#### USCA Case #22-1139 Document #1970116 Filed: 10/21/2022 Page 1 of 47 ORAL ARGUMENT NOT YET SCHEDULED

#### No. 22-1139

# IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

#### CONCERNED HOUSEHOLD ELECTRICITY CONSUMER'S COUNCIL, et al.,

Petitioners,

v.

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

On Consolidated Petitions for Review of Environmental Protection Agency Final Order

Consolidated with Case No. 22-1140

## BRIEF OF AMICI CURIAE DR. WILLIAM HAPPER, DR. RICHARD S. LINDZEN, AND THE CO2 COALITION IN SUPPORT OF PETITIONERS AND REVERSAL

*Of Counsel:* Charles D. Weller 314 Magnet Innovation Center 1768 East 25<sup>th</sup> Street Cleveland, OH 44114 (216) 496-0836 weller1@nxgh.net

David S. Wachen Wachen LLC 11605 Montague Court Potomac, MD 20854 (240) 292-9121 david@wachenlaw.com

Counsel for Amici Curiae Dr. William Happer, Dr. Richard S. Lindzen, and The CO2 Coalition

October 21, 2022

# CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), Amici certify as follows:

# A. <u>Parties and Amici Curiae</u>

All parties, intervenors, and Amici appearing before the district court and in this Court are listed in the Brief for Petitioners.

# B. <u>Rulings Under Review</u>

References to the rulings at issue appear in the Brief for Petitioners.

# C. <u>Related Cases</u>

References to related cases appear in the Brief for Petitioners.

#### **CORPORATE DISCLOSURE STATEMENT**

The *Amici Curiae* are two individual scientists who are recognized experts in the field of climate science, and the CO2 Coalition. Drs. William Happer and Richard Lindzen are filing based on their personal knowledge and expertise. The CO2 Coalition is a Section 501(c)(3) member organization, consisting of individual members. It has no parent companies. The CO2 Coalition issues no securities.

#### CONSENT TO AMICUS FILING

Pursuant to Circuit Rule 29(b), Amici state that all parties have consented to the filing of this Amicus brief.

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# GLOSSARY

AR5	IPCC Fifth Assessment Report
CMIP	Coupled Model Intercomparison Project
EPA	Environmental Protection Agency
IPCC	Intergovernmental Panel on Climate Change
NRC	National Research Council
ppm	Parts per million
USGCRP	United States Global Climate Research Program
$W/m^2$	Watts per square meter

## IDENTITY OF AMICI CURIAE, THEIR INTERESTS IN THE CASE, AND THE SOURCE OF THEIR AUTHORITY TO FILE THIS BRIEF

Amici Dr. William Happer, Emeritus Professor of Physics, at Princeton University, Dr. Richard S. Lindzen, Emeritus Professor in the Department of Earth, Atmospheric, and Planetary Sciences at MIT, and the CO2 Coalition, a section 501(c)(3) member organization with individual expert members interested in understanding carbon dioxide and its essential role in the Earth's atmosphere, support the Petitioners' challenge of the EPA's Denial of Petitioners' Petitions to Reconsider the 2009 Endangerment Findings for Greenhouse Gases ("Endangerment Findings") and urge this Court to overrule the denial of Petitioners' Petitions to Reconsider the Endangerment Findings.

Dr. Happer, Dr. Lindzen, and the CO2 Coalition Amici believe that the "science" relied upon by the EPA in its Endangerment Findings is seriously flawed and not truly scientific. They believe therefore that the denial to reconsider the Endangerment Findings is without a valid scientific basis, arbitrary, and capricious. For several decades, Amici have studied the science and evidence purportedly underpinning the Endangerment Findings and are experts in the fields of physics and atmospheric sciences from which the EPA's evidence is drawn.

#### William Happer, Ph.D.

Dr. Happer began his professional career in the Physics Department of Columbia University in 1964, where he served as Director of the Columbia Radiation Laboratory from 1976 to 1979. He joined the Physics Department of Princeton University in 1980.

Dr. Happer invented the sodium guidestar that is used in astronomical adaptive optics systems to correct for the degrading effects of atmospheric turbulence on imaging resolution. He has published over 200 peer-reviewed scientific papers, is a Fellow of the American Physical Society and the American Association for the Advancement of Science, and is a member of the American Academy of Arts and Sciences, the National Academy of Sciences, and the American Philosophical Society.

He served as Director of Energy Research in the U.S. Department of Energy from 1991 to 1993. He was a co-founder in 1994 of Magnetic Imaging Technologies Incorporated (MITI), a small company specializing in the use of laser-polarized noble gases for magnetic resonance imaging. He served as Chairman of the Steering Committee of JASON from 1987 to 1990.

He served as Deputy Assistant to the President and Senior Director for Emerging Technologies at The National Security Council in the White House from 2018 to 2019.

He is Chair of the Board of Directors of the CO2 Coalition, a non-profit 501(c)(3) organization established in 2015 to educate thought leaders, policy

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makers, and the public about the vital contribution made by carbon dioxide to our lives and our economy.

#### Richard S. Lindzen, Ph.D.

After completing his doctorate at Harvard in 1964 (with a thesis on the interaction of photochemistry, radiation, and dynamics in the stratosphere), Dr. Lindzen did postdoctoral work at the University of Washington and the University of Oslo before joining the National Center for Atmospheric Research as a staff scientist. At the end of 1967, he moved to the University of Chicago as a tenured associate professor, and in 1971, he returned to Harvard to assume the Gordon McKay Professorship (and later the Burden Professorship) in Dynamic Meteorology. In 1981, he moved to MIT to assume the Alfred P. Sloan Professorship in Atmospheric Sciences. He has also held visiting professorships at UCLA, Tel Aviv University, and the National Physical Laboratory in Ahmedabad, India, the Hebrew University in Jerusalem, the Jet Propulsion Laboratory in Pasadena, and the Laboratory for Dynamic Meteorology at the University of Paris.

He developed our current understanding of the quasi-biennial oscillation of the tropical stratosphere, the current explanation for dominance of the solar semidiurnal and diurnal tides at various levels of the atmosphere, the role of breaking gravity waves as a major source of friction in the atmosphere, and the role of this friction in reversing the meridional temperature gradient at the tropopause (where the equator is the coldest latitude) and the mesopause (where temperature is a minimum at the summer pole and a maximum at the winter pole). He has also developed the basic description of how surface temperature in the tropics controls the distribution of cumulus convection, and led the group that discovered the iris effect where upper-level cirrus contract in response to warmer surface temperatures. He has published approximately 250 papers and books. He has received awards from the American Meteorological Society and the American Geophysical Union. He is a fellow of the American Meteorological Society, the American Geophysical Union, and the American Association for the Advancement of Science, and a member of the National Academy of Sciences and the American Academy of Arts and Sciences.

He has served as the director of the Center for Earth and Planetary Sciences at Harvard, and on numerous panels of the National Research Council. He was also a lead author on the Third Assessment Report of the UN's Intergovernmental Panel on Climate Change—the report for which the IPCC shared the Nobel Peace Prize with Al Gore. He is a member of the CO2 Coalition.

#### CO2 Coalition

The CO2 Coalition is the nation's leading organization providing facts, resources, and information about the vital role carbon dioxide plays in our environment. Its membership is comprised of more than 100 outstanding scientists with deep knowledge concerning many aspects related to climate change.

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The Coalition provides facts and science without political ideology to the public through publications, public presentations, commentaries, and interviews. Its membership has published thousands of peer-reviewed scientific papers over a wide spectrum of climate-related topics.

# **RULE 29(a)(4)(E) CERTIFICATION**

No counsel for a party authored this brief in whole or in part, and no party or counsel for a party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *Amici Curiae*, their members, or their counsel contributed money that was intended to fund preparing or submitting the brief.

#### **INTRODUCTION AND SUMMARY OF ARGUMENT**

The CO2 Coalition is a non-profit corporation comprised of more than 100 scientists, engineers, and energy experts, publishing on various aspects of climate change and related fields.

Professors Happer and Lindzen are career physicists who, for decades, have specialized in applying the scientific method to radiation physics and dynamic heat transfer.

Scientific knowledge is determined by the scientific method, through which theoretical predictions are validated or rejected by observations. If the theoretical predictions do not work, the theory is rejected. That's real science.

Scientific knowledge is *not* determined by government-controlled opinions, consensus, peer review, or theoretical models that do not work. Those are false science.

This brief applies the scientific method to the Endangerment Findings<sup>1</sup> and its supporting Technical Support Document<sup>2</sup> and demonstrates both are scientifically corrupted and thus must be rescinded for the following reasons.

<sup>&</sup>lt;sup>1</sup> EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,511 (Dec. 15, 2009).

<sup>&</sup>lt;sup>2</sup> Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act (Dec. 7, 2009), <u>http://epa.gov/climatechange/ endangerment.html</u> (Technical Support Document).

• <u>IPCC Government-Controlled Opinions</u>. The Endangerment Findings and the Technical Support Document extensively rely on Intergovernmental Panel on Climate Change ("IPCC") assessments as a "primary scientific and technical basis" for the Findings. The IPCC is government controlled and thus issues only government opinions, not real science as the picture below—of government representatives determining content at IPCC's Summary for Policymakers' writing meeting—shows.<sup>3</sup>



<sup>&</sup>lt;sup>3</sup> Donna Laframboise, "US Scientific Integrity Rules Repudiate the UN Climate Process," Big Picture News, Informed Analysis (January 29, 2017) <u>https://nofrakkingconsensus.com/2017/01/29/us-scientific-integrity-rules-</u> <u>repudiate-the-un-climate-process/</u>

This is not how scientific knowledge is determined. Governments do not determine scientific knowledge; the scientific method does.

The dangers of governmentally determined science were tragically demonstrated about a century ago when Stalin appointed Trofim Lysenko as the czar of Russian agricultural science in the former Soviet Union. Lysenko suppressed the scientific method and dictated instead that his agricultural theories be used. Lysenko's government-dictated theories led to famine and millions of deaths through starvation and disease. It is a poignant reminder that the IPCC's government-dictated "science" must not be used in the Endangerment Findings and Technical Support Document.

• <u>IPCC Theoretical Models Don't Work</u>. Both the Endangerment Findings and the Technical Support Document should be withdrawn because they fundamentally rely on IPCC theoretical models that predict catastrophic warming unless fossil fuel  $CO_2$  is eliminated. The IPCC climate models then and most recently have been proven conclusively by observations to fail by over-predicting warming. Therefore, they must be rejected and not used. *See, infra*, § IV.

• <u>Peer Review and Consensus</u>. Both the Endangerment Findings and Technical Support Document use peer review and consensus extensively, which, as noted, does not determine real science.

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• <u>Censorship of the Contradicting Real Science</u>. By using "the scientific assessments of the IPCC, USGCRP, and the NRC" as "best reference" for science, 74 Fed. Reg. 66,511, the EPA inadvertently admits it censored the overwhelming evidence from real science that demonstrates there is no danger that fossil fuel CO<sub>2</sub> will cause catastrophic global warming. *See, e.g., infra,* § V.

• <u>The Endangerment Findings and Technical Support Document are</u> <u>Driving Disastrous Consequences</u>. Contrary to common reporting,  $CO_2$  is essential to life by producing food through photosynthesis. Increasing  $CO_2$  in the atmosphere by burning fossil fuels will produce more food for people worldwide. Elimination of fossil fuels in response to the Endangerment Findings will be doubly disastrous by reducing the amount of food available to people worldwide and eliminating the major source of low-cost energy.

Thus, real science requires that all the false science be removed from the Endangerment Findings and Technical Support Document. This requires deleting all the government-dictated IPCC material, all IPCC theoretical climate models and scenarios, and all citations to consensus. As a result, the Endangerment Findings and Technical Support Document will be without adequate required real scientific support.

Accordingly, it is Amici's scientific opinion that the Endangerment Findings and Technical Support Document are based, in part, on government dictated material and must be withdrawn before they cause more disastrous reduction in the food supply worldwide and the end of affordable and reliable fossil fuel energy for people worldwide, future generations, and the United States.

# ARGUMENT

# I. THE ENDANGERMENT FINDINGS AND TECHNICAL SUPPORT DOCUMENT ARE NOT BASED ON THE SCIENTIFIC METHOD

According to the Endangerment Findings, "the Administrator finds that greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare." 74 Fed. Reg. 66,497.

<u>Government-Controlled Opinions</u>. The Administrator emphasized that three government organizations were the "primary scientific basis" for the Findings:

The major assessments by the U.S. Global Climate Research Program (USGCRP), the Intergovernmental Panel on Climate Change (IPCC), and the National Research Council (NRC) serve as the primary scientific basis supporting the Administrator's endangerment finding.<sup>[4]</sup>

The Technical Support Document...summarizes scientific findings from the major assessments of the USGCRP, the IPCC, and the NRC accompanies these Findings.<sup>[5]</sup>

It is EPA's view that the scientific assessments of the IPCC, USGRCP, and the NRC represent the best reference materials for determining the general state of knowledge on the scientific and

<sup>&</sup>lt;sup>4</sup> 74 Fed. Reg. 66,497 (footnote omitted).

<sup>&</sup>lt;sup>5</sup> *Id.* at 66,510.

technical issues before the agency in making an endangerment decision.<sup>[6]</sup>

Unintentionally, the Administrator made clear she chose to use government-determined opinions as "science," rather than scientific knowledge determined by the scientific method:

The USGCRP, IPCC, and NRC assessments have been reviewed and formally accepted by, commissioned by, or in some cases authored by U.S. government agencies and individual government scientists. These reports already reflect significant input from EPA's scientists and the scientists of many other government agencies.

Id. at 66,511 (emphasis added).

Of the three, IPCC opinions are the dominant source of purported "science" underlying the Endangerment Findings and Technical Support Document, and indeed all "Net Zero" policies to eliminate fossil fuel  $CO_2$ emissions in the U.S. and worldwide.

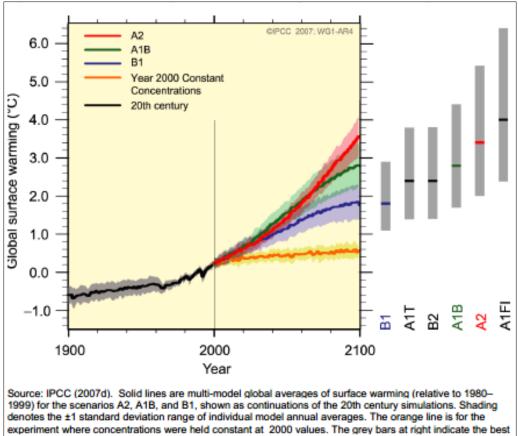
However, contrary to the vigorous assertions by the IPCC that it provides the best climate science in the world, the IPCC is government-controlled and, therefore, the IPCC's Summaries for Policymakers and assessment reports are government dictated opinions with little scientific value, all of which is elaborated on in section III.

<sup>&</sup>lt;sup>6</sup> *Id.* at 66,511.

<u>Theoretical Models Don't Work</u>. As noted, the Endangerment Findings and Technical Support Document fundamentally rely on IPCC theoretical models that predict catastrophic global warming unless fossil fuel  $CO_2$  is eliminated. The IPCC climate models used in support of the Endangerment Findings shown below are the most dominant models used to support the argument that fossil fuel  $CO_2$  must be eliminated and reduced to "Net Zero" to avoid catastrophic global warming.

Specifically, the Endangerment Findings assert: "According to climate model simulations summarized by the IPCC...[b]y the end of the century, projected average global warming...[will range] from 1.8 to 4.0 °C (3.2 to 7.2 °F)." 74 Fed. Reg. 66,519.

The Technical Support Document similarly relies on IPCC theoretical climate model predictions to assert that by the end of the century there will be "a warming range of 3.2°F to 7.2°F." (Technical Support Document at 64.) The Technical Support Document cites the 2007 IPCC theoretical climate model:



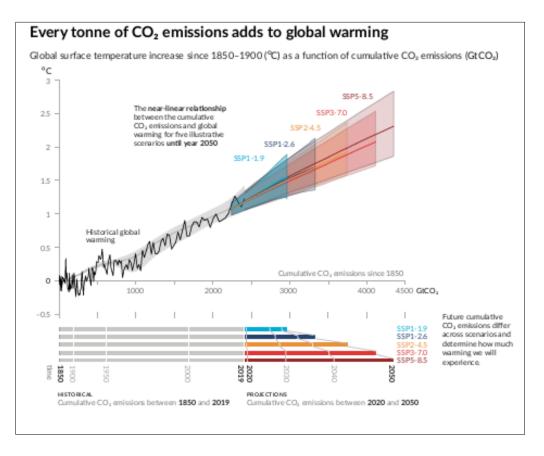
denotes the ±1 standard deviation range of individual model annual averages. The orange line is for the experiment where concentrations were held constant at 2000 values. The grey bars at right indicate the best estimate (solid line within each bar) and the likely range assessed for the six SRES marker scenarios. The assessment of the best estimate and likely ranges in the grey bars includes the AOGCMs in the left part of the figure, as well as results from a hierarchy of independent models and observational constraints.

Id.

A similar chart using the most recent IPCC theoretical model, referred to

as "CMIP6," and its predictions were published last year in Climate Change

2021: The Physical Science Basis Summary for Policymakers, at 28.



However, the IPCC models fail the basic test of science—none of their predictions are validated by observations. None work. In real science, they would be rejected and never used, as discussed further in section IV.

<u>Peer Review and Consensus</u>. As noted, peer review and consensus do not determine real science.

<u>Censorship of the Contradicting Real Science</u>. As noted, the Endangerment Findings and Technical Support Document have censored the overwhelming evidence from real science that demonstrates there is no danger that fossil fuel  $CO_2$  will cause catastrophic global warming, some of which is presented in section V.

# II. "REAL SCIENCE" IS DETERMINED BY VALIDATING THEORETICAL PREDICTIONS WITH OBSERVATIONS; "FALSE SCIENCE" IS DETERMINED BY CONSENSUS, PEER REVIEW, GOVERNMENT OPINION, FABRICATED DATA, OR MODELS THAT DON'T WORK

Scientific knowledge is determined by the scientific method. Prof. Richard

Feynman, a Nobel Laureate in Physics, provided an incisive definition of the

scientific method:

"[W]e compare the result of [a theory's] computation to nature...[and] compare it directly with observations, to see if it works. If it disagrees with experiment it is wrong. In that simple statement is the key to science.

R. Feynman, THE CHARACTER OF PHYSICAL LAW 150 (1965).

Agreement with observations is the measure of scientific truth. Making this peculiar situation particularly dangerous are world leaders who have abandoned the science and intellectual rigor bequeathed to us by the Enlightenment and its forebears.

Real science is *not* determined by:

<u>Consensus</u>. The frequent assertion that there is a consensus behind the idea that there is an impending disaster from climate change is not how the validity of science is determined. To quote the profoundly true observation of Michael Crichton: "If it's consensus, it isn't science. If it is science, it isn't consensus." M. Crichton, CalTech Michelin Lecture: *Aliens Cause Global Warming* (2003).<sup>7</sup>

Government-Controlled Opinion. Nobel physicist Richard Feynman put it clearly: "No government has the right to decide on the truth of scientific principles." R. Feynman, THE MEANING OF IT ALL 57 (1998).

As noted, government control of Russian agricultural theory by Lysenko, resulting in the deaths of millions, tragically underscores the importance that government not determine science. W. Happer, *Harmful Politicization of Science* in POLITICIZING SCIENCE 29-35 (Michael Gough ed., 2003).

<u>Peer Review</u>. Peer review can be helpful in many areas of science, but it does not determine scientific validity. In Drs. Happer and Lindzen's decades of personal experience in the field, peer review of the climate literature has been corrupted; it is now "pal review," not peer review.

<u>Fabricated Observations</u>. Since theories are tested with observations, fabricating and omitting unfavorable facts to make a theory work is an egregious violation of the scientific method. Richard Feynman stated this fundamental principle of the scientific method well:

If you're doing an experiment, you should report everything that you think might make it invalid—not only what you think is right about

<sup>7</sup> Available here:

https://stephenschneider.stanford.edu/Publications/PDF\_Papers/Crichton2003.pdf

it.... Details that could throw doubt on your interpretation must be given, if you know them.

R. Feynman, 1974 Commencement Address at CalTech in SURELY YOU'RE JOKING,MR. FEYNMAN! 311-12 (1985).

However, misrepresentation, exaggeration, cherry picking, or deliberate falsification comprise much of the so-called evidence marshalled in support of the theory that fossil fuel  $CO_2$  will cause catastrophic global warming and of the urgent need to achieve "Net Zero" fossil fuel and  $CO_2$  emissions by 2050.<sup>8</sup>

<u>Models That Do Not Work</u>. Models are a type of theory. The scientific method requires they be tested by observations to see if they work. As Feynman explained, any model's theoretical predictions must be tested with "observations, to see if it works." Thus, "If it disagrees with experiment it is wrong." Feynman, THE CHARACTER OF PHYSICAL LAW 150.

In summary, "real science" is determined by the scientific method, testing theory with observations, to provide scientific knowledge, not by consensus, government opinion, fabricated data, peer review, or models that do not work.

<sup>&</sup>lt;sup>8</sup> Lindzen, *Global Warming for the Two Cultures*, in GLOBAL WARMING POLICY FOUNDATION 10 (2018). *Accord* Lindzen, *The Absurdity of the Conventional Global Warming Narrative* (April 20, 2022), <u>https://co2coalition.org/media/the-absurdityof-the-conventional-global-warming-narrative/</u> (last visited Oct. 21, 2022); Lindzen, *Straight Talk About Climate Change*, in ACAD. QUEST 419 (2017).

# **III. THE IPCC IS GOVERNMENT-CONTROLLED AND THUS ONLY ISSUES GOVERNMENT OPINIONS, NOT REAL SCIENCE**

Unknown to most, two IPCC rules require that IPCC *governments* control what it reports as "scientific" findings on CO<sub>2</sub>, fossil fuels, and catastrophic humanmade global warming, not scientists. IPCC governments meet behind closed doors and control what is published in its Summaries for Policymakers, which control what is published in full reports, as the picture above demonstrates. *Supra*, p. 8.

This is not how scientific knowledge is determined. In science, as the Lysenko experience tragically underscores, and as Richard Feynman emphasized: "*No government has the right to decide on the truth of scientific principles*."

The two IPCC rules are:

# No.1: <u>All Summaries for Policymakers Are Approved Line by Line by</u> <u>Member Governments</u>

IPCC Fact Sheet: "How does the IPCC approve reports? 'Approval' is the process used for IPCC Summaries for Policymakers (SPMs). Approval signifies that the material has been subject to detailed, line-by-line discussion, leading to agreement among the participating IPCC member countries, in consultation with the scientists responsible for drafting the report."<sup>9</sup>

<sup>&</sup>lt;sup>9</sup> Intergovernmental Panel on Climate Change, Principles Governing IPCC Work, the Procedures for the Preparation, Review, Acceptance, Adoption, Approval and Publication of IPCC Reports , Appendix A Sections 4.4-4.6, <u>https://archive.ipcc.ch/news\_and\_events/docs/factsheets/FS\_ipcc\_approve.pdf;</u> <u>http://www.ipcc.ch/pdf/ipcc-principles/ipcc-principles-appendix-a-final.pdf</u> (emphasis added).

Since governments control the Summaries for Policymakers, the Summaries

for Policymakers are merely government opinions. Therefore, they have no value as

real science.

What about IPCC assessments and reports? The second rule requires that any

draft the independent scientists write must be rewritten to be consistent with the

Summaries for Policymakers.

IPCC Fact Sheet: "Acceptance' is the process used for the full underlying report in a Working Group Assessment Report or a Special Report after its [Summary for Policymakers] has been approved.... Changes...are limited to those necessary to ensure consistency with the Summary for Policymakers."

Id. (emphasis added).

IPCC governments' control of assessments and full reports using Rule No. 2

is demonstrated by the IPCC's rewrite of the scientific conclusions reached by

independent scientists in their draft of Chapter 8 of the IPCC report Climate Change

1995, The Science of Climate Change ("1995 Science Report").

The draft by the independent scientists concluded:

- No study to date has positively attributed all or part (of the climate warming observed) to (manmade) causes.
- *None of the studies* cited above have shown clear evidence that we can *attribute the observed* [climate] changes to the specific cause of increases in greenhouse gases.

No. 2: <u>Government Summaries for Policymakers Override Any Inconsistent</u> <u>Conclusions Scientists Write for IPCC Reports</u>

Frederick Seitz, A Major Deception on Climate Warming, WALL ST. J., June 12,

1996 (https://www.wsj.com/articles/SB834512411338954000).

What happened to the independent scientists' draft? IPCC Rule No. 2 was applied, and their draft was rewritten to be consistent with the Summaries for Policymakers in numerous ways.

- "[M]ore than 15 sections in Chapter 8 of the report—the key chapter setting out the scientific evidence for and against a human influence over climate—were changed or deleted.... [N]early all worked to remove hints of the skepticism with which many scientists regard claims that human activities are having a major impact on climate in general and on global warming in particular." *Id*.
- The government-written Summaries for Policymakers proclaimed the exact opposite of what the scientists concluded as to human influence: "The balance of evidence suggests a *discernible human influence on global climate.*" 1995 Science Report Summaries for Policymakers, at 4.
- The Summaries for Policymakers' opposite language was inserted in the published version of Chapter 8 in the *1995 Science Report*, on page 439: "The body of statistical evidence in chapter 8 ... now points towards a *discernible human influence on global climate*."
- The scientists' draft language was deleted from Chapter 8 of the 1995 Science Report.

Hundreds of world-class scientists of IPCC's Working Group 1 draft some

very good science. The science does not suggest an existential threat; neither does

the work of Nobel Laureate economist William Nordhaus.<sup>10</sup> As the example above illustrates, however, sound science from Working Group 1 is eliminated if it contradicts the political narrative. The public is subjected to alarmist political reports from IPCC, which are implied to be based on science, since IPCC has a Working Group 1 that addresses the science of climate, but which is overruled if its answers are politically incorrect.

In conclusion, the Endangerment Findings and Technical Support Document are fatally flawed because of their extensive reliance on IPCC assessments and opinions. Thus, as the Lysenko experience tragically underscores, they must be withdrawn for their dependency on IPCC false science.

# IV. THE IPCC THEORETICAL MODELS DO NOT WORK AND THUS UNDER BASIC SCIENTIFIC METHOD MUST NOT BE USED

The IPCC's theoretical model is used in the Endangerment Findings and Technical Support Document, as noted. Later versions of the IPCC climate models are the most dominant model used to support the theory that fossil fuels must be eliminated to avoid catastrophic global warming.

Prof. Steven Koonin's book UNSETTLED (2021) devotes an entire chapter to "Many Muddled Models." He analyzed in detail the IPCC's Coupled Model

<sup>&</sup>lt;sup>10</sup> R.W. Cohen, *et al., In the Climate Casino: An Exchange*, N.Y. REV, Apr. 26, 2012, <u>https://www.nybooks.com/articles/2012/04/26/climate-casino-exchange/</u> (last visited Oct. 20, 2022).

Intercomparison Project (CMIP) and other models and concluded: "Projections of future climate and weather events rely on models demonstrably unfit for the purpose." *Id.* at 24.

Focusing on his analysis of the most recent IPCC theoretical model, CMIP6,

he proved that it failed to predict observations and thus failed under the scientific

method and should not be used:

- "An analysis of 267 simulations run by 29 different CMIP6 models created by 19 modeling groups around the world shows that they [1] do a very poor job describing warming since 1950 and...[2] underestimate the rate of warming in the early twentieth century [1910 to 1940]." Id. at 90 (emphasis added).
- "Comparisons among the [29] models [show]...model results differed dramatically both from each other and from observations ...[and] disagree wildly with each other." Id. (emphasis added).
- "One particularly jarring failure is that the simulated global average *surface temperature...varies among models...three times greater than the observed value* of the twentieth century warming they're purporting to describe and explain." *Id.* at 87 (emphasis added).
- "[A]nother equally serious issue" is the models failed to predict the "strong warming observed from 1910 to 1940. On average, the models give a warming rate over that period of *about half what was* actually observed. That the models can't reproduce the past is the big red flag—it erodes confidence in their projections of future climates." *Id.* at 88, 91 (emphasis added).

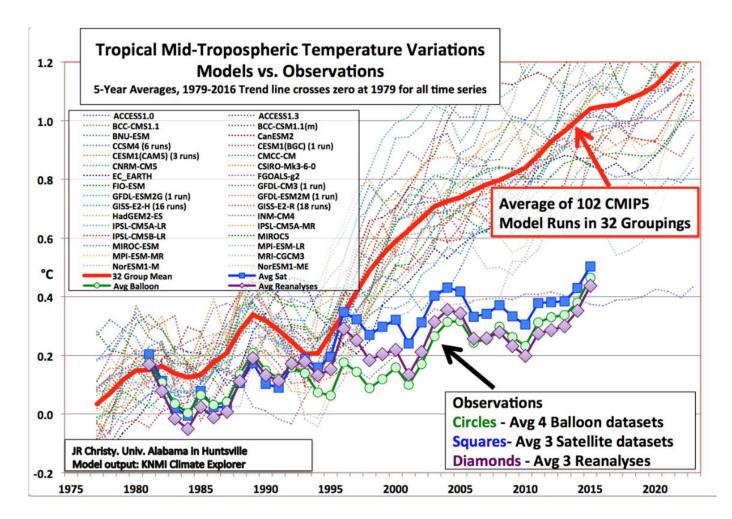
John Christy, Ph.D., Professor of Atmospheric Science at the University of

Alabama, applied the scientific method to the earlier CMIP5 model. It had 102

predictions of temperatures, from 1979 to 2016, by theoretical models from 32

institutions.

He explained he used "the traditional scientific method in which a claim (hypothesis) is made and is tested against independent information to see if the claim can be sustained. He produced the following chart:<sup>11</sup>



- The dotted lines are 102 predictions made by the models;
- The red line is the average, called the "consensus," of the models. (In real science, each theoretical model is tested separately. There are no

<sup>&</sup>lt;sup>11</sup> John Christy, Testimony, House Comm. Science, Space, and Tech. (Mar. 29, 2017), at 3,5,

https://science.house.gov/imo/media/doc/Christy%20Testimony\_1.pdf?1 (last visited Oct. 20, 2022).

average models in real science);

• The blue, purple, and green lines show actual temperature measurements against which the models' predictions were tested.

The graph clearly shows 101 model predictions (dotted lines) and their average (red line) fail miserably to predict reality.

The one model that closely predicted the temperatures is a Russian model. It

should be the only model that should be used in real science. However, the IPCC did

not use it. The IPCC instead used the models that should have all been rejected.

# Dr. Christy concluded:

When the "scientific method" is applied to the output from climate models of the IPCC [Fifth Assessment Report ("AR5")], specifically the bulk atmospheric temperature trends since 1979 (a key variable with a strong and obvious theoretical response to increasing [Greenhouse Gases] in this period), I demonstrate that the *consensus of the models* [*red line*] *fails the test to match the real-world observations by a significant margin*. As such, the average of the models is untruthful in representing the recent decades of climate variation and change, and thus would be *inappropriate for use* in predicting future changes in the climate or related policy decisions.

Id. at 13 (emphasis added).

Thus, the CMIP5 models also fail the Feynman test under the scientific method. They do not "work."

We now know the IPCC theoretical climate models, an early version of which was used in the Endangerment Findings and Technical Support Document, fail the basic test of the scientific method and, thus, should not be used. Without a valid theoretical model, the IPCC's future climate projections and scenarios have no scientific validity. For this reason alone, the Findings and Technical Support Document should be rescinded.

# V. CENSORED *REAL* SCIENCE PROVES FOSSIL FUEL CO<sub>2</sub> WILL NOT CAUSE CATASTROPHIC GLOBAL WARMING

# A. 600 Million Years of Data Show Today's 420 ppm CO<sub>2</sub> Level is Low and Not Dangerously High

The EPA's Endangerment Findings warn ominously that "current atmospheric greenhouse gas concentrations are now *at elevated and essentially unprecedented levels*" and that carbon dioxide and methane are at higher levels than they have been for "at least the last *650,000 years*." 74 Fed. Reg. 66,511 (emphasis added).

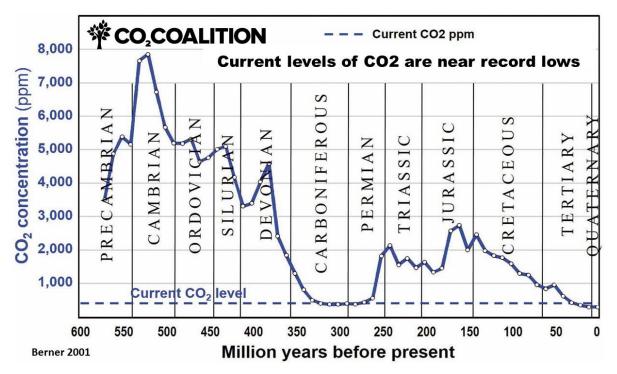
This is a classic example of omitting and censoring observations that contradict the theory fossil fuel  $CO_2$  will cause catastrophic global warming. Six hundred and fifty thousand years is a trivially short period of geological time. There are hundreds of millions of years of data on  $CO_2$  levels. The omitted data<sup>12</sup> show that today's 420 ppm  $CO_2$  level is near *a record low*, not dangerously high, and that:

- CO<sub>2</sub> levels averaged 2,600 ppm for hundreds of millions of years, or six times our current levels;
- They ranged from 200 ppm to over 7,000 ppm—almost 20 times higher

<sup>&</sup>lt;sup>12</sup> Gregory Wrightstone, INCONVENIENT FACTS at 16 (Silver Crown Productions, LLC 2017); CO2 Coalition, <u>https://co2coalition.org/wp-</u> content/uploads/2021/08/CO2\_07.jpg (last visited Oct. 20, 2022).

than today's level;

• Today's approximately 420 ppm is not far above the minimal level at which plants die of CO<sub>2</sub> starvation, around 150 ppm, when all human and other life would die from lack of food.<sup>13</sup>



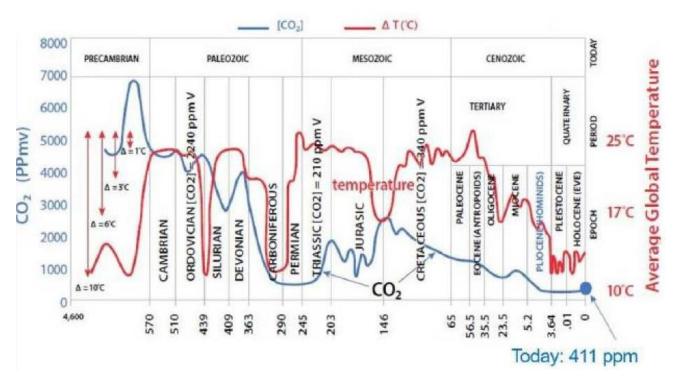
The omitted 600 million years of data demonstrate that the Endangerment Findings' statement that  $CO_2$  greenhouse gas levels are at unprecedented high levels

is false.

**B.** Six Hundred Million Years of CO<sub>2</sub> and Temperature Data Contradict the Theory That Fossil Fuel CO<sub>2</sub> Will Cause <u>Catastrophic Global Warming</u>

The chart below shows 600 million years of CO2 levels and temperature

<sup>&</sup>lt;sup>13</sup> Derived from Berner, R. and Kothavala, Z., *Geocarb III: A Revised Model of Atmospheric CO2 Over Phanerozoic Time*, AM. J. OF SCIENCE, Vol. 301, Feb. 2001, at 182–204.



data.<sup>14</sup> The blue line shows CO<sub>2</sub> levels. The red line shows temperature.

Note the chart shows little correlation between  $CO_2$  and climate temperatures for much of Earth's history. Both extremely high and low temperatures occurred during periods of both high and low  $CO_2$  levels, implying that the effects of  $CO_2$  are, in fact, either marginal or non-existent.

Although the data are based on various proxies, with the attendant uncertainties, they are good enough to demolish the argument that atmospheric  $CO_2$  concentrations control Earth's climate.

This censored data, omitted by the Endangerment Findings and Technical

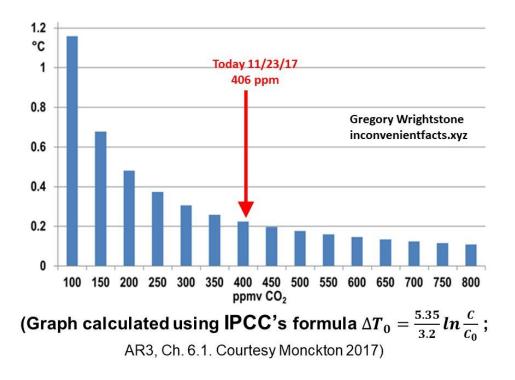
<sup>&</sup>lt;sup>14</sup> Nahle, N. *Geologic Global Climate Changes*, BIOLOGY CABINET J. (Mar. 2007) (Gregory Wrightstone revision).

Support Document, also contradict the theory that fossil fuel CO<sub>2</sub> will cause catastrophic global warming.

# C. Atmospheric CO<sub>2</sub> is Now "Heavily Saturated," Which in Physics Means More CO<sub>2</sub> Will Have Little Warming Effect

Drs. Happer and Lindzen have special expertise in radiation transfer, the prime mover of the greenhouse effect in Earth's atmosphere. It is important to understand the radiation physics of what the effect is of adding  $CO_2$  at current atmospheric concentrations.

CO<sub>2</sub> becomes a less effective greenhouse gas at higher concentrations because of what in physics is called "saturation," shown in the chart below.<sup>15</sup>



<sup>&</sup>lt;sup>15</sup> Gregory Wrightstone, 7 INCONVENIENT FACTS.

This means that, from now on, our emissions from burning fossil fuels will have a modest and a *declining* impact on greenhouse-induced warming. There is no climate emergency. We could continue burning fossil fuels and emitting CO<sub>2</sub>, with little additional warming effect.

Saturation also explains why temperatures were not catastrophically high over the hundreds of millions of years when  $CO_2$  levels were 10-20 times higher than they are today, shown in the previous chart.

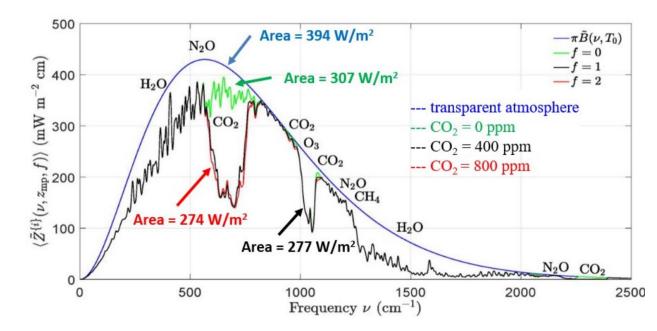
Further, saturation also provides another reason why reducing the use of fossil fuels to "net zero" by 2050 would have a trivial impact on climate, also contradicting the theory that it is urgently necessary to eliminate fossil fuel  $CO_2$  to avoid catastrophic global warming.

As a matter of physics, adding more  $CO_2$  to the atmosphere slightly decreases the amount of long-wave infrared radiation that goes to space, called the "flux." The details are shown in the graph below.<sup>16</sup>

The area under the blue curve,  $394 \text{ W/m}^2$  (Watts per square meter), is the heat the Earth would radiate to space *if our atmosphere had no greenhouse gases or clouds*, and if the surface temperature were 60° F. The area under the jagged black

<sup>&</sup>lt;sup>16</sup> Happer & Wijngaarden, *Dependence of Earth's Thermal Radiation on Five Most Abundant Greenhouse Gases* (June 8, 2020), https://arxiv.org/pdf/2006.03098.pdf (last visited Oct. 20, 2022).

curve, 277 W/m<sup>2</sup>, is the heat radiation that is actually measured with instruments on satellites. This heat is supplied by solar radiation. Without greenhouse gases or clouds, 277 W/m<sup>2</sup> of solar heating would only suffice to warm Earth's surface to  $264^{\circ}$  K or  $16^{\circ}$  F—well below the freezing point of water.



The jagged black curve lies *below* the smooth blue curve because of absorption and emission of radiation by the greenhouse gases water vapor (H<sub>2</sub>O), nitrous oxide (N<sub>2</sub>O), carbon dioxide (CO<sub>2</sub>), ozone (O<sub>3</sub>), and methane (CH<sub>4</sub>).

The red curve is the radiation to space if  $CO_2$  concentrations were to be doubled from 400 ppm to 800 ppm, with no changes in other greenhouse gases. One can barely make out the difference, about 3 W/m<sup>2</sup> or 1.1% (3/277) of the radiation before doubling. To restore balance between solar heating, the surface temperature would have to increase by a trivial amount, about 1° C (1.8° F) or less. This is yet another example of the censored real science the Endangerment Findings and Technical Support Document omit if they cast any doubt on the necessity for "Net Zero" to avoid catastrophic global warming.

# VI. THE ENDANGERMENT FINDINGS AND TECHNICAL SUPPORT DOCUMENT SUPPORT OF "NET ZERO" FOSSIL FUEL CO<sub>2</sub> POLICIES WILL DISASTROUSLY REDUCE FOOD WORLDWIDE AND ELIMINATE FOSSIL FUELS, THE MAJOR SOURCE OF LOW-COST ENERGY FOR THE U.S. AND PEOPLE WORLDWIDE

There is overwhelming scientific evidence that fossil fuels and  $CO_2$  provide enormous social benefits in terms of more food and low-cost energy. Therefore, there will be disastrous consequences for the poor, people worldwide, future generations, and the United States if fossil fuels and  $CO_2$  emissions are reduced to "Net Zero," briefly elaborated on below.

As noted,  $CO_2$  is essential to life. Without  $CO_2$ , there would be no photosynthesis, no food, and no human or other life on Earth.

Further, more  $CO_2$  means more food. This also means that more  $CO_2$  from fossil fuels results in more food worldwide.

More  $CO_2$  is especially important now for regions of the world suffering from drought because more  $CO_2$  increases the resistance of plants to droughts. Thus, more  $CO_2$  in drought-stricken areas means there will be more food than there would be otherwise. An illustration of the response of green plants to increases of atmospheric  $CO_2$  is shown below. Dr. Sherwood Idso grew Eldarica (Afghan) pine trees with increasing amounts of  $CO_2$  in experiments, starting with an ambient concentration of  $CO_2$  of 385 ppm. He showed what happens over the 10 years when  $CO_2$  is increased from 385 ppm to 535, 685, and 835 ppm:<sup>17</sup>



In a recent paper, Taylor and Schlenker report: "We find consistently high fertilization effects: a 1 ppm increase in  $CO_2$  equates to a 0.5%, 0.6%, and 0.8%

<sup>&</sup>lt;sup>17</sup> C. Idso, *Increased Plant Productivity: The First Key Benefit of Atmospheric CO2 Enrichment,* MASTER RESOURCE (Apr. 21, 2022), <u>https://www.masterresource.org/carbon-dioxide/increased-plant-productivity-the-</u> <u>first-key-benefit-of-atmospheric-co2-enrichment/</u> (last visited Oct. 21, 2022).

yield increase for corn, soybeans, and wheat, respectively. Viewed retrospectively, 10%, 30%, and 40% of each crop's yield improvements since 1940 are attributable to rising  $CO_2$ ."<sup>18</sup>

At the same time, doubling the CO<sub>2</sub> concentration from 400 ppm to 800 ppm, which would take well over a century, will not cause catastrophic global warming, but will directly cause only about a beneficial 1°C warming.<sup>19</sup> Modest warming of 1°C will lead to increased length of growing seasons, allowing more plantings and increased food production.

Accordingly, continuing to use fossil fuels generating  $CO_2$  will provide enormous social benefits: more food and more low-cost energy for Americans and people worldwide. Eliminating fossil fuels and reducing its  $CO_2$  to "Net Zero" will be disastrous.

<sup>&</sup>lt;sup>18</sup> J. Taylor and W. Schlenker, *Environmental Drivers of Agricultural Productivity Growth: CO<sub>2</sub> Fertilization of US Field Crops*, Working Paper, NATIONAL BUREAU OF ECONOMIC RESEARCH, <u>https://www.nber.org/papers/w29320</u>. (last visited Oct. 20, 2022).

<sup>&</sup>lt;sup>19</sup> Lindzen, "On Climate Sensitivity" CO2 Coalition, Climate Issues in Depth, (2/2/2020), <u>https://co2coalition.org/wp-content/uploads/2021/08/On-Climate-Sensitivity.pdf</u> (last visited Oct. 20, 2022).

# CONCLUSION

For the above scientific reasons, we respectfully request that the Court rescind

the Endangerment Findings and Technical Support Document.

Respectfully submitted,

/s/David S. Wachen

*Of Counsel:* Charles D. Weller 314 Magnet Innovation Center 1768 East 25<sup>th</sup> Street Cleveland, OH 44114 (216) 496-0836 <u>weller1@nxgh.net</u> David S. Wachen Wachen LLC 11605 Montague Court Potomac, MD 20854 (240) 292-9121 Fax (301) 259-3846 david@wachenlaw.com

Counsel for Amici Curiae Dr. William Happer, Dr. Richard S. Lindzen, and The CO2 Coalition

# **CERTIFICATE OF COMPLIANCE WITH RULE 32(g)**

I certify that the foregoing document complies with the type-volume limitations of Fed. R. App. P. 29(a)(5) and 32(a)(7)(B). As determined by the Microsoft Word software used to produce this brief, it contains 5,821 words in the text, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and Circuit Rule 32(e)(1).

I further certify that this document is prepared using the Times New Roman font, 14-point size.

Dated: October 21, 2022

/s/David S. Wachen David S. Wachen

# **CERTIFICATE OF SERVICE**

I certify that on October 21, 2022, the foregoing document was electronically filed with the United States Court of Appeals for the District of Columbia Circuit using the Court's CM/ECF system. Counsel for Petitioners, Respondent, and Respondent's Intervenors are registered CM/ECF users, and service upon them will be accomplished by the CM/ECF system.

> /s/David S. Wachen David S. Wachen