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U.S. Environmental Protection Agency
Docket ID No. EPA-HQ-OAR-2025-0194
1200 Pennsylvania Avenue NE
Washington, D.C.

Re: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards; Extension of Comment Period (“Proposed Rule”)

Dear Administrator Zeldin,

Thank you for the opportunity to comment on the Environmental Protection Agency’s (“EPA”) Proposed Rule.¹

We are career physicists with a special expertise in radiation physics, which describes how carbon dioxide and other GHGs affect heat flow in Earth's atmosphere. We are both members of the National Academy of Sciences. Our CVs are attached.

Our comment focuses on your request for comments as to, “The scientific underpinnings of the Endangerment Finding are weaker than previously believed and contradicted by empirical data, peer-reviewed studies, and scientific developments since 2009 (C-2).”

In our scientific opinion, the scientific underpinnings of the Endangerment Finding (“EF”)² are fatally flawed science, for two key reasons.

- It fails to consider contradictory science.
- It is not based on science, it is based on unscientific evidence.

Thus there is no scientific basis for the Endangerment Finding that greenhouse gases (“GHGs”) will endanger the public health and welfare. Furthermore, it endangers the public health and welfare itself.

Accordingly, it should be repealed ASAP.

Scientific details follow.

¹ 90 FR 36288 (Aug. 1, 2025).

² EPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases, 74 Fed. Reg. 66,496 (Dec. 15, 2009), Technical Support Document (Dec. 7, 2009)(“TSD”), https://www.epa.gov/sites/default/files/2016-08/documents/endangerment_tsd.pdf

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I. INTRODUCTION

The EPA Endangerment Finding is:

“[T]he Administrator finds that greenhouse gases in the atmosphere may reasonably be anticipated both to endanger public health and to endanger public welfare. Specifically, the Administrator is defining the “air pollution” referred to in CAA section 202(a) to be the mix of six long-lived and directly-emitted greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).” * * * “The Administrator has considered how elevated concentrations of the well-mixed greenhouse gases and associated climate change affect public health by evaluating the risks associated with changes in air quality, increases in temperatures, changes in extreme weather events, increases in food- and water-borne pathogens, and changes in aeroallergens.” 74 FR 66,497.

At the outset it is important to understand that carbon dioxide has two relevant properties, as a creator of food and oxygen, and as a greenhouse gas (GHG).

As to food and oxygen, carbon dioxide is essential to nearly all life on earth by creating food and oxygen by photosynthesis. Further, it creates more food as its level in the atmosphere increases. For example, doubling carbon dioxide from today's approximately 420 ppm to 840 ppm would increase the amount of food available to people worldwide by roughly 40%, and doing so would have a negligible effect on temperature.

As to carbon dioxide as a GHG, the Endangerment Finding is premised on the Net Zero Theory that carbon dioxide and other GHG emissions must be reduced to Net Zero and the use of fossil fuels must be eliminated by 2050 to avoid catastrophic global warming and more extreme weather.

A key premise the EPA has asserted is, “The increased concentrations of GHGs in the atmosphere and the resulting warming have led to more frequent and more intense heat waves and extreme weather events, rising sea levels, and retreating snow and ice.”³

Further, a foundational premise of everything the Intergovernmental Panel on Climate Change (IPCC) does is that the “evidence is clear that carbon dioxide (CO₂) is the main driver of climate change,” where “main driver means responsible for more than 50% of the change.”⁴

We demonstrate that the scientific underpinnings of the Endangerment Finding and of both the EPA and IPCC premises are fatally flawed science, for two key separate and combined reasons:

First, both fail to consider contradictory science, including

³ EPA, New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 89 FR 39798, 39800 (May 9, 2024).

⁴ IPCC, *Climate Change 2021: The Physical Science Basis*, p. 424, IPCC, [Press_release_wgi_ar6_website-final \(Aug. 9, 2021\)](#), p. 3.

- the physics that demonstrates increasing carbon dioxide and other GHGs can only cause negligible warming and cannot, have not and will not cause catastrophic warming
- as a result, increasing GHGs cannot cause increased extreme weather
- that doubling carbon dioxide from today's level will have a trivial effect on temperature but increase the world's food supply by 40%
- that eliminating carbon dioxide and fossil fuels will have disastrous effects for Americans, America, the poor and people worldwide.

Second, both are not based on science, and are based on unscientific evidence.

Thus there is no scientific basis for the Endangerment Finding that GHGs will endanger the public health and, furthermore, it endangers the public health and welfare itself. Accordingly, it should be repealed ASAP.

Frankly, we also demonstrate the Endangerment Finding is a classic example of what Peter Drucker described as government subordinating science to "value-judgments that are the reverse of, and largely incompatible with, any criteria one could possibly call scientific."⁵

Further, our opinion is that science requires urgent action to repeal the Endangerment Finding and other government actions based on it because they are policies that will destroy western economies, impoverish the working middle class, condemn billions of the world's poorest to continued poverty and increased starvation, leave our children despairing over the alleged absence of a future, and will enrich the enemies of the West who are enjoying the spectacle of our suicide march.⁶

Scientific details follow.

II. WHAT IS, AND IS NOT, SCIENCE

Our analysis starts with fundamentals: what is, and is not, science.

A. What Is Science?

The Supreme Court explained, and we agree: "'scientific knowledge' ... must be derived by the scientific method."⁷

The scientific method is simply and profoundly: validating theoretical predictions with observations and rejecting theories when they do not work.

Nobel physicist Richard Feynman elaborated:

"[W]e compare the result of [a theory's] computation to nature, ... compare it directly with observations, to see if it works. If it disagrees with experiment, it is

⁵ In 1979, Peter Drucker warned: "In government, there is now a strong tendency to judge science by what is politically expedient or politically fashionable; that is, to attempt to subordinate science, whether pure or applied, to value-judgments that are the reverse of, and largely incompatible with, any criteria one could possibly call scientific." Drucker, "Science and Industry" *Science* 806 (May 25, 1979)(emphasis added).

⁶ Richard Lindzen, *Manufacturing Consensus on Climate Change*, *The American Mind* (Nov. 21, 2024).

⁷ *Daubert v. Merrell Pharmaceuticals, Inc.*, 509 U.S. 579, 593 (1993).

wrong. In that simple statement is the key to science." *The Character of Physical Law* (1965), p. 150.

Agreement with observations is the measure of scientific truth. Scientific progress proceeds by the interplay of theory and observation. Theory explains observations and makes predictions of what will be observed in the future. Observations anchor understanding and weed out the theories that do not work. This has been the scientific method for more than four hundred years. "Progress often involves the killing of an exquisite theory by an ugly fact." Leon Lederman, a Nobel Laureate in Physics, *The God Particle* (1993), p. 256.

It is astounding that one of the most complex questions in physics (namely, the behavior of a multi-phase, radiatively active, turbulent fluid) should be labeled by the government — and funding agencies it controls — to be so settled that skeptics are silenced. The models supporting the climate-crisis narrative make predictions that utterly fail to match the observations of what they purport to predict. This failure means in science they should never be used. Unfortunately, this peculiar situation is particularly dangerous because many world leaders have abandoned the science and intellectual rigor bequeathed to us by the Enlightenment and its forebears.

Thus, the scientific method is very simple and very profound: Does the theory work with observations? If not, it is rejected and not used.

B. What is Not Science?

Scientific knowledge is not determined by unscientific sources.

1. Models That Do Not Work

Models are a type of theory; they predict physical observations. The scientific method requires models to be tested by observations to see if they work. If a model's prediction disagrees with observations of what it purports to predict, it is wrong and never used as science. The models supporting the climate-crisis narrative simply do not align with observations of the phenomena they are supposedly designed to predict. Instead, they consistently overestimate the warming effect of CO₂ emissions, often predicting two or three times more warming than has been observed, detailed below.

2. Government Opinion

Nobel physicist Richard Feynman put it unambiguously:

"No government has the right to decide on the truth of scientific principles."⁸

The importance of the scientific principle that government does not determine science was chillingly underscored in Russia under Stalin and recently in Sri Lanka.

In Russia, Stalin made Trofim Lysenko the czar of Russian biology and agriculture. His false biology, which rejected well-established genetic science, prevailed for 40 years in the Soviet Union because Lysenko gained dictatorial control, providing one of the most thoroughly documented and horrifying examples of the politicization of science. Lysenko was strongly supported by "scientists" who benefitted from his patronage. Millions died because of his ruthless campaign against genetic science in agriculture.⁹

⁸ Richard Feynman, *The Meaning of It All* p. 57 (1998).

⁹ William Happer, Chapter 1, Michael Gould. *Politicizing Science* pp. 29–35 (2003).

Recently in Sri Lanka, one of us (Happer) explained:

"Ideologically driven government mandates on agriculture have usually led to disaster...The world has just witnessed the collapse of the once bountiful agricultural sector of Sri Lanka as a result of government restrictions on mineral [nitrogen] fertilizer."¹⁰

3. Consensus and 97% of Scientists' Opinions

What is correct in science is not determined by consensus, and 97% of scientist's opinions,¹¹ but by experiment and observations. Historically, the consensus of scientists has often turned out to be wrong. Many of the greatest scientists in history are great precisely because they broke with consensus. To quote the profoundly true observation of Michael Crichton:

"Historically, the claim of consensus has been the first refuge of scoundrels...If it is consensus, it isn't science. If it's science, it isn't consensus."¹²

In science, however, consensus and 97% of scientists' opinions are not the test. The test is the scientific method, testing theory with observations, and rejecting theories not validated by observations.

4. One-Sided Peer Review

Peer review can be helpful in many areas of science, but peer review does not determine scientific knowledge, the scientific method does.

In our decades of personal experience in the field, we have been dismayed that many distinguished scientific journals now have editorial boards that further the agenda of climate-change alarmism rather than objective science. Research papers with scientific findings contrary to the dogma of climate calamity are commonly rejected by peer reviewers, many of whom fear that their research funding will be cut if any doubt is cast on the climate catastrophe.

It is one-sided peer review, usually not including any contradictory science that goes against the party line of the climate-alarm establishment.

One of our personal experiences (Lindzen's) is typical. He had two papers peer reviewed and published in the *Bulletin of the American Meteorological Society*. In both cases, the editor was immediately fired. In the second case the new editor specifically asked for papers attacking his paper and prevented him from responding.

In conclusion, in climate science, peer reviewed publications usually only contain one-sided articles supporting the climate dogma narrative, and exclude contradictory science.

¹⁰ William Happer, et al., [*Nitrous Oxide and Climate*](#), CO₂ Coalition (Nov. 10, 2022), p. 39 (emphasis added).

¹¹ Importantly, note the 97% number is false. "The figure of 97% is entirely discredited." Andrew Montford, *Fraud, Bias and Public Relations: The 97% 'Consensus' and its Critics*, Global Warming Policy Foundation (2014), p. 12.

¹² Michael Crichton, *Aliens Cause Global Warming*, Caltech Michelin Lecture (Jan. 17, 2003).

5. Cherry-Picked, Fabricated, Falsified or Omitted Contradictory Data

Since theories are tested with observations, fabricating data, falsifying data, and omitting contradictory facts to make a theory work is an egregious violation of the scientific method.¹³

Richard Feynman stated this fundamental principle of the scientific method:

"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 it.... Details that could throw doubt on your interpretation must be given, if you know them."¹⁴

In Albert Einstein's words: "The right to search for truth implies also a duty; one must not conceal any part of what one has recognized to be true."¹⁵

One of us (Lindzen) observes: "Misrepresentation, exaggeration, cherry-picking, or outright lying pretty much covers all the right source touched evidence" marshalled in support of the Net Zero Theory.¹⁶

C. The Climate Dogma Protocol

In our decades of experience in the field, those advocating the Net Zero Theory dogma that GHGs and fossil fuels cause catastrophic global warming and extreme weather usually follow or implement what we call the Climate Dogma Protocol:

1. Government and Organizational Control. Have government organizations like the EPA and IPCC, publishers, and nonprofits be the gatekeeper to make sure that only climate dogma is published and used, and to make sure that no contradictory science is used or published.
2. Insist on One-Sided Peer Review. Insist peer-reviewed publications be used, because most peer reviewed publications only publish climate dogma, and do not publish any contradictory science.
3. Claim Consensus and 97% of Scientists' Opinions is Science. Have consensus and 97% of scientists' opinions be cited as good science, which it is not.
4. One-Sided Funding. Make sure all funding goes to climate dogma researchers and actors and that no funding goes to those doing and publishing contradictory science.

When one of us (Happer), was the Director of Energy Research of the Department of Energy in the early 1990s, "I was amazed that the great bulk of federal funds for environmental studies from the DOE, NASA, EPA and other federal agencies flowed into research programs that reinforced the message of imminent doom:

¹³ David Goodstein, *On Fact and Fraud* p. 135 (2010). "Fabrication is making up data or results," "falsification is ... changing or omitting data or results."

¹⁴ Richard Feynman, *Surely You're Joking, Mr. Feynman!* pp. 311–312 (1985).

¹⁵ Albert Einstein, *The Ultimate Quotable Einstein* p. 480 (2010).

¹⁶ Richard Lindzen, *Global Warming for the Two Cultures, Global Warming Policy Foundation* 10 (2018).

humanity and planet Earth devastated by global warming, pestilence, famine, and flood.”¹⁷

Literally trillions of dollars have been spent on one-sided research predicting catastrophic climate change. Dr. Harold Lewis, a distinguished physics professor, bluntly described this reality:

"The global warming scam, with the (literally) trillions of dollars driving it ... has corrupted so many scientists ... It is the greatest and most successful pseudoscientific fraud I have seen in my long life as a physicist."¹⁸

5. Exclude Contradictory Science. Ensure that contradictory science is not used or published.

In summary, scientific knowledge is determined by the scientific method, testing theory with observations, not by government opinion, consensus, 17% of scientists' opinions, one-sided peer review or cherry-picked, fabricated, falsified or omitting contradictory data.

Next, we demonstrate that the Endangerment Finding is based on fatally flawed science because, first, it entirely failed to consider contradictory science, and second, it is not based on science, but is based instead on unscientific evidence.

III. THE ENDANGERMENT FINDING FAILED TO CONSIDER CONTRADICTIONARY SCIENCE

A. The Physics of Carbon Dioxide and GHGs Demonstrates They Cannot and Will Not Cause Catastrophic Warming and Extreme Weather

The Endangerment Finding states:

“The scientific evidence is compelling that elevated concentrations of heat-trapping greenhouse gases are the root cause of recently observed climate change. The IPCC conclusion from 2007 has been re-confirmed by the June 2009 USGCRP assessment that most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.” 74 FR 66,518 (footnote deleted).

As a matter of physics, the scientific evidence cited by the Endangerment Finding from two government organizations, the IPCC and USGCRP, is false science. (Elaborated in section III.B and D).

The five most abundant GHGs are water vapor (H₂O), nitrous oxide (N₂O), carbon dioxide (CO₂), ozone (O₃), and methane (CH₄).¹⁹ Water vapor and clouds account “for more than 90% of

¹⁷ William Happer, *Politicizing Science*, *supra*, p. 45.

¹⁸ Harold Lewis, October 6, 2010 resignation letter to the American Physical Society.

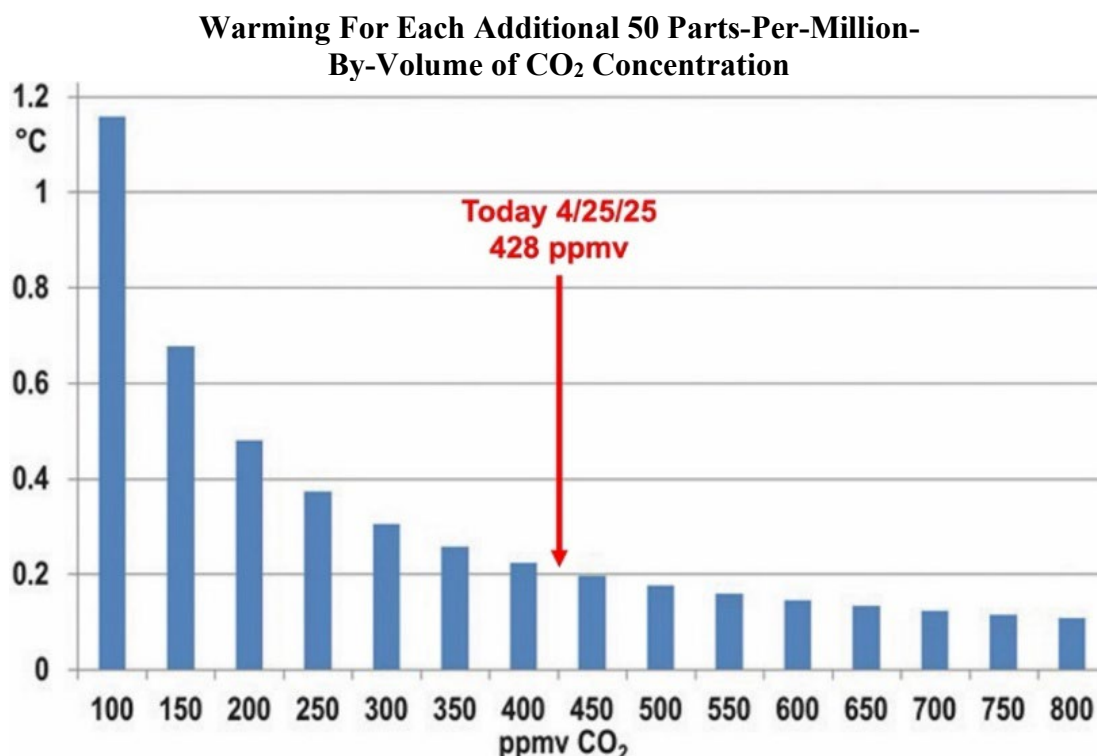
¹⁹ Williaam van Wijngaarden & William Happer, *Dependence of Earth's Thermal Radiation on Five Most Abundant Greenhouse Gases* (2020), p.1, <https://ar5iv.labs.arxiv.org/html/2006.03098>.

the atmosphere's ability to intercept heat."²⁰ Thus CO₂ and all the other GHGs account for less than 10% of the atmosphere's ability to intercept heat and warm the planet.

The Endangerment Finding cites six GHGs: carbon dioxide, methane, and nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. 74 FR 66,516. The warming effects of methane and nitrous oxide are also so small that they are irrelevant to climate,²¹ as are the latter three.²²

The physics of carbon dioxide and other GHGs is that they lose their capacity to warm the planet as their concentration in the atmosphere increases because of what is called "saturation," and according to logarithmic equations. Every doubling of CO₂ causes a warming of less than 1° C, to first approximation, 0.75° C (1.4° F). The other GHGs cause only a small fraction of the warming from CO₂.

Focusing on the physics of CO₂, it becomes a less effective greenhouse gas at higher concentrations. The saturation effect is shown in the chart below.²³



Most importantly, at today's CO₂ concentration in the atmosphere of approximately 425 parts per million and higher, saturation means that CO₂ has little ability to absorb heat and warm the planet. Because of saturation, doubling carbon dioxide from today's approximately 420 ppm

²⁰ Steven Koonin, *Unsettled* (2d. 2024) p. 51.

²¹ "Radiative effects of CH₄ [methane] and N₂O [nitrous oxide] are so small that they are irrelevant to climate." William van Wijngaarden and William Happer, "Methane and Climate" (2019), <https://co2coalition.org/wp-content/uploads/2021/08/Methane-and-Climate.pdf>, p. 4.

²² William van Wijngaarden & William Happer, *Instantaneous Clear Sky Radiative Forcings of Halogenated Gases* (June 23. 2023), : <https://arxiv.org/pdf/2306.13642>

²³ Gregory Wrightstone, *Inconvenient Facts* (2017) p. 7 (updated).

to 840 ppm would increase the amount of food available to people worldwide by roughly 40%, and doing so would have a negligible effect on temperature, 0.75°C (1.4°F).

Saturation means that from now on, CO_2 emissions from burning fossil fuels and other sources will have little impact on global warming. Since CO_2 at today's level is "saturated," for this reason alone there is no risk that the continued use of fossil fuels will cause catastrophic global warming and more extreme weather.

Moreover, the mathematics of logarithms can also be applied to temperature increases since the beginning of the Industrial Age in 1750 when carbon dioxide levels were about 280 ppm. Doubling it to 560 ppm would also only cause a trivial increase in temperature, 0.75°C (1.4°F). The increase in temperature would be even less, and trivial, if carbon dioxide increased from the beginning of the Industrial Age at 280 ppm to today's 425 ppm, a much smaller increase of 145 ppm than doubling it to 560 ppm.

Saturation also explains why temperatures were not catastrophically high over the hundreds of millions of years when CO_2 levels were 10 to nearly 20 times higher than they are today, shown in the chart in Part III.C covering 600 million years.

More specifically, the physics of how changes in atmospheric GHGs affect radiation transfer are described by precise physical equations that have never failed to describe observations. We and Prof. van Wijngaarden applied these formulas to the enormous efforts by the U. S. and worldwide to reduce CO_2 emissions to Net Zero by 2050 in a paper that we recommend to those with a technical background.²⁴

We show that all these efforts to achieve Net Zero emissions of carbon dioxide, if fully implemented, will have a trivial effect on temperature:

- United States Net Zero by 2050 — only avoids a temperature increase of $2/100^{\circ}\text{F}$ (0.02°F) with no positive feedback, and only $6/100^{\circ}\text{F}$ (0.06°F) with positive feedback of 4 that is typically built into the models of the United Nations International Panel on Climate Change (IPCC).
- Worldwide Net Zero by 2050 — only avoids a temperature increase of $13/100$ (0.13°F), or $50/100^{\circ}\text{F}$ (0.50°F) with a factor of 4 positive feedback.

These numbers are trivial, but the cost of achieving them would be disastrous to people worldwide detailed below in Part II.A.

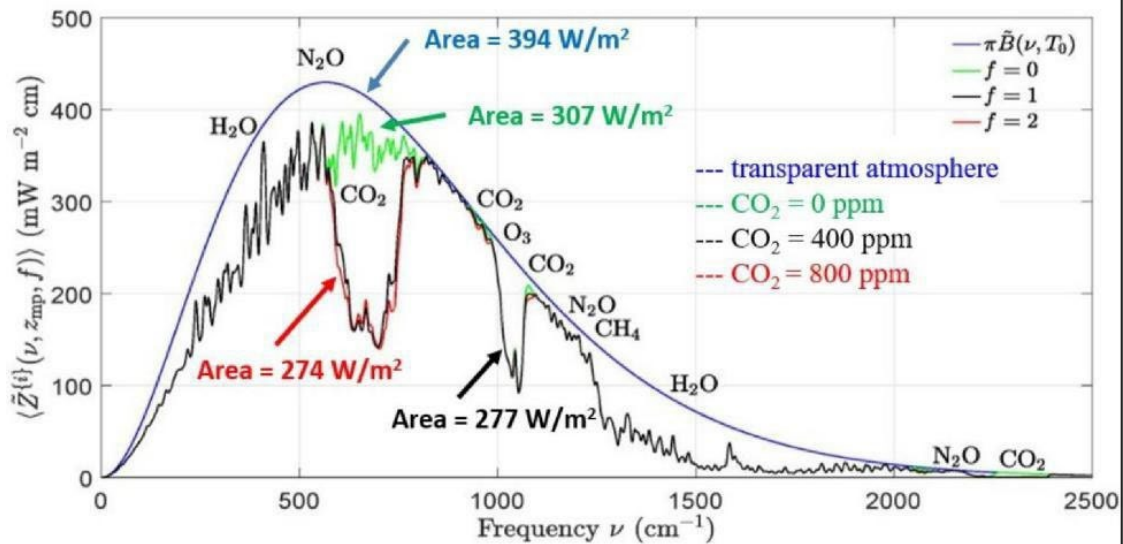
More details on the saturation physics are explained with the graph below.²⁵

The blue curve shows the heat energy the Earth would radiate to space if our atmosphere had no greenhouse gases or clouds. The magnitude is measured in Watts per square meter (W/m^2).

Without greenhouse gases, the total heat loss of $394\text{ W}/\text{m}^2$ would soon cool the Earth's surface to 16°F , well below freezing. Most life would end at these low temperatures. Thus, we should be grateful for greenhouse warming of the Earth.

²⁴ Richard Lindzen, William Happer and William van Wijngaarden, *Net Zero Avoided Temperature Increase*, ([Net Zero Averted Temperature Increase – \$\text{CO}_2\$ Coalition](https://arxiv.org/abs/2406.07392); <http://arxiv.org/abs/2406.07392>)

²⁵ William Happer & Williaam van Wijngaarden, *Dependence of Earth's Thermal Radiation on Five Most Abundant Greenhouse Gases*, p.1, <https://ar5iv.labs.arxiv.org/html/2006.03098>.



The jagged black curve below the blue curve shows how much less the Earth radiates infrared radiation to space with the current concentration of the most abundant greenhouse gases. Because of greenhouse gases, the Earth radiates 277 W/m² rather than 394 W/m² to space, 70% (277/394) of what it would radiate with no greenhouse gases.

What would happen if CO₂ concentrations were doubled from 400 ppm to 800 ppm? “Doubling the standard concentration of CO₂ (from 400 to 800 ppm) would cause a forcing [warming] increase (the area between the black and red lines) of ...3.0 W/m².” Id. p. 13. That means a temperature increase of a trivial amount, less than 1° C (2° F). It should be noted doubling methane concentrations would have an even more trivial warming increase, 0.7 W/m², and thus an even more trivial temperature increase. Id. p. 14.

Finally, note that CO₂ is not nearly as potent a greenhouse gas as water vapor and clouds (especially cirrus clouds). A radiation-blocking effect of only about 3 W/m² could easily also be produced by changes in the size or height of cloud cover on any given day. This is a complex system, and the idea that one variable, globally average temperature, is changed primarily by one thing, manmade CO₂, is baseless. As one of us (Lindzen) has explained:

"The climate system consists of two turbulent fluids interacting with each other, [ocean and atmosphere]. They are on a rotating planet that is differentially heated by the sun. A vital constituent of the atmospheric component is water in the liquid, solid, and vapor phases, and the changes in phase have vast energetic ramifications. The energy budget of this system involves the absorption and remission of about 200 watts per square meter. Doubling CO₂ involves a two percent perturbation to this budget. So do minor changes in clouds, ocean circulations, and other features, and such changes are common. In this complex multifactor system, what is the likelihood that the climate (which itself consists of many variables and not just globally averaged temperature anomalies) is controlled by a two percent perturbation in the energy budget due to just one of the numerous variables,

namely CO₂? Believing this is pretty close to believing in magic."²⁶

In conclusion, since CO₂ at today's level is "saturated," and the warming effects of the other GHGs are so small they irrelevant to climate, physics demonstrates:

- increasing carbon dioxide and other GHGs can only cause negligible warming
- there is no risk that the continued use of fossil fuels and even a doubling of atmospheric CO₂ will cause catastrophic global warming
- with no major warming, increasing GHGs cannot and will not cause increased extreme weather.

Physics demonstrates there is no scientific basis for the Endangerment Finding. For this reason alone, the Endangerment Finding should be repealed.

B. The EPA's Own MAGCC Model Confirms Carbon Dioxide and Other GHGs Have Only a Negligible Impact on Temperature

The Environmental Protection Agency uses the Model for Assessment of Greenhouse Gas-Induced Climate Change (MAGICC), as do many government agencies, the IPCC and climate policy analysts to predict temperatures and sea level rise from the level of CO₂ and other GHGs in the atmosphere.

The EPA explained, "MAGICC is widely used in science research, policy analysis, IPCC reports,"²⁷ and that it has "estimated changes in projected atmospheric CO₂ concentrations, global mean surface temperature and sea-level rise to 2100 using ...the MAGICC (Model for the Assessment of Greenhouse-Gas Induced Climate Change) simple climate model."²⁸

If the U.S. reduced CO₂ and other GHG emissions to net zero effective immediately, rather than waiting until 2050, what does the MAGICC model predict the effect on global temperatures would be in 2100?

Virtually nothing, 0.17° C (0.31° F).²⁹

Thus the EPA's own MAGICC formula confirms the physics that, since CO₂ is now and at higher levels a weak GHG, there is no risk that the continued use of fossil fuels and even a doubling of atmospheric CO₂ will cause catastrophic global warming and extreme weather.

It thus also confirms there is no science underpinning the Endangerment Finding and that it should be repealed ASAP.

C. 600 Million Years of Data Confirm GHGs Do Not Cause Catastrophic Global Warming

The Endangerment Finding asserts:

²⁶ Richard Lindzen, *Straight Talk About Climate Change*, "Acad. Quest." (2017), p. 432.

²⁷ EPA Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances (Nov. 2023), p. 36.

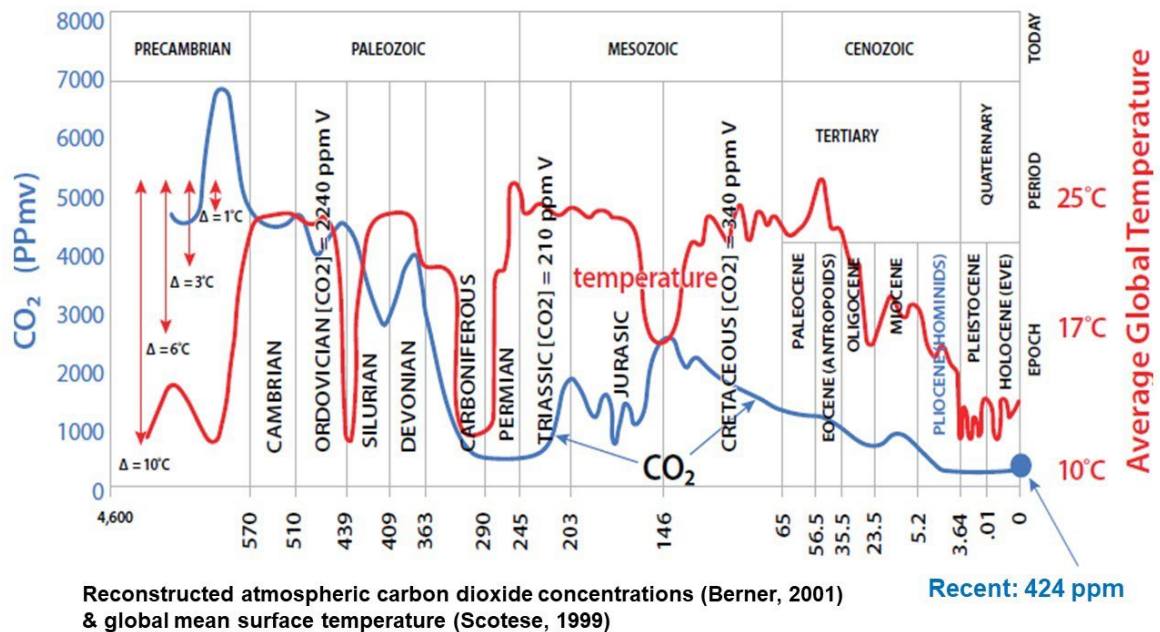
²⁸ EPA, Final Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards: Regulatory Impact Analysis (April 2010), pp. 7-122 to 7-123, [EPA-HQ-OAR-2010-0799-1190_content \(2\).pdf](#)

²⁹ Benjamin Zycher, *The Case for Climate-Change Realism* (2021), p. 108.

“The scientific evidence is compelling that elevated concentrations of heat-trapping greenhouse gases are the root cause of recently observed climate change. The IPCC conclusion from 2007 has been re-confirmed by the June 2009 USGCRP assessment that most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.” 74 FR 66,518 (footnote deleted).

Contrary to the Endangerment Finding assertion, the chart below shows 600 million years of the dominant GHG CO₂ levels and temperature data³⁰ confirms the dominant GHG carbon dioxide does not cause catastrophic warming. The data is based on various proxies and uncertainties, they demolish the argument that atmospheric CO₂ concentrations control Earth's climate and the theory that CO₂ will cause catastrophic global warming and extreme weather. They will not.

The blue line shows CO₂ levels. The red line shows temperature.



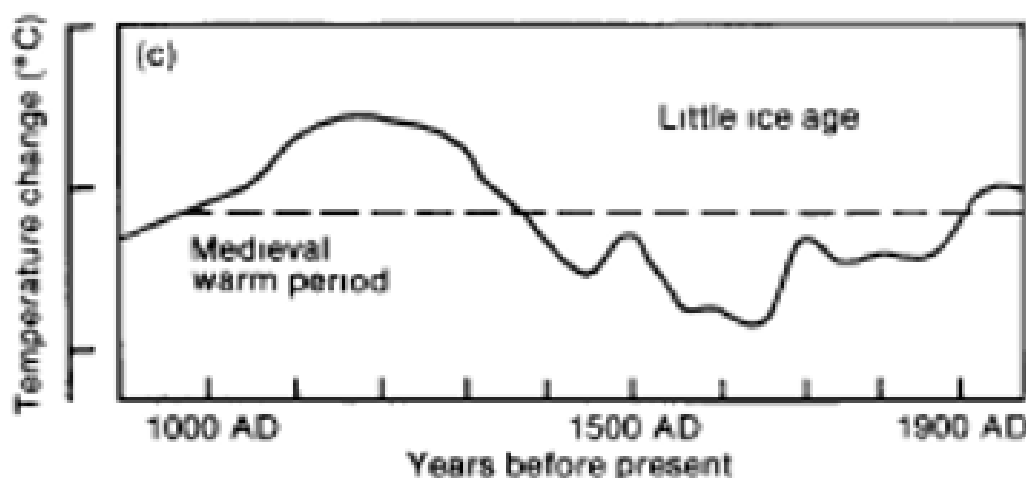
The chart shows:

- Contrary to the theory higher levels of CO₂ drive higher temperatures, when CO₂ was at a record high at about 7,000 ppm, temperatures were at a near-record low.
- When CO₂ levels were low, temperatures were at the highest they have ever been about 60 million years ago.

That is, contrary to the theory, the opposite is usually the case. Over hundreds of millions of years, temperatures were low when CO₂ levels were high, and temperatures were high when CO₂ levels were low.

³⁰ Nasif Nahle, *Geologic Global Climate Changes, Biology Cabinet J.* (Mar. 2007).
Updated by Gregory Wrightstone May 2024

Also contradicting the Endangerment Finding theory is an IPCC temperature chart covering 1,000 AD to 1900 AD. The IPCC reported, “The late tenth to early thirteenth centuries (about AD 950–1250) appear to have been exceptionally warm,”³¹ higher than today:



The IPCC also reported, “there is no evidence that it was accompanied by an increase of greenhouse gases.”³²

This chart also fundamentally contradicts the Endangerment Finding and others’ theory that human carbon dioxide emissions from fossil fuels will cause catastrophic warming. Obviously, there were no human carbon dioxide emissions from fossil fuels in 1250, yet the temperatures were higher than they are now with major increases in carbon dioxide from fossil fuel burning.

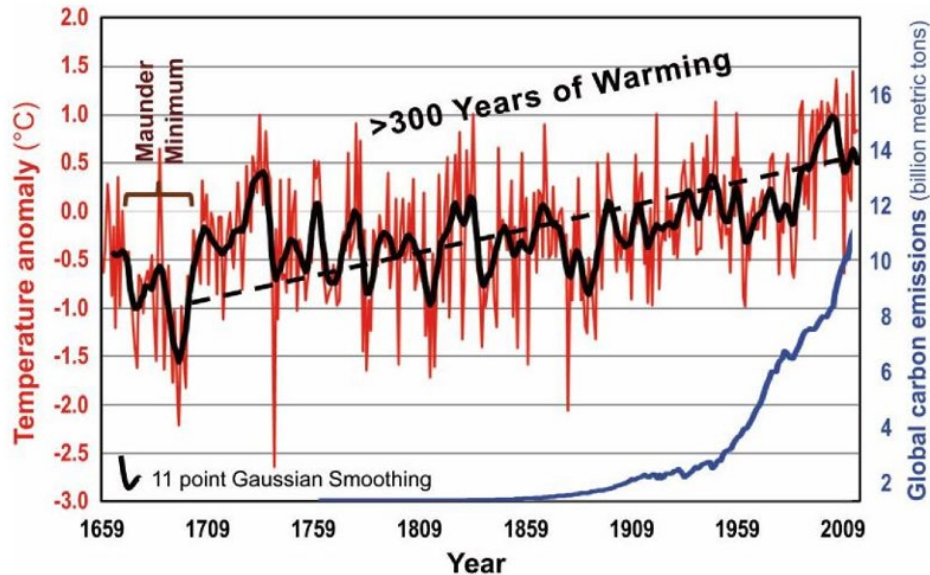
The little warming we observe now is a continuation of the 300-year warming that is a recovery from the depths of the Little Ice Age around 1650, shown in the following chart:³³

³¹ IPCC, *Climate Change: The IPCC Scientific Assessment* (1990), p. 203. We have confirmed this IPCC data from many sources.

³² *Id.* p. 202 (emphasis added)..

³³ Wrightstone, *supra*, p. 34; Boden et al. U.S. Dept. Energy, *Global CO₂ Emissions from Fossil Fuel Burning Cement Manufacture and Gas Flaring 1751–2013* (2016).

Figure I-24: Greater than 300 years of warming in central England
from 1695 – 2017



Thus, applying the scientific method to the 600 million years of data the Endangerment Finding failed to consider contradicts the Endangerment Finding theory that CO₂ and other GHGs cause and will cause catastrophic global warming and extreme weather and endanger the public health and welfare.. The EPA Theory does not agree with the facts, and there is another reason there is no science underpinning the Endangerment Finding and it must be repeated.

D. The Endangerment Finding is Factually False About Human GHG Causing 75% of Warming Since the Industrial Revolution Around 1750

The Endangerment Finding asserts two factually false statement that human GHG emissions are responsible for about 75% of the rise in temperature since pre-Industrial levels.

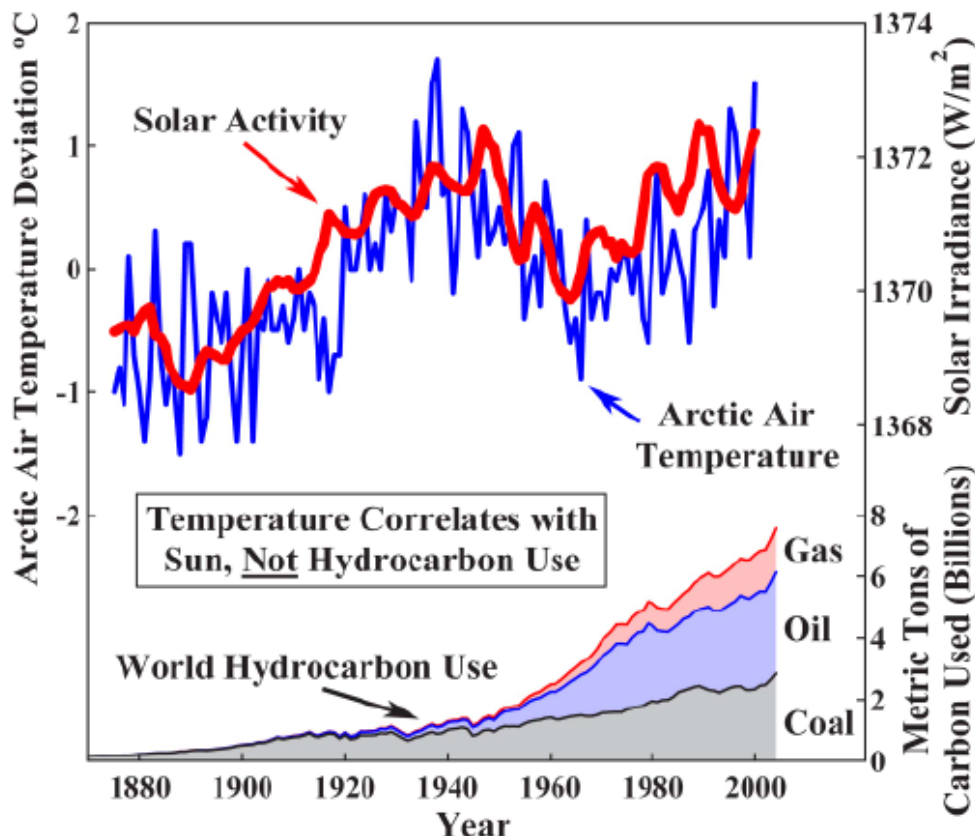
“Of the total anthropogenic heating effect caused by the accumulation of the six well-mixed greenhouse gases plus other warming agents ..., the combined heating effect of the six well-mixed greenhouses is responsible for roughly 75 percent.”
Id.

Frankly, the EPA Endangerment has done what in science is called “falsified” the facts.³⁴

The physics we demonstrated above is that carbon dioxide and other GHGs logarithmically lose their capacity to warm the planet as their concentration in the atmosphere increases. In 1750 carbon dioxide levels were about 280 ppm. At that level, the mathematics of logarithms demonstrates that increasing it to 400 ppm or doubling it to 560 ppm would only cause a trivial increase in temperature, 0.75° C (1.4° F).

³⁴ David Goodstein, *On Fact and Fraud* (2010), , p. 136 (“falsification is... changing or omitting data or results such that the research is not accurately represented in the research record.”).

Further, the following graph by Prof. Soon and others confirm the trivial role CO₂ plays in temperature change, and that the sun is dominant:³⁵



They explain:

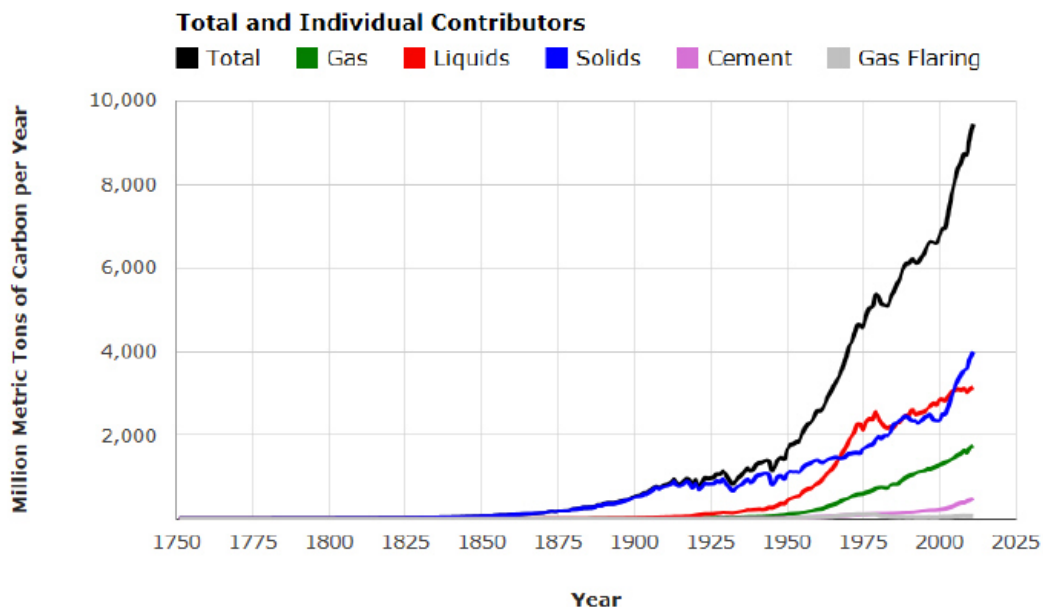
“Atmospheric temperature is regulated by the sun, which fluctuates in activity...; by the greenhouse effect, largely caused by atmospheric water vapor (H₂O); and by other phenomena that are more poorly understood. While major greenhouse gas H₂O substantially warms the Earth, minor greenhouse gases such as CO₂ have little effect.... The 6-fold increase in hydrocarbon use since 1940 has had no noticeable effect on atmospheric temperature or on the trend in glacier length.” Id.

The following chart and data from the Department of Energy’s Carbon Dioxide Information Analysis Center (CDIAC) confirms the above chart showing fossil fuel emissions from 1750 to about 1930 were very small and increased substantially after the 1980s.³⁶

"Since 1751 just over 400 billion metric tonnes of carbon have been released to the atmosphere from the consumption of fossil fuels and cement production....Half of these fossil-fuel CO₂ emissions have occurred since the late 1980s."

³⁵ Arthur Robinson, Noah Robinson & Willie Soon, “Environmental Effects of Increased Atmospheric Carbon Dioxide,” *J. Am. Physicians & Surgeons* 79 (2007), pp. 79-80.

³⁶ Hignett, "Here's How Much Carbon Dioxide Emissions Have Increased Since the Industrial Age, *Newsweek* (May 1, 2018).



Thus even if fossil fuel carbon dioxide could drive significant warming, which as a matter of physics it cannot and does not, there was too little emitted from 1750 on to matter.

Accordingly, contrary to the Endangerment Finding assertion, CO₂ and fossil fuels play a trivial role in climate warming. The last sentence of Prof. Soons chart crisply captures the scientific fallacy underlying Endangerment Finding detailed in this comment and the reason why it should be repealed ASAP.

“The 6-fold increase in hydrocarbon use since 1940 has had no noticeable effect on atmospheric temperature.”

It also confirms there is no science underpinning the Endangerment Finding and that it should be repealed ASAP.

E. 600 Million Years of Data Show Today’s Carbon Dioxide 425 ppm Level Is Very Low, Not Historically Very High

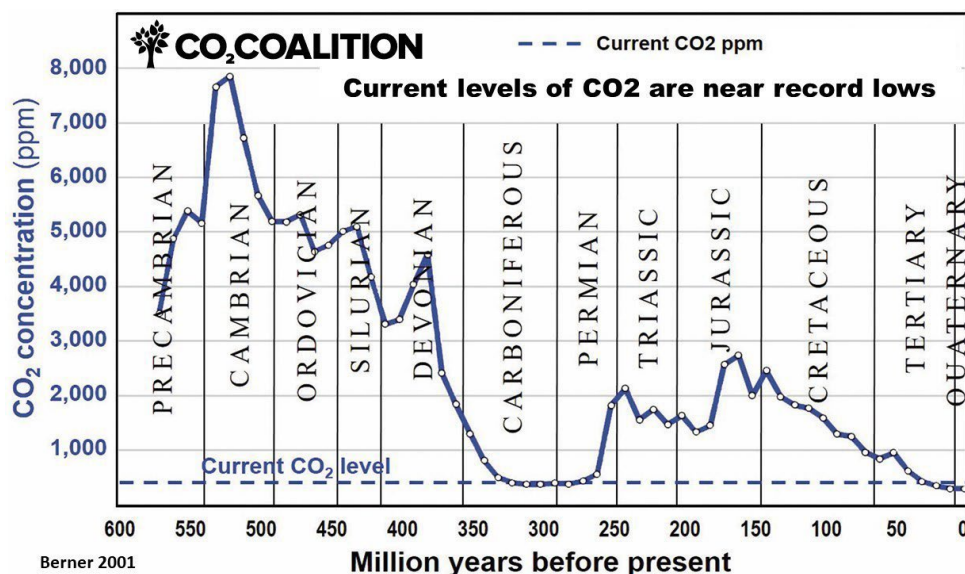
The Endangerment Finding asserts that the carbon dioxide levels today are historically very high:

“Historic data show that current atmospheric concentrations of the two most important directly emitted, long-lived greenhouse gases (carbon dioxide and methane) are well above the natural range of atmospheric concentrations compared to at least the last 650,000 years... It also remains clear that these high atmospheric concentrations of greenhouse gases are the unambiguous result of human activities.” 74 FR 66,517.

Frankly, the EPA did what science deems falsifying data by cherry-picking a short period of geological time to prove their point. They did it again in proposing its Fossil Fuel Power Plant Rule by asserting “CO₂ concentration of 415 ppm is already higher than at any time in the last 2 million years,” and “elevated concentrations endanger our health by affecting our food and water sources, the air we breathe, the weather we experience, and our interactions with the natural and built environments.”³⁷

³⁷ 88 Fed. Reg. 33,249–50 (footnotes omitted).

Hundreds of million years of data raises the obvious scientific question: what does the available data show? The EPA cherry-picked data over a very short period of time and did not report the contradictory data over 600 hundred million years that prove CO₂ levels today are near a record low:³⁸



The omitted hundreds of millions of years of data prove that:

- CO₂ levels were more than 2,000 ppm for over half of the last 600 million years.
- CO₂ levels ranged from a high of over 7,000 ppm -- almost 20 times higher than today's 420 ppm, to a low of 200 ppm, close to today's low of 420 ppm.
- The often highly emphasized 140 ppm increase in CO₂ since the beginning of the Industrial Age is trivial compared to CO₂ changes over the geological history of life on Earth.'
- Today's 420 ppm is not far above the minimal level when plants die of CO₂ starvation, around 150 ppm, when all human and other life would die from lack of food.

Thus, applying the scientific method to cherry-picked data and omitted 600 million years of data, CO₂ levels are very low and not dangerously high. It further contradicts the Endangerment Finding theory that CO₂, other GHGs and fossil fuels will cause catastrophic global warming and extreme weather, confirming there is no science underpinning the Endangerment Finding and that it should be repealed ASAP.

F. There Will Be Disastrous Consequences For Americans, America, The Poor and People Worldwide If Carbon Dioxide, Other GHGs and Fossil Fuels Are Reduced to Net Zero

The Endangerment Finding, unless repealed, will reduce carbon dioxide emissions and the use of fossil fuels significantly that will have disastrous effects on Americans and America endangering public health and welfare. It failed to consider the following.

Effects on Employment, Diverting Funds From Investment and Consumer Choice.
The foreseeable effects of the Endangerment Finding that were not considered were a tsunami of

³⁸ Wrightstone, *supra*, p. 16.

regulations intended to substantially reduce GHG emissions and the use of fossil fuels that will have disastrous effects on Americans and America, endangering public health and welfare, for example, substantially reduce gasoline car and truck production and associated 10 million jobs,³⁹ related GDP and tax revenue; ban gas stoves, gas furnaces, gas heaters and other personal and commercial gas appliances; require the purchase of electric appliances where electricity costs 3 ½ times more than natural gas; significantly reduce 10.8 million oil and gas industry jobs.⁴⁰

Further, the foreseeable effects are helping divert enormous amounts of capital to Green New Deal spending and subsidies from investments in businesses that create jobs, GDP and tax revenue, for example:

- McKinsey and Company estimated the Net Zero transition would cost about \$9.2 trillion per year and \$275 trillion between 2021 and 2050.⁴¹
- Former Treasury Secretary Janet Yellen estimated the global energy transition from fossil fuels to renewable energy will cost \$78 trillion through 2050, \$3 trillion a year,⁴² and
- 450 financial firms recently pledged \$130 trillion in capital to finance the transition to Net Zero emissions.⁴³

As demonstrated in Parts III.A-E, these astounding costs will achieve no benefits to the public.

Reducing CO₂ Will Reduce the Amount of Food Available Worldwide. The ”7Endangerment Finding acknowledges, reluctantly, that increased carbon dioxide has the “potential for a net benefit in the near term for certain crops, but there is significant uncertainty about whether this benefit will be achieved given the various potential adverse impacts of climate change on crop yield, such as the increasing risk of extreme weather events.” 4 FR. P. 663535.

It both fails to consider the numerous benefits of increasing carbon dioxide and the physics that demonstrates that even doubling CO₂ from 400 ppm to 800 ppm will result in negligible increase in temperature.

Increasing CO₂ in the atmosphere increases the amount of food that plants produce, a phenomenon called "fertilization." Thousands of experimental results demonstrate that more CO₂ usually increases the amount of food that plants produce.⁴⁴ A graphic illustration of the response

³⁹ [National Economic Insights | Alliance For Automotive Innovation.](#)

⁴⁰ PWC, *Impacts of the Oil and Natural Gas Industry on the US Economy in 2021* (April 2023).

⁴¹ McKinsey and Company, *The Net Zero Transition* (January 2022).

⁴² Institute for Energy Research, *Global Energy Transition Will Cost \$3 Trillion a Year* (Aug. 1, 2024).

⁴³ Joshua Rauh and Mels de Zeeuw, *Net Zero Will Make Wall Street Richer at Main Street's Expense*, *Wall Street J.* (Nov. 12, 2021).

⁴⁴ See, e.g., NIPCC, *Climate Change Reconsidered II: Biological Impacts* (2014); Craig Idso, “What Rising CO₂ Means For Global Food Security” CO₂ Coalition (2019); Plant Growth Database, Center for the Study of Carbon Dioxide and Global Change, http://www.CO2science.org/data/plant_growth/dry/dry_subject.php.

of plants to increases in CO₂ is shown below. Dr. Sherwood Idso grew Eldarica (Afghan) pine trees with increasing amounts of CO₂ in experiments, starting with an ambient CO₂ concentration of 385 ppm. He showed what happens when CO₂ is increased from 385 ppm to 535 ppm, 685 ppm and 835 ppm over 10 years:⁴⁵



The "fertilization" effect varies significantly by type of plant. Dr. Craig Idso reported, "[s]ince the start of the Industrial Revolution, it can be calculated ... that the 120-ppm increase in atmospheric CO₂ concentration increased agricultural production per unit land area" for various crops ranging from 28% to 70%, and averaging 46%.⁴⁶

What would happen if CO₂ doubled from the current approximately 400 ppm in the atmosphere to 800 ppm? Crop yields worldwide would increase by about 40%, based on empirical findings of how CO₂ concentrations affect crop yields.⁴⁷

Thus, more CO₂ means more food for people worldwide. On the other hand, the Endangerment Finding intention to reduce CO₂ emissions significantly would reduce the amount of food for people worldwide. Sylvan Wittwer, the father of agricultural research on

⁴⁵ Craig Idso, *Increased Plant Productivity: The First Key Benefit of Atmospheric CO₂ Enrichment*, Master Resource (Apr. 21, 2022).

⁴⁶ Nongovernmental International Panel on Climate Change (NIPCC), *Climate Change Reconsidered II: Biological Impacts* (2014) p. 322.

⁴⁷ One of the authors (Happer) explained that experiments with CO₂ fertilization show that many crop yields increase by a factor x with adequate water and other nutrients, where x is the ratio of the current CO₂ ppm level to the former level. Doubling from 400 to 800 ppm means $x = 800/400 = 2$, and $\sqrt{2} = 1.41$, implying approximately a 40% increase. (Note it would take more than a century for CO₂ to reach 800 ppm).

this topic, eloquently emphasized the enormous benefits of providing more food to people worldwide by rising CO₂:

"The rising level of atmospheric CO₂ could be the one global natural resource that is progressively increasing food production and total biological output ... The effects know no boundaries, and both developing and developed countries are, and will be, sharing equally."⁴⁸

Reducing CO₂ Will Decrease Food in Drought-Stricken Areas. Reducing carbon dioxide emissions will reduce the amount of food in drought stricken areas. Increasing CO₂ results in drought-stricken areas having more food. In regions of the world suffering from drought, more CO₂ means there will be more food, because increasing CO₂ lessens water lost by plant transpiration:

At higher CO₂ levels, plants need less water because they grow leaves with fewer stomatal pores, and generally do not open their leaf stomatal pores as wide. The result is less water loss by transpiration. Plants need *less* water to produce the *same* — or an even *greater* — amount of biomass.⁴⁹

On the other hand, Dr. Idso bluntly summarized the disastrous consequences of reducing if Net Zero fossil fuels and carbon dioxide policies are implemented on the food available to people worldwide:

“[R]estricting anthropogenic CO₂ emissions... are enacted, they will greatly exacerbate future food problems by reducing the CO₂-induced yield enhancements.... And because of such CO₂ emissions rules, hundreds of millions of the world's population will be subjected to hunger and malnutrition. Even more troubling is the fact that thousands would die daily because of health problems they likely would have survived had they received adequate food and nutrition.”⁵⁰

The Enormous Social Benefits of Fossil Fuels. The Endangerment Finding fails to consider the enormous social benefits of fossil fuels. They provide ordinary people the freedom, prosperity and health that were reserved for kings in ages past.

There are many, including:

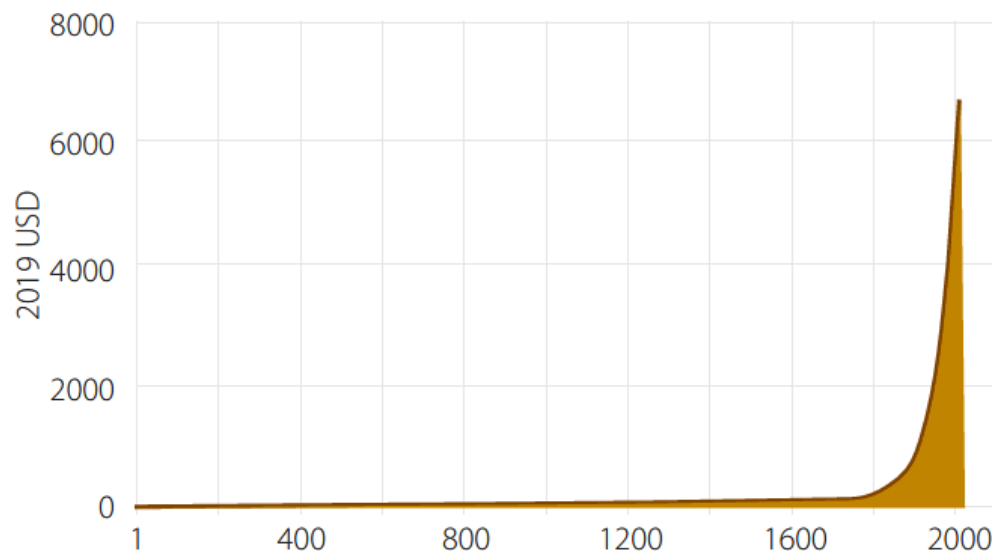
- providing the most reliable, efficient and low-cost source of energy
- providing 60% of the nation's electricity
- increasing the amount of food available worldwide, especially in drought-stricken areas elaborated above
- nitrogen fertilizer that is essential to feeding nearly half the world elaborated below.

⁴⁸ Quoted in NIPCC, *Climate Change Reconsidered II: Fossil Fuels* (2019), pp. 322–23.

⁴⁹ Craig Idso, *What Rising CO₂ Means for Global Food Security*, CO₂ Coalition (2019), p. 13. See also Craig Idso & Sherwood Idso, *The Many Benefits of Atmospheric and CO₂ Enrichment* (2011).

⁵⁰ Craig Idso, *Estimates of Global Food Production in The Year 2050: Will We Produce Enough to Adequately Feed the World?* p. 31 (2011).

The following chart of the GDP per person for the last 2,000 years powerfully summarize them:⁵¹



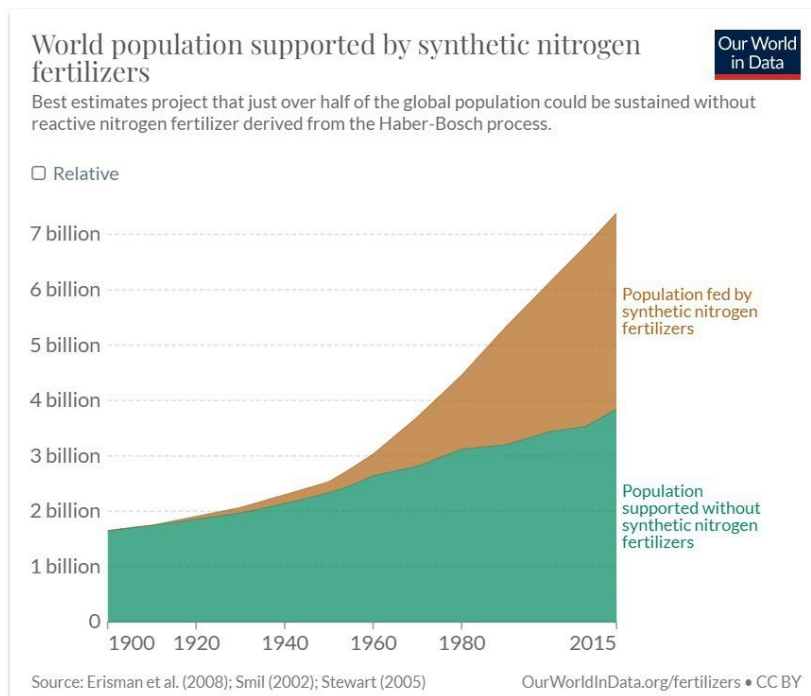
Increased Starvation From Loss of Fossil Fuels and Nitrogen Fertilizer. Food scarcity is an enormous global problem, as the UN has realized by including "zero hunger" among the top two sustainable development goals. Unfortunately, 2.3 billion people are moderately or severely food insecure today,⁵² and 900 million are severely food insecure. Id.

Nitrogen fertilizer, which is made from fossil fuels (natural gas), has greatly alleviated the problem of food scarcity. Nitrogen fertilizer now supports approximately half of the global population."⁵³

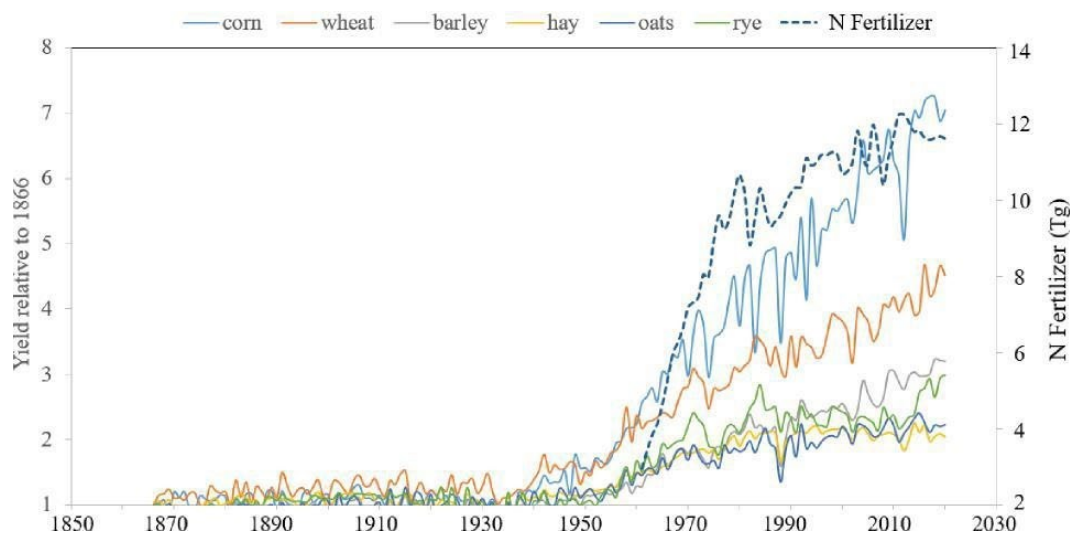
⁵¹Rupert Darwall, *Climate Noose: Business, Net Zero and the IPCC's Anticapitalism* Global Warming Policy Foundation p. 21.

⁵² United Nations, *The State of Food Security and Nutrition In The World (2022)* at xvii (2022).

⁵³ Hannah Ritchie, Max Roser and Pablo Rosado, "[How Many People Does Synthetic Fertilizer Feed?](#)", *Our World In Data* (Nov. 7, 2017).



Cereal food production increased threefold after the widespread use of nitrogen fertilizer began around 1950 (see the black dotted line at the top in the chart below):⁵⁴



If fossil fuels and thus nitrogen fertilizer are reduced or eliminated, the left side of the chart shows what would happen -- food production would drop drastically. It would not be as low as before the widespread use of nitrogen fertilizer because of CO₂ fertilization since then, improved crop varieties and better agricultural practices. But without nitrogen fertilizer, there would be mass starvation.

The recent experience in Sri Lanka, which eliminated the use of nitrogen fertilizer, is a concrete example of what would happen. Sri Lankan President Rajapaksa in April 2021 banned "the importation and use of synthetic fertilizers and pesticides and ordered the country's 2 million

⁵⁴ William Happer, et al., *Nitrous Oxide and Climate*, CO₂ Coalition (Nov. 10, 2022), p. 39.

farmers to go organic."⁵⁵ The result was disastrous. "It's rice production has dropped more than 50%, while domestic rice prices have increased more than 80%."⁵⁶ This is a real-life warning of the worldwide disaster that would result from eliminating fossil fuels.

Accordingly, without the "use of inorganic [nitrogen] fertilizers" derived from fossil fuels, the world simply "will not achieve the food supply needed to support 8.5 to 10 billion people,"⁵⁷ resulting in widespread starvation.

Increased Energy Poverty Worldwide. Energy poverty worldwide is another urgent and acute problem. The World Health Organization reports that around 2.1 billion people worldwide use stoves fueled by wood, animal dung, crop waste, kerosene and coal, or open fires, which generate harmful household air pollution. Household air pollution was responsible for an estimated 3.2 million deaths per year in 2020, including over 237,000 deaths of children under the age of 5.⁵⁸ They also estimate 675 million people have no electricity at all,⁵⁹ so no electricity to power a refrigerator, a washing machine and other items that would greatly improve their lives.

"If the world's least fortunate are to improve their lives and join the developed world, there must be a dramatic increase in their personal energy consumption, and that of the societies in which they live. There is simply no other way to escape poverty Zero Energy Poverty by 2050 is a humane and achievable goal."⁶⁰

Fossil fuels are the most affordable and reliable source of energy to significantly improve the lives of the billions of people who do not have adequate energy and will also prevent millions of unnecessary deaths.

In summary, the Endangerment Finding did not consider any of this scientific evidence. Thus the Endangerment Finding will endanger, not promote, public health and welfare, and must be repealed ASAP.

IV. THE ENDANGERMENT FINDING IS NOT BASED ON SCIENCE BUT ON UNSCIENTIFIC SOURCES

The Endangerment Finding and its Technical Support Document ("TSD") are not based on scientific knowledge derived from the scientific method but on unscientific sources that provide no scientific knowledge that supports the Endangerment Finding.

⁵⁵ Helen Raleigh, *Sri Lanka Crisis Shows The Damning Consequences of Western Elites Green Revolution*, *Federalist* (July 15, 2022).

⁵⁶ *Id.*

⁵⁷ William Happer, et al., *Nitrous Oxide and Climate*, CO₂ COALITION (Nov. 10, 2022), p. 39 (emphasis added).

⁵⁸ World Health Organization, *Household Air Pollution* (Oct. 16, 2024), https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health?utm_source=chatgpt.com.

⁵⁹ WHO, Basic energy access lags amid renewable opportunities, new report shows, https://www.who.int/news/item/06-06-2023-basic-energy-access-lags-amid-renewable-opportunities--new-report-shows?utm_source=chatgpt.com.

⁶⁰ Chris Wright, *Bettering Human Lives*, pp. 18-19.

A. Models Used in the Endangerment Finding and Later Versions Do Not Reliably Predict Temperatures and Thus Have No Scientific Value

The TSD explains models are essential to the Endangerment Finding and everywhere in climate science.

“The attribution of observed climate change to anthropogenic activities is based on multiple lines of evidence,” including “the use of computer-based climate models to simulate the likely patterns of response of the climate system to different forcing mechanisms (both natural and anthropogenic). Confidence in these models comes from their foundation in accepted physical principles and from their ability to reproduce observed features of current climate and past climate changes (IPCC, 2007a) [IPCC, *Climate Change 2007: The Physical Science Basis*]. TSD p. 47. See TSD section 6, “Projected Future Greenhouse Gas Concentrations and Climate Change” for more detail.

Steven Koonin analyzes the models used to predict the effects of GHG emissions at the time of the Endangerment Finding and ever since in the "Many Muddled Models" chapter of his book *Unsettled* (2d. ed. 2024). The key source is the IPCC’s “Coupled Model Intercomparison Project” (“CMIP”) model. As to all the models, he concludes, and we agree, none of them meet scientific standards and would never be used in science:

“Projections of future climate and weather events rely on models demonstrably unfit for the purpose. ***

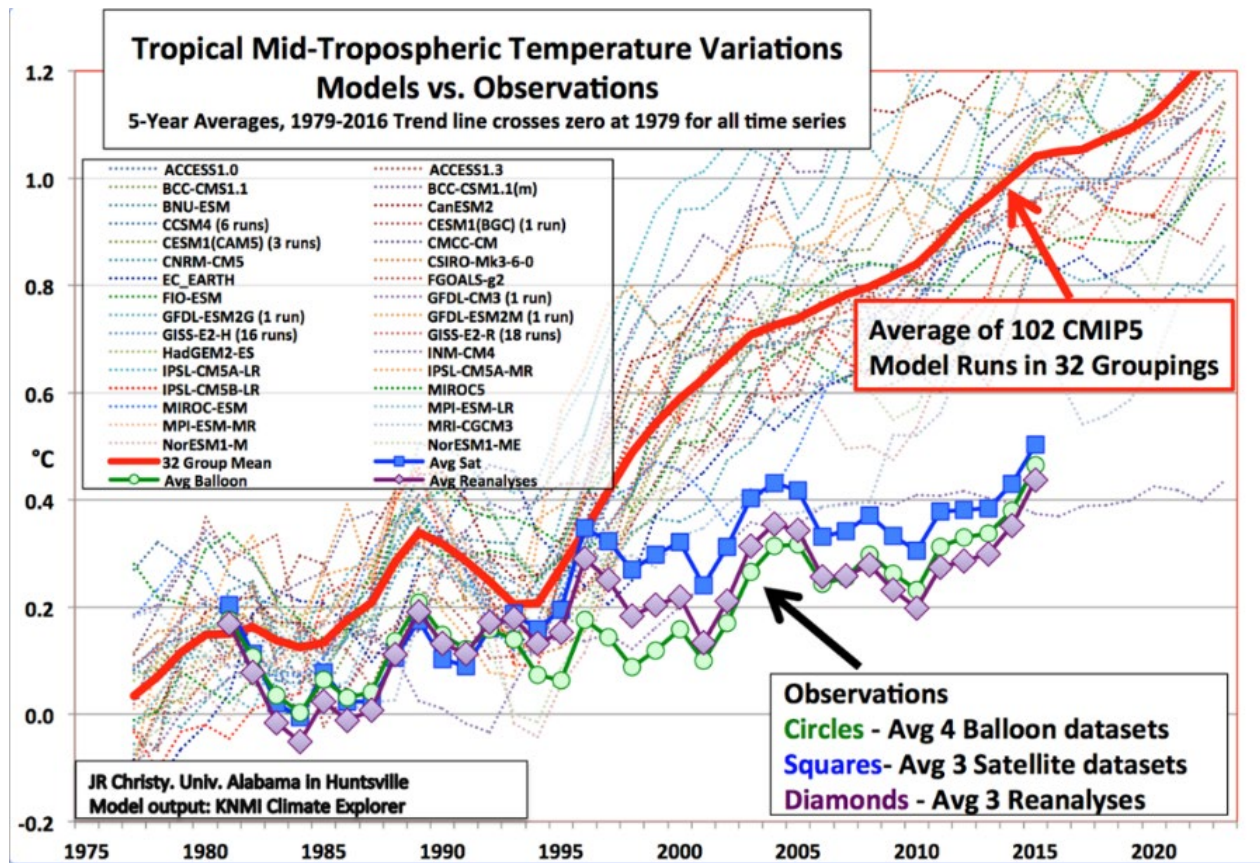
“The uncertainties in modeling of both climate change and the consequences of future greenhouse gas emissions make it impossible today to provide reliable, quantitative statements about relative risks and consequences and benefits of rising greenhouse gases to the Earth system as a whole, let alone to specific regions of the planet.” Id. pp. 24, 96.

The models provide no scientific basis for concluding that CO₂, other GHGs and fossil fuels will cause catastrophic climate change and extreme weather. Here are the scientific details:

CMIP5. John Christy, Ph.D., Professor of Atmospheric Science at the University of Alabama, applied the scientific method to CMIP5's 102 predictions of temperatures from 1979 to 2016 by 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," and produced the following chart:⁶¹

⁶¹ John Christy, House Comm. Science, Space and Technology (Mar. 29, 2017), pp. 3, 5.



At the bottom, the blue, purple and green lines show the actual reality -- temperature observations against which the models' predictions were tested.

The dotted lines are 102 temperature "simulations" (predictions) made by the models from 32 institutions for the period 1979–2016.

The red line is the consensus of the models, their average.

The graph clearly shows 101 of the 102 predictions by the models (dotted lines) and their consensus average (red line) fail miserably to predict reality. Focusing on the red consensus line, Dr. Christy concluded, and we agree:

"When the 'scientific method' is applied to the output from climate models of the IPCC AR5, specifically the bulk atmospheric temperature trends since 1979 (a key variable with a strong and obvious theoretical response to increasing GHGs in this period), . . . 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."⁶²

Thus, the models that produced the 101 predictions failed the test under the scientific method. They do not work, and bear no rational relationship to the reality they purport to represent.

⁶² Id. p.13 (emphasis added).

Thus, CMIP5 provides no reliable scientific evidence for Net Zero Theory rules, subsidies or policies.

Nor does the later version, CMIP6, pass this basic test of science. In Steven Koonin's book *Unsettled*, CMIP6 assertions were carefully analyzed in the chapter, "Many Muddled Models."⁶³ We agree with the conclusions of that chapter:

"One stunning problem is that ... the later generation of [CMIP] models are actually more uncertain than the earlier one[s].

"The CMIP6 models that inform the IPCC's upcoming AR6 [Climate Change reports] don't perform any better than those of CMIP5."⁶⁴

Representative examples of CMIP6's failure to use the scientific method are:

- "An analysis of 267 simulations run by 29 different CMIP6 models created by 19 modeling groups around the world shows that they do a very poor job [1] describing warming since 1950 and ... [2] underestimate the rate of warming in the early twentieth century."⁶⁵
- "Comparisons among the [29] models [show] ... model results differed dramatically both from each other and from observations ... [and] disagree wildly with each other."⁶⁶
- "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."⁶⁷
- As to the early twentieth century warming when CO₂ levels only increased from 300 to 310 ppm, "strong warming [was] observed from 1910 to 1940. On average, the models give a warming rate over that period of about half what was actually observed."⁶⁸
- "That the models can't reproduce the past is a big red flag -- it erodes confidence in their projections of future climate."⁶⁹

Thus, the CMIP6 models also fail the fundamental test of the scientific method: they do not work.

In a recent talk at the Hungarian Institute of Earth Physics and Space Science, one of us (Lindzen) pointed out that current computer models also fail to show the "polar amplification" of global warming. The Earth has undergone major warmings and coolings many times in its long geological history, and all of these have involved profound changes in the tropics to poles

⁶³ Id. pp. 77-99.

⁶⁴ Id. p. 87, 90 (emphasis added).

⁶⁵ Id. p.90.

⁶⁶ Id. p. 86.

⁶⁷ Id. p. 87.

⁶⁸ Id. p. 88.

⁶⁹ Id. p. 91.

temperature differences. The poles warm and cool much more than the tropics. Observations show that the warming since the 19th century has been almost uniform with no polar amplification. The fact that IPCC models show significant changes in tropics to poles temperature differences, contrary to data, is another confirmation that the models have no predictive power.

Thus, these models would never be used in science.

Accordingly, the models the Endangerment Finding used, updated to the present, provide no scientific basis for concluding that CO₂, other GHGs and fossil fuels will cause catastrophic climate change and extreme weather and endanger the public health and welfare.

They are a key example of the unscientific evidence underpinning the Endangerment Finding. They also are a reason alone for repealing the Endangerment Finding ASAP.

B. The IPCC is Government Controlled and Thus Only Issues Unscientific Government Opinions With No Scientific Value (Except Independently Verified Data)

It is little known that the IPCC is government controlled. It is not an independent scientific organization.

In science, as the Lysenko experience chillingly underscores, and as Richard Feynman emphasized:

"No government has the right to decide on the truth of scientific principles."

As a result, contrary to common understanding and vigorous IPCC assertions, the IPCC provides only government opinions, not scientific knowledge (unless independently verified).

Specifically, the IPCC has two relevant governing rules.

First, its Summaries for Policymakers ("SPMs") are one of the most important documents in climate discussions. One of the IPCC governing rules ensure the SPMs are merely government opinions, not scientific knowledge. IPCC governments, not scientists, meet behind closed doors and control what is published. SPMs also control what is published in the full IPCC reports.

This is not how scientific knowledge is determined. Governments do not determine scientific knowledge, the scientific method does. The picture below tells all.⁷⁰

⁷⁰ Donna Laframboise. *US Scientific Integrity Rules Repudiate the UN Climate Process* (January 29, 2017) link [US Scientific Integrity Rules Repudiate the UN Climate Process | Big Picture News, Informed Analysis.](#)



IPCC Summary for Policymakers writing meeting.

Thus the Summaries for Policymakers have no scientific value. They are merely governments' opinion.

There are two governing IPCC rules:

IPCC SPM Rule No.1: All Summaries for Policymakers (SPMs) Are Approved Line by Line by Member Governments

"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."⁷¹ (Emphasis added).

Since governments control the SPMs, the SPMs are merely government opinions. Therefore, they have no value as science.

What about the thousands of pages in the IPCC reports? A second IPCC rule requires that everything in an IPCC published report must be consistent with what the governments agree to in the SPMs about CO₂, other GHGs and fossil fuels. Any drafts the independent scientists write are rewritten as necessary to be consistent with the SPM.

IPCC Reports Rule No. 2: Government SPMs Override Any Inconsistent Conclusions Scientists Write for IPCC Reports

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 SPM has been

⁷¹ 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, https://www.ipcc.ch/site/assets/uploads/2018/02/FS_ipcc_approve.pdf (emphasis added).

approved.... **Changes ...are limited to those necessary to ensure consistency with the Summary for Policymakers.**" IPCC Fact Sheet, *supra*. (Emphasis added).

This rule was used to make the most important change and falsification of climate science by the IPCC in history that is dominant to this day. IPCC governments' control of full reports using Rule No. 2 is poignantly 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 date] to anthropogenic [manmade] causes."

"None of the studies cited above has shown clear evidence that we can attribute the observed [climate] changes to the specific cause of increases in greenhouse gases." Frederick Seitz, "A Major Deception on Climate Warming," *Wall Street Journal* (June 12, 1996). (Emphasis added).

However, the government written SPM proclaimed the exact opposite as to human influence:

"The balance of evidence suggests a discernible human influence on global climate." *1995 Science Report* SPM, p. 4. (Emphasis added).

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

- Their draft language was deleted.
- The SPM's 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 IPCC also changed "more than 15 sections in Chapter 8 of the report ... after the scientists charged with examining this question had accepted the supposedly final text." Seitz, *supra*. (Emphasis added).

Did the IPCC ever correct the falsified science in their 1995 Report to report what the scientists, as opposed to governments, concluded, as cited above, that:

"No study to date has positively attributed all or part (of the climate warming observed) to (manmade) causes"? (emphasis added).

Never.

Instead, the IPCC has repeatedly reported the same false science ever since. In 2021, the most recent IPCC Report, AR 6, cited the same false science six times, e.g.:⁷²

"The evidence for human influence on recent climate change strengthened from the IPCC Second Assessment Report to the IPCC Fifth Assessment Report, and is now even stronger in this assessment. The IPCC Second Assessment Report (SAR, 1995)

⁷² IPCC. *Climate Change 2021: The Physical Science Basis*, p. 405 (emphasis added). Accord id. pp.182, 284, 312, 425, 428.

concluded 'the balance of evidence suggests that there is a discernible human influence on global climate.'"

Thus, all of the scientific findings in IPCC reports are contaminated as science because they are rewritten, Lysenko-like, to comply with the IPCC governments' decreed science. No matter what the independent scientists conclude, the IPCC governments' views prevail and what the scientists wrote is rewritten.

What to do with the full IPCC reports, where hundreds of world-class scientists draft some very good science? Should the IPCC reports be viewed as science? No. Use a presumption that anything in IPCC reports should be presumed to be government opinion with no value as reliable science, unless independently verified by the scientific method.

In conclusion, the IPCC is a government-controlled organization and therefore all of the IPCC SPMs, models, scenarios and other findings are merely the opinions of IPCC governments. As the Lysenko experience chillingly underscores, none provide any scientific knowledge that supports the Endangerment Finding, unless independently confirmed by the scientific method.

Accordingly, all the unscientific evidence provided by the IPCC should be deleted. Since IPCC findings are the fundamental scientific underpinning of the Endangerment Finding, it then will not have an adequate scientific basis and it should be repealed.

C. The EPA Inadvertently Admitted Government Opinions, Consensus and One-sided Peer Review and Excluding Contrary Science is the Unscientific Evidence Underpinning the Endangerment Finding

The Endangerment Finding rigorously applied the Climate Dogma Protocol.

Government Control.

- The EPA Administrator specifically stated three government organizations were the "primary scientific basis" for the Endangerment Finding:
"[I]t is EPA's view that the scientific assessments of the IPCC, USGCRP, and the NRC represent the best reference materials for determining the general state of knowledge on the scientific and technical issues before the agency in making an endangerment decision." 74 FR 66,510.
IPCC assessments and findings were the most important of the three, cited more than 400 times in the EF and TSD.
- The EPA knew the IPCC findings were determined by governments, not scientists and thus knew they were unscientific evidence. The TSD stated that the IPCC Summary for Policymakers ("SPMs") must be approved by all its governments in "line by line" review, not by scientists:
"Each Summary for Policymakers is approved line by line, and the underlying chapters then accepted by government delegations in formal plenary sessions." TSD, p. 4. (Emphasis added).
- "The Administrator is relying on the major assessments of the USGCRP, IPCC, and NRC as the primary scientific and technical basis of her endangerment decision for a number of reasons." 74 FR 66,510.
- "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. 66,511.

- “When governments accept the IPCC reports and approve their Summary for Policymakers, they acknowledge the legitimacy of their scientific content.”⁷³
- The key role of the governmental IPCC to the Endangerment Finding is also demonstrated by how the EPA agreed with the USGCRP, another government organization, to rely on and to incorporate IPCC assessments: “[T]he June 2009 assessment of the USGCRP incorporates a number of key findings from the 2007 IPCC Fourth Assessment Report; such findings include the attribution of observed climate change to human emissions of greenhouse gases, and the future projected scenarios of climate change for the global and regional scales.” 74 FR 66,511.

Consensus. “The USGCRP, IPCC, and NRC assessments synthesize literally thousands of individual studies and convey the consensus conclusions on what the body of scientific literature tells us.” Id. (Emphasis added).

Peer Review and Government. “These assessment reports undergo a rigorous and exacting standard of peer review by the expert community, as well as rigorous levels of U.S. government review and acceptance.” Id (Emphasis added).

Peer Review and Consensus. “No other source of information [than IPCC, USGCRP, and the NRC] provides such a comprehensive and in-depth analysis across such a large body of scientific studies, adheres to such a high and exacting standard of peer review, and synthesizes the resulting consensus view of a large body of scientific experts across the world.” Id.

Exclude Contradictory Science. The Endangerment Finding never adequately analyzed any contradictory science.

Accordingly, the EPA effectively admitted that the Endangerment Finding is fundamentally based on the unscientific evidence of government opinions, one-sided peer review publications, consensus opinions and excluded contradictory science, not on evidence derived by the scientific method.

Further, as to the key issue in the Endangerment Finding specifically of the purported link of GHGs to catastrophic temperature increases, which physics demonstrated does not exist, the TSD stated its most important source linking temperature to human GHGs was the government controlled IPCC:

- Two Summaries for Policymakers and
- The falsified science shown above in Part IV.B where the IPCC changed the independent scientists’ conclusion that, “No study to date has positively attributed all or part [of the climate warming observed to date] to anthropogenic [manmade] causes,” to “the balance of evidence suggests a discernible human influence on global climate.” (Emphasis added).

“Temperature

⁷³ 74 FR 66,511 (emphasis added and footnote omitted).

“IPCC statements on the linkage between GHGs and temperatures have strengthened since the organization’s early assessments ([IPCC]Solomon et al., 2007). The IPCC’s First Assessment Report in 1990 contained little observational evidence of a detectable anthropogenic influence on climate (IPCC, 1990). In its Second Assessment Report in 1995, the IPCC stated the balance of evidence suggests a discernible human influence on the climate of the 20th century (IPCC, 1996). The Third Assessment Report in 2001 concluded that most of the observed warming over the last 50 years is likely to have been due to the increase in GHG concentrations (IPCC, 2001b) [an SPM]. The conclusion in IPCC’s 2007 Fourth Assessment Report (2007b) [another SPM] is the strongest yet:

“Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations.” TSD 47-48. (Emphasis added).

It is a classic example of unscientific evidence, not derived by the scientific method, but from government written SPMs and falsified evidence.

Therefore the EPA inadvertently admitted government opinions, consensus and one-sided peer review and excluding contrary science is the unscientific evidence underpinning the Endangerment Finding. For this reason alone, the it should be repealed ASAP.

D. The U. S. Global Change Research Program (USGCRP and U. S. Climate Change Science Program (CCSP)

The USGCRP and earlier CCSP provided 17 papers the Endangerment Finding relied on (TSD 6) and since 2009 has provided various National Climate Assessments (NCAs).

None of the 17 seemed relevant to rebutting the physics we demonstrated that increasing GHGs cannot cause catastrophic warming and extreme weather earlier in this comment.

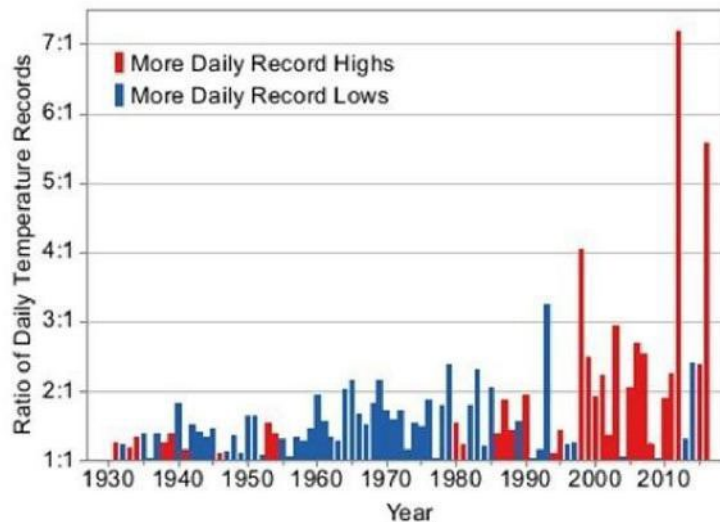
However, USGCRP is not a reliable source of scientific knowledge, demonstrated next.

Shockingly, the USGCRP in several assessments fabricated, falsified and omitted contradictory data on heat waves, hurricanes, wildfires and sea levels that in science means that none of their assessments should ever be used as scientific knowledge.

For example, the USGCRP’s Fourth National Climate Assessment (NCA4) includes a chart stating, "Record Warm Daily Temperatures Are Occurring More Often."⁷⁴

⁷⁴ NCA4 Climate Science Special Report (CSSR) (2017), p. 19, Fig ES.5.

Record Warm Daily Temperatures Are Occurring More Often

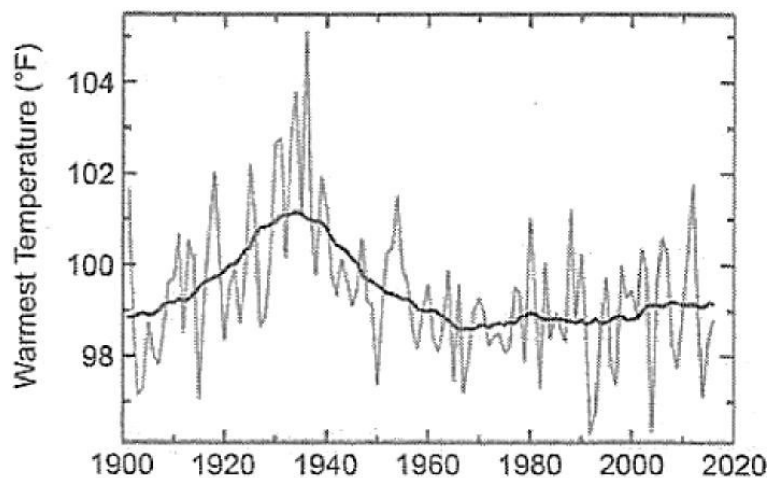


Prof. Koonin calls out this chart, and we agree, as "shockingly misleading." *Unsettled* (2d ed. 2024), p. 111.

Note the chart does not actually show "daily temperatures." Instead, it shows a "ratio" of daily record highs to lows—a number designed to create the impression that record-setting high temperatures are getting much more frequent.

Prof. Koonin explained: "I suspect that most readers were shocked by that figure, as I was when I first saw it. Who wouldn't be? An attention grabbing title ("record warm daily temperatures are occurring more often") backed up by data with a hockey-stick shape veering sharply upward in recent years (and, in the original, years with more 'highs' portrayed in alarming scarlet). It sure looks like temperatures are going through the roof. Id. p. 106.

He looked deeper and found daily temperature data buried on page 190 that totally contradicted the chart:⁷⁵



The spiked lines are yearly values. The dark line is the daily average temperatures over the last 120 years. This chart shows that:

⁷⁵ *Unsettled*, p. 106, NCA4 CSSR , p. 190, Fig. 6.3.

- The hottest temperatures occurred during the Dust Bowl in the 1930s.
- Today the average warm temperature is about the same as it was in 1900.
- Warm temperatures are not occurring more often.

- He asked, as we do:

“How could a report that proclaims itself ‘designed to be an authoritative assessment of the science of climate change’ so mischaracterize the data? After all, the [USGCRP] CSSR was subject to multiple reviews, including one by an expert panel convened by the National Academies of Sciences, Engineering and Medicine (NASEM).” Id. p. 107 (footnote omitted & emphasis added).

Thus, the USGCRP report’s ratio chart "Record Warm Daily Temperatures Are Occurring More Often" is what is called a "fabrication" in science.⁷⁶ Frankly, it is appalling that the thirteen federal agencies that make up the USGCRP and that the National Academy of Sciences that convened the review would publish such a false and fabricated climate assessment.

Hurricanes

The USGCRP Third NCA (NCA3) in 2014 asserts hurricanes are getting worse:

"Key Message 8. The intensity, frequency and duration of North Atlantic hurricanes, as well as the frequency of the strongest (Category 4 and 5) hurricanes, have all increased since the early 1980s."⁷⁷

Prof. Koonin in *Unsettled* notes the NCA report supports that statement with the graph below purporting to show an alarming increase in the strength of North Atlantic hurricanes, measured by what is called the Power Dissipation Index ("PDI"). The graph shows two sets of data from 1970 to 2010, with a sharp upward trend in the black line when the two are combined.⁷⁸

⁷⁶ David Goodstein, *On Fact and Fraud*, p. 135 (2010) (“Fabrication is making up data or results.”).

⁷⁷ Koonin, *supra*, p. 123, citing NCA3 p. 41 (emphasis added).

⁷⁸ Id. p.124, citing Fig. 2.23 on p. NCA3 p. 42.

Observed Trends in Hurricanes Power Dissipation

POWER DISSIPATION INDEX IN THE NORTH ATLANTIC OCEAN

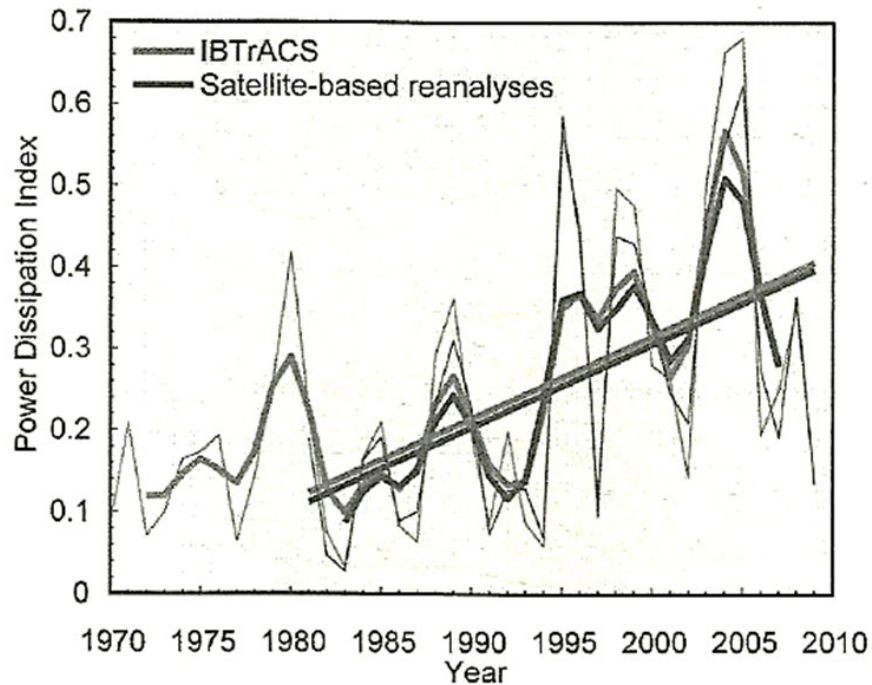


FIGURE 6.3 Power Dissipation Index in the North Atlantic Ocean. Two different analyses of the data are shown, along with straight lines indicating the trend in each. (NCA2014, Figure 2.23.)

Here again, the USGCRP has created the misleading appearance of a dangerous trend by what science deems falsifying data by cherry-picking data from a very short period of time, here, 1970–2010, and failing to consider extensive contradictory data.

And again the USGCRP contradicts itself with data buried deep in NCA3, Appendix 3, which states expressly:

"There has been no significant trend in the global number of tropical cyclones nor has any trend been identified in the number of U.S. land-falling hurricanes." *Id.* p. 769 (footnotes omitted and emphasis added).

Did USGCRP fix this error in NCA4?

No, NCA4 CSSR repeats the same false science:

"Human activities have contributed substantially...to the observed upward trend in North Atlantic hurricane activity since the 1970s."⁷⁹

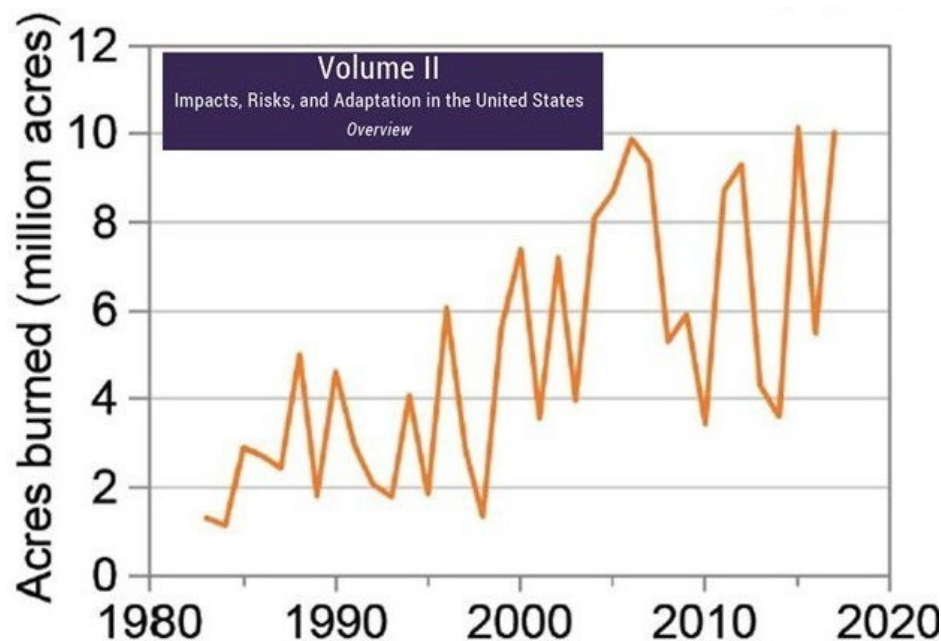
Thus, both the USGCRP's Third and Fourth NCA fabricated, falsified, and omitted and failed to consider contradictory data, which, in science, corrupts them both and means that can

⁷⁹ *Id.* p. 118 (footnote omitted).

never be cited as scientific knowledge to support any of the Net Zero Theory rules, subsidies or policies.

Wildfires

Volume II of USGCRP's NCA4 presents an alarming chart purporting to show a huge increase in the number of acres burned since 1984:⁸⁰



Also, the "Key Findings 6" of NCA4 CSSR states that the incidence of large forest fires in the West has increased since the early 1980s:

"The incidence of large forest fires in the western United States and Alaska has increased since the early 1980s (*high confidence*) and is projected to further increase in those regions as the climate warms, with profound changes to certain ecosystems (*medium confidence*). (Emphasis added)."⁸¹

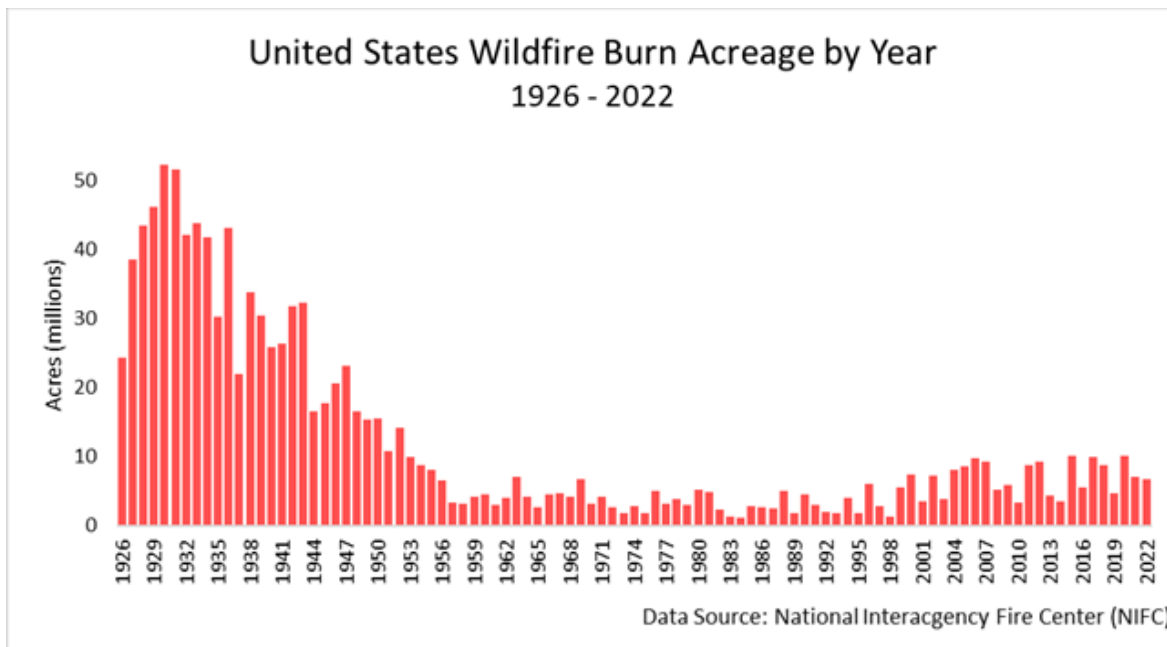
This is yet another example of the USGCRP doing what science deems falsifying data by cherry-picking a very short period of time—1980 onward—and not considering and omitting contradictory data from a longer period of relevant time.

The National Interagency Fire Center ("NIFC") used to provide data going back to 1926. The NIFC removed all the data before 1983 from their website in March 2021. Why? That data showed that the burned area has been declining, with more than a 75% reduction since their peak in the 1920s and 1930s—even though CO₂ has been increasing. Looking at contradictory omitted data before 1984, it shows the United States now is faring much better than in the past.⁸²

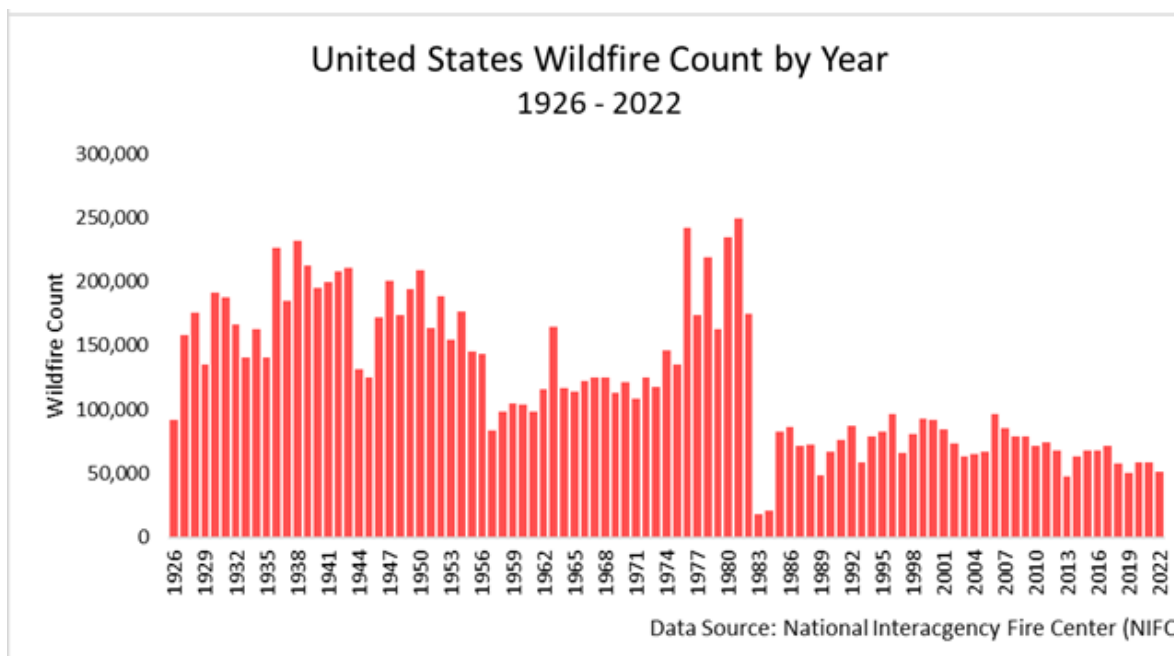
⁸⁰ USGCRP, *The 4th National Climate Assessment*, Vol. II, *Impacts, Risks, and Adaptation in the U.S.* (2018), p. 5 & 1508.

⁸¹ *Id.* p. 249.

⁸² *U.S. Wildfires, Climate at a Glance*, <https://climateataglance.com/climate-at-a-glance-u-s-wildfires/>.



Similarly, the total number of wildfires in the United States has dropped enormously since the 1930s.⁸³



Thus, there is no long trend of increased wildfires. Rather, to the contrary, there is a long-term trend of decreasing wildfires when the omitted contradictory data is considered as scientific method requires. Thus the NCA's CSSR Wildfire data provides no scientific knowledge that supports any of the Net Zero Theory rules, subsidies or polices.

Sea Level

We agree with Steven Koonin's analysis in "A Deceptive New Report On Climate" on sea levels by the NCA4 CSSR in the *Wall Street Journal* (Nov. 2, 2017). He singled out the CSSR

⁸³ *Id.*

for what science deems falsifying data by cherry-picking data on this issue and omitting contradictory data.

The CSSR cited a sea level rise in two recent decades, but omitted data showing a similar sea level rise earlier in the century.

"The report ominously notes that while global sea level rose an average 0.05 inch a year during most of the 20th century, it has risen at about twice that rate since 1993. But it fails to mention that the rate fluctuated by comparable amounts several times during the 20th century. The same research papers the report cites show that recent rates are statistically indistinguishable from peak rates earlier in the 20th century, when human influences on the climate were much smaller. The report thus misleads by omission. ... Such data misrepresentations violate basic scientific norms."⁸⁴

Thus, the scientific method shows that there is no risk that CO₂, other GHGs and fossil fuels will cause increased damage from rising sea levels. Sea levels may rise and cause damage, but if that occurs it will have nothing to do with increases in CO₂ and other GHGs.

In summary, USGCRP fabricated, falsified and omitted contradictory data on heat waves, hurricanes, wildfires and sea levels. It could not have provided any scientific knowledge that supports the Endangerment Finding.

E. The National Academy of Sciences' Cited Publications and *Valuing Climate Damages* Book

The Endangerment Finding cited four NRC reports: *Climate Change Science: Analysis of Some Key Questions* (2001); *Radiative Forcing of Climate Change* (2005); *Surface Temperature Reconstructions for the Last 2,000 Years* (2006); *EPA Potential Impacts of Climate Change on U.S. Transportation* (2008). TSD 6.

None rebutted the physics we could find that we demonstrate above that increasing GHGs cannot cause dangerous warming or extreme weather because of saturation. In any event, the Endangerment Finding cannot stand without the deleted IPCC findings.

It should be noted that the National Academy of Sciences' ("NAS") *Valuing Climate Damages: Updating Estimating the Social Cost of Carbon Dioxide* (2017) was published after the Endangerment Finding was issued in late 2009. It is cited by the EPA in 2023 in its proposed Clean Power Plant rule 2.0 as one of the "major scientific assessments [that] continue to demonstrate ... the impacts that GHGs have on public health and welfare both for current and future generations."⁸⁵

However, for whatever reason, this book by this very prestigious scientific group expressly states that it limited its analysis to "peer reviewed literature" as the "scientific basis" for all "modules, their components, their interactions, and their implementation," rather than using the scientific method which requires considering all relevant science:

⁸⁴ *Id.*

⁸⁵ 88 Fed. Reg. 33,249.

"RECOMMENDATION 2-2 The Interagency Working Group should use three criteria to evaluate the overall integrated SC-CO₂ framework and the modules to be used in that framework: scientific basis, uncertainty characterization, and transparency.

- Scientific basis: Modules, their components, their interactions, and their implementation should be consistent with the state of scientific knowledge as reflected in the body of current, peer-reviewed literature."⁸⁶

Peer review, as noted, does not determine scientific knowledge. science.

More importantly as detailed above, “peer-reviewed literature” in climate science almost always excludes contradictory science, an egregious violation of the scientific method.

We both are members of the National Academy, but with all due respect, the National Academy’s book *Valuing Climate Damages*, by limiting its analysis to “peer-reviewed literature” and not using the scientific method means *Valuing Climate Damages* has no value as scientific knowledge and is merely this government organization’s opinion.

V. THE ENDANGERMENT FINDING IS ARBITRARY, CAPRICIOUS AND THUS INVALID UNDER THE SUPREME COURT’S STATE FARM DECISION

As a legal matter, we understand *State Farm*⁸⁷ is a key Supreme Court case that ruled that an agency regulation is arbitrary, capricious and thus invalid where, *inter alia*:

- “the agency has relied on factors which Congress has not intended it to consider.”
- “the agency has ... entirely failed to consider an important aspect of the problem.”

The Endangerment Finding fails each of these *State Farm* mandates:

First, Unscientific Evidence. Unscientific evidence, misrepresented as science, is all the EPA provided underlying the Endangerment Finding, demonstrated in Part IV. Congress never intended for the EPA to consider and rely on unscientific evidence in making its Endangerment Finding, as it did.

Second, Contradictory Scientific Evidence Ignored. The Endangerment Finding ignored and “entirely failed to consider an important aspect of the problem,” the robust and reliable contradictory scientific evidence detailed above in Part III.

Therefore the Endangerment Finding is arbitrary, capricious and thus invalid for either or both reasons under *State Farm*.

CONCLUSION

Accordingly, we demonstrated the Endangerment Finding is based on fatally flawed science, for two reasons:

⁸⁶ *Valuing Climate Damages* , p.47 (emphasis added).

⁸⁷“Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem” *Motor Vehicle Manufacturers Association of the United States, Inc. v. State Farm Mutual Automobile Insurance Company*, 463 U.S. 29, 43 (1983).

First, it fails to consider contradictory science, including:.

- The physics that demonstrates increasing carbon dioxide and other GHGs can only cause negligible increased warming.
- There is no risk that the continued use of fossil fuels and even a doubling of atmospheric CO₂ will cause catastrophic global warming.
- With no major warming, increasing GHGs cannot cause increased extreme weather.
- Doubling carbon dioxide from today's level will increase the world's food supply by 40% and have a trivial effect on temperature
- that eliminating carbon dioxide and fossil fuels will have disastrous effects for Americans, America, the poor and people worldwide.

Second, it is not based on science, it is based on unscientific sources.

Thus there is no scientific basis for the Endangerment Finding that GHGs will endanger the public health and welfare. Furthermore, it endangers the public health and welfare itself.

Accordingly, it should be repealed ASAP.

Finally, we repeat urgent action to repeal the Endangerment Finding and other government actions based on is required because they are policies that will destroy western economies, impoverish the working middle class, condemn billions of the world's poorest to continued poverty and increased starvation, leave our children despairing over the alleged absence of a future, and will enrich the enemies of the West who are enjoying the spectacle of our suicide march.

CURRICULUM VITAE

Richard Lindzen, Ph.D.

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

I 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). I have 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. I have published approximately 250 papers and books. I am an award recipient of the American Meteorological Society and the American Geophysical Union. I am 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.

I have served as the director of the Center for Earth and Planetary Sciences at Harvard and on numerous panels of the National Research Council. I 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.

William Happer, Ph.D.

I am a Professor Emeritus in the Department of Physics at Princeton University.

I began my professional career in the Physics Department of Columbia University in 1964, where I served as Director of the Columbia Radiation Laboratory from 1976 to 1979. I joined the Physics Department of Princeton University in 1980.

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

I served as Director of Energy Research in the U.S. Department of Energy from 1991 to 1993. I 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. I served as Chairman of the Steering Committee of JASON from 1987 to 1990.

I 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.

I am the Chair of the Board of Directors of the CO₂ Coalition, a nonprofit 501(c)(3) organization established in 2015 to educate thought leaders, policy makers and the public about the vital contribution made by carbon dioxide to our lives and our economy.