	Steve Goreham
6/1/17	WTTW-TV Chicago Tonight (Chicago)	Steve Goreham
6/1/17	China Global Television Network	Ed Hudgins
6/1/17	I24 News (Israeli TV)	Fred Palmer
6/1/17	CBS News Radio (KNX-AM, Los Angeles)	Joe Bast
6/1/17	Rod Arquette Show (KNRS-AM/FM; Salt Lake City)	Isaac Orr
6/1/17	The Georgene Rice Show (KPDQ-AM; Portland, Oregon)	H. Sterling Burnett
6/1/17	KPCC-FM, NPR affiliate (Los Angeles)	Jim Enstrom
6/2/17	590 WVLK-AM (Lexington, Kentucky)	H. Sterling Burnett
6/2/17	Mike Schikman Show (WSVA-AM; Harrisonburg, Virginia)	Sam Karnick
6/2/17	Vince Coakley Show (WORD-FM; Simpsonville, South Carolina)	Joe Bast
6/2/17	Charlie James Show (WTMA-AM; Charleston, South Carolina)	Jim Lakely
6/2/17	The Josh Tolley Show (Nationally syndicated)	Joe Bast
6/2/17	Steve Gruber Show (WJIM-AM; Lansing, Michigan)	Tom Harris
6/2/17	Don Kroah Show (WAVA-FM; Washington, Virginia)	Joseph Bast
6/2/17	Scott Sands Show (WSPD-AM; Toledo, Ohio)	Tom Harris
6/2/17	WTMJ-AM (Milwaukee, Wisconsin)	H. Sterling Burnett
6/2/17	WBND-TV, ABC affiliate (South Bend, Indiana)	Joseph Bast
6/3/17	Jeff Crank Show (KVOR-AM; Colorado Springs, Colorado)	Sam Karnick
6/5/17	Morning Answer with Dan Proft & Amy Jacobson (WIND-AM; Chicago)	Joseph Bast
6/5/17	Jimmy Lakey Show (KCOL-AM; Fort Collins, Colorado)	Tom Harris
6/5/17	Rick Roberts Show (WBAP-AM; Fort Worth, Texas)	John Coleman
6/5/17	Freedom and Prosperity Radio (National)	Fred Palmer
6/5/17	Eric Price Show (KSRM-AM; Kenai, Alaska)	Tom Harris
6/6/17	ZimmCast with Chuck Zimmerman (Agriculture podcast)	Jay Lehr
6/6/17	Pastor Greg Host (Nationally Syndicated Radio Show)	Tom Harris
6/7/17	Maryland's Wake-Up Call with Sean Casey (WCBM-AM; Baltimore)	Steve Milloy

Joseph Bast

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Support Heartland today!