



National Academies of Sciences Committee Bias: **An unscientific rigging of a science review**

The National Academies of Sciences (NAS) has created a committee purportedly to have an unbiased assessment of the Environmental Protection Agency's proposal to repeal the regulation of carbon dioxide (CO₂) as a pollutant, which is known as the Endangerment Finding.

The NAS announcement of the study stated that the committee should "contain the requisite expertise to address its task and whether the points of views of individual members are adequately balanced such that the committee as a whole can address its charge objectively."

In our review of the backgrounds of committee members, we found that 13 of the 15 have a strong bias toward linking increasing atmospheric CO₂ to supposedly dangerous global warming and a threat to human health. In other words, the committee was constructed to reinforce the very claim it is purportedly designed to test rather than carry out an impartial investigation.

By stacking the committee with committee members whose views embrace the so-called "consensus" opinion that increasing CO₂ is leading to dangerous warming and harm to human health, the NAS has stacked the deck to arrange a predetermined outcome which will oppose repeal of the Endangerment Finding.

The possibility of an honest evaluation of the science underlying CO₂'s actual role in the environment, which is that of a plant food necessary for all life, is unlikely.

The following are brief descriptions of the backgrounds of the 13 committee members that we find to be problematic:

Shirley M. Tilghman, chair

[Dr. Tilghman](#), professor of molecular biology and president emeritus at Princeton University and with the [Lewis-Sigler Institute for Integrative Genomics](#), is accomplished in her field but not expert in climate issues.

Placing Dr. Tilghman firmly in the camp of climate alarmists is her 2015 lecture to the Royal College of Physicians of London, "[Laying the Foundations for 21st Century Scientific Progress](#)." The relevant quote (pages 5-6) follows:

I needn't tell this audience that in the last 50 years we have experienced an unprecedented rise in CO₂ levels in the environment, leading to a rise in global sea levels of 17 cm, and temperature increases on land and in the oceans.

The impact of these changes in the atmosphere are far-ranging and threaten human health and well-being in many ways, through more extreme fluctuations in weather, decreased air and water quality, declines in agriculture productivity, damage to fragile ecosystems – coral reefs in the oceans and Arctic habitats in the tundra – and ultimately the loss of coastal cities. In response to these immense threats, geologists will be building more sophisticated climate models to help anticipate the changes ahead; engineers will be developing cost-effective renewable energy sources; material scientists will be discovering new batteries that can store energy indefinitely; biologists will be studying the adaptation of threatened animal and plant populations; and environmental scientists will be developing mitigation methods to scrub the

atmosphere of heat-trapping gases. If I were 18 years old I would surely want to work on sustaining the future of the planet.

Some of Dr. Tilghman's writings exhibit support of "diversity," but as far as we can determine, diversity of thought regarding the regulation of carbon dioxide is sorely lacking on the committee. (See "[Concrete steps to diversify the scientific workforce](#)" and "[Increasing gender diversity in the STEM research workforce](#).")

David T. Allen

Dr. Allen has served at the [Center for Energy and Environmental Systems Analysis](#) (CEESA), - a research facility at The University of Texas at Austin that is focused on reducing greenhouse gas emissions. This and a stated interest in the "[greenhouse gas footprints of fossil fuels](#)" suggest [Dr. Allen](#) is predisposed towards a position opposing EPA's current deliberation to revoke the Endangerment Finding.

Susan Anenberg

Dr. Anenberg is Director of the George Washington University Climate and Health Institute, which [partners with organizations](#) that oppose the use of fossil fuels and hold views consistent with the regulation of carbon dioxide.

Her [research](#) focuses on the "health implications of air pollution and climate change from local to global scales." She has received funding from a [Wellcome Trust](#) "[Climate Change and Health Awards](#)" grant, which is described in part as follows:

Many greenhouse gas mitigation actions also benefit air quality and health, but assessment of these co-benefits has been limited. Over the next several years, [C40 Cities](#) will be working with city governments to develop climate action plans. We will integrate a screening-level air quality model focusing on particulate matter into C40's climate action planning tool ...

Michele Barry

Dr. Barry's credentials – M.D., FACP, FASTMH, and a professorship in Medicine and Tropical Diseases – have little bearing on to the science of climate change. Her training is in medicine, not atmospheric physics, not climatology and certainly not the study of Earth's carbon cycle. Yet she positions herself as an authority on climate by focusing narrowly on supposed "health impacts" of climate change. This is not expertise on climate itself, but a derivative claim built on a preconceived narrative.

Like many others in her field, Dr. Barry's climate-related work rests on the unexamined assumption that greenhouse gases – particularly CO₂ – are the dominant driver of climate change.

The following are quotes from a Stanford Medicine News Center [interview](#) that illustrate Dr. Barry's views on climate change:

It became obvious that climate and planetary health needed to be a priority of global health – that we can't have global health unless we have a healthy planet.

Worldwide, the health care industry is responsible for [4.4%](#) of global emissions, which is more than entire countries such as Brazil and Japan. In the U.S., our health care system is responsible for nearly [10% of national emissions](#). We need to green our hospitals and decarbonize health care.

Even more importantly, we need to help communities withstand the health threats of climate change and extreme weather. We need to improve heating, cooling and ventilation in schools and community centers, so people have public places to withstand extreme heat and wildfires.

When we talk about climate and health, we also have to talk about environmental justice.

Charles T. Driscoll, Jr.

Dr. Driscoll, with degrees in civil and environmental engineering, specializes in the response of ecosystems to changes in pollution levels and climate – not on what is considered as pollution or what causes climate to alter. This is evident in some of his remarks.

Comments like the following from a [news report](#) and repeated on a [Syracuse University](#) web page indicate a shallow grasp of climate data and research methodology:

We've got pretty good climate records for Central New York. They date back well over 50 years. They've been pretty strong patterns of increase in temperature, particularly in the city, increase in nighttime temperatures and then increases in precipitation.

To call a 50-year snapshot a “good” climate record is scientifically indefensible. Half a century tells virtually nothing about the long-term relationship between CO₂ and climate. Worse, there is a glaring omission in acknowledging the obvious: Rising nighttime temperatures in urban areas are largely the product of the Urban Heat Island effect rather than climate change. By ignoring such a basic and well-documented phenomenon, Dr. Driscoll demonstrates not only a selective use of data but also a willingness to distort the record in service of a predetermined narrative.

Another [quote](#) listed on the university website reflects a bias toward reducing carbon dioxide emissions, as well as a naive understanding of what it takes to produce electricity for a modern society:

Bold progress on cleaning up the nation's electricity grid is central to curbing global climate change. It would also have a dramatic, but often underappreciated, impact on local air quality and health. ... While there are many ways to get there, it is clear that decarbonizing the electricity sector by 80% over the next decade will deliver large benefits that are widespread and far outweigh the costs.

In 2015, it was revealed that Dr. Driscoll was among researchers who had not acknowledged [financial conflicts](#) in supporting a claim that the Endangerment Finding would “save thousands of lives per year.”

Dr. Driscoll seems unlikely to be open to a reasonable debate about the validity of the Endangerment Finding that EPA seeks to repeal.

Chris T. Hendrickson

Dr. Hendrickson previously served on the National Academies Committee on [Accelerating Decarbonization in the United States](#): Technology, Policy, and Societal Dimensions. The committee report said:

To avoid the worst consequences of climate change and reach the nation's interim goal of 50 percent emissions reduction by 2030 and the ultimate goal of net zero by 2050, it is critical to pursue all opportunities for decarbonization. ...

Among the key actions recommended by the committee were the following:

- *To ensure decarbonization efforts are efficient, effective, and can adapt as needed, Congress should authorize and fund the Office of Management and Budget to develop guidance for federal agencies on evaluating decarbonization policy spending and impacts, including assessment of systems-level and cross-sector impacts.*
- *To track and communicate decarbonization progress, Congress should authorize and fund a single enduring entity to collect, aggregate, interpret, and communicate publicly accessible descriptive statistics about the pace and scale of U.S. decarbonization.*

We presume Dr. Hendrickson accepts the premise that carbon dioxide is a dangerous pollutant.

Marika Holland

As a Senior Scientist and Section Head for the Paleo and Polar Climate Research Section of the Climate and Global Dynamics Laboratory, [Dr. Holland](#) is perhaps the only committee member with direct expertise in evaluating climate variability, her area of research being polar regions. Her research interests are focused on the role of sea ice in the climate system, including long-term sea ice change, ice-ocean-atmosphere interactions, abrupt high latitude climate change, and polar climate variability.

However, in forecasting declining sea ice and ice-free Arctic summers, she used the [most radical, or pessimistic, scenarios](#) of computer modeling (RCP 8.5). Her conclusions are consistent with researchers having an apocalyptic outlook:

As shown in multiple previous studies ..., the internal variability is considerable in Arctic sea ice and can lead, for example, to a 20-yr window of uncertainty for when the Arctic will reach summer ice-free conditions.

George M. Hornberger

[Dr. Hornberger](#) is Director of the Vanderbilt Institute for Energy and the Environment and a hydrology expert with a preconceived assumption that Earth is already endangered by CO₂ emissions from energy systems. One of his [papers](#) states:

Anthropogenic-induced climate changes and population growth projected by 2050, combined with global economic growth driven by emerging markets, suggest that greater stress will be placed on water, food, and energy resources in the future.

His penchant for anticipating catastrophe is reflected on a Vanderbilt University [web page](#), where he states:

As risks of both flooding and water scarcity become more acute over time, there is a need to learn how infrastructure, institutions, and individuals make decisions that affect water resources.

Not only is there an assumption in Dr. Hornberger's work that human emissions are creating an ever more dangerous climate, but there is also a clear declaration that forecast models such as CMIP6 are accurate when they are not. Dr. Hornberger's predictions of increasing climatic "stress on water" contradicts a plethora of findings that CO₂-induced greening of Earth is bestowing huge benefits on ecosystems.

Arthur Lee

[Arthur Lee](#) is Chevron Fellow and Principal Advisor, Environment and Climate Change, at Chevron Services Company, specializing carbon capture and storage (CCS).

Arthur was appointed April 2010 by the U.S. Secretary of Commerce to the National Climate Assessment Development and Advisory Committee, responsible for the next assessment of climate change impacts on the United States. Arthur is team leader on deployment issues in the CO₂ Capture Project, which is the global joint industry-governments project to develop the next generation of CO₂ capture and storage technology.

Arthur served as the review editor of the International Panel on Climate Change's (IPCC) Special Report on Carbon Dioxide Capture and Storage (2005).

With his leadership, Chevron was the key sponsor of the series of G8/International Energy Agency/Carbon Sequestration Leadership Workshop on Carbon Capture and Storage. The workshop series was successful in generating a consensus on recommendations for near-term opportunities for CCS.

CCS is a technology that draws much of its support from those who view CO₂ as a pollutant, and Mr. Lee's commitment to it suggests a bias against EPA's proposal to repeal the Endangerment Finding.

Kari C. Nadeau

Dr. [Nadeau](#), M.D. and Ph.D., is the Chair of the Department of Environmental Health at Harvard T.H. Chan School of Public Health and John Rock Professor of Climate and Population Studies. She blames climate change and CO₂ for a variety of afflictions. For instance, this is from her biography:

Many of the health issues involving individuals and the public are increasing because of global warming, sustainability practices, and extreme weather conditions.

Dr. Nadeau was among those filing an [amicus brief](#) in support of a court suit alleging harm to children as a result of climate change: The brief's conclusion states:

Climate change is dramatically increasing children's exposure to heat and pollutants and destabilizing their homes, education, and futures. Children, like the Plaintiffs in this case, are being exposed to multiple climate change stressors that are affecting their mental and physical wellbeing, from development in utero to adolescence. Due to their physiology and because they are still developing, children are at higher risk of adverse health effects from exposure to these stressors than adults. These will include both short- and long-term effects. As more children are concurrently exposed to climate change and toxic stressors, cumulative effects of multiple climate change stressors have been observed. It is imperative that we protect the health and wellbeing of children both now and in the future.

The Harvard school of public health [reports](#) the following:

Kari Nadeau trains her expertise on finding solutions to climate-related health issues ... Carbon dioxide is a stimulant for grasses and ragweed, causing them to emit more pollen even as the warming climate causes them to produce pollen earlier. At the same time, studies showed climate change was making wildfires more severe. ...

'People's health is inextricably linked to the planet's health,' Nadeau says. 'Researchers have shown that heat stress, air pollution, extreme weather events, displacement, all increase not only acute but also chronic health outcomes. I wanted to expand my thinking towards solution-facing research with policy-related outcomes.'

The article also notes an opinion piece by Dr. Nadeau in USA Today:

'Study after study suggests that climate change raises the risk for cancer, heart disease, stroke, autoimmune disease, neurodegenerative disorders, asthma, and allergies,' Nadeau and her colleague Sarah Fortune, chair of Harvard Chan School's Department of Immunology and Infectious Diseases, wrote in a recent op-ed in USA Today. 'It's critical that everyone understands this is not an abstract crisis; warming temperatures pose a deeply personal threat to our own health and longevity, and to the well-being of our friends and family.'

Charles W. Rice

[Dr. Rice](#), a professor of soil microbiology at Kansas State University, states the following on a website posting under the heading: "Climate Change Science, Adaptation, and Mitigation: The latest from IPCC 2014 Report:"

Human influence on climate is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history. Recent climate changes have had widespread impacts on human and natural systems. Anthropogenic greenhouse gas emissions have increased since the pre-industrial era, driven largely by economic and population growth. This has led to atmospheric concentrations of carbon dioxide, methane and nitrous oxide that are unprecedented in at least the last 800,000 years. Their effects, together with those of other anthropogenic drivers, have been detected throughout the climate system and are extremely likely to have been the dominant cause of the observed warming since the mid-20th century. The total aerosol effect in the atmosphere, which includes cloud adjustments due to aerosols have offset a substantial portion of global mean forcing from greenhouse gases. However, the aerosol effect has high uncertainty. Adaptation and mitigation are complementary strategies for reducing and managing the risks of climate change. Substantial emissions reductions over the next few decades can reduce climate risks in the 21st century and beyond, increase prospects for effective adaptation, reduce the costs and challenges of mitigation in the longer term, and contribute to climate-resilient pathways for sustainable development. Agriculture, Forestry, and Other Land Use is unique among the sectors since the mitigation potential is derived from both an enhancement of removals of greenhouse gases (GHG), as well as reduction of emissions through management of land and livestock. However, there are many barriers to implementation of mitigation options including technological.

Dr. Rice's expertise resides in things on and below the ground – soil carbon and nitrogen, soil health and microbial ecology – not in CO₂, temperature, climate or atmospheric physics. He applies the narrative of climate alarmists to his study area and is presumably comfortable with relating to CO₂ as a pollutant.

Drew T. Shindell

[Dr. Shindell](#), Professor of Earth Science at Duke University, appears to be a reliable purveyor of the climate alarmist narrative and unlikely to be open to consideration of the EPA's repeal of the Endangerment Finding.

An abstract of one of Dr. Shindell's papers, "[Climate and health impacts of US emissions reductions consistent with 2 °C](#)," states the following:

An emissions trajectory for the US consistent with 2 °C warming would require marked societal changes, making it crucial to understand the associated benefits. Previous studies have examined technological potentials and implementation costs^{1,2} and public health benefits have been quantified for less-aggressive potential emissions-reduction policies (for example, refs ^{3,4}), but researchers have not yet fully explored the multiple benefits of reductions consistent with 2 °C. We examine the impacts of such highly ambitious scenarios for clean energy and vehicles. US transportation emissions reductions avoid ~0.03 °C global warming in 2030 (0.15 °C in 2100), whereas energy emissions reductions avoid ~0.05–0.07 °C 2030 warming (~0.25 °C in 2100). Nationally, however, clean energy policies produce climate disbenefits including warmer summers (although these would be eliminated by the remote effects of similar policies if

they were undertaken elsewhere). The policies also greatly reduce damaging ambient particulate matter and ozone. By 2030, clean energy policies could prevent ~175,000 premature deaths, with ~22,000 (11,000–96,000; 95% confidence) fewer annually thereafter, whereas clean transportation could prevent ~120,000 premature deaths and ~14,000 (9,000–52,000) annually thereafter. Near-term national benefits are valued at ~US\$250 billion (140 billion to 1,050 billion) per year, which is likely to exceed implementation costs. Including longer-term, worldwide climate impacts, benefits roughly quintuple, becoming ~5–10 times larger than estimated implementation costs. Achieving the benefits, however, would require both larger and broader emissions reductions than those in current legislation or regulations.

Another paper, “[Mitigating climate disruption in time: A self-consistent approach for avoiding both near-term and long-term global warming](#),” states:

The ongoing and projected impacts from human-induced climate change highlight the need for mitigation approaches to limit warming in both the near term (< 2050) and the long term (> 2050). We clarify the role of non-CO₂ greenhouse gases and aerosols in the context of near-term and long-term climate mitigation, as well as the net effect of decarbonization strategies targeting fossil fuel (FF) phaseout by 2050.

Rear Admiral David W. Titley, USN (Retired)

As a member of the Center for Climate and Security’s Advisory Board and Founding Director of the Center for Solutions to Weather and Climate Risk at Penn State University, [Admiral Titley](#) can be expected to resist a repeal of the Endangerment Finding.

He is an Advisory Board member of the [Citizens’ Climate Lobby](#), which supports achieving “net zero” by 2050, carbon taxes and other measures that embrace regulation of CO₂.

During the first Trump administration, Admiral Titley [resisted](#) a challenge to climate policy that featured a [letter](#) denouncing the [process](#) to establish an climate-change review panel. He stated:

What concerns so many of us who signed the letter is that this is really a blatant attempt by the National Security Council to politicize the security aspect of climate change.

In [testimony](#) prepared for a congressional committee, Admiral Titley stated:

The rapid change in climate will have significant impacts on our national security: The climate will continue to change, rapidly, for the remainder of the 21 st Century and likely beyond. The days of climate stability that we have experienced for much of human civilization are over. ... Climate change can be a powerful link in a chain of events that, if not broken, can lead to runaway instability.