Honorable Charles E. Grassley
Ranking Member
Senate Budget Committee

March 7, 2023

Dear Senator Grassley,

Thank you again for inviting me to present testimony at the Senate Budget Committee's March 1, 2023 hearing "Rising Seas, Rising Costs: Climate Change and the Economic Risks to Coastal Communities." This letter responds to the three questions posed in your letter of March 1.

Question #1:

Dr. Lewis, your organization has catalogued a rich history of eco-alarmist predictions—many coming from those in government and science—over the last 50 years. The problem with these predictions is that they all turned out to be wrong. From the position of an observer, it seems like the goal posts are always moving. Why do these predictions continually miss the mark?

Answer #1:

Apocalyptic predictions continually miss the mark for various reasons. Underestimating natural variability partly explains the global cooling scare of the 1970s. Some highly-credentialed scientists feared a return to ice-age conditions, potentially culminating in famine, war, and civilizational collapse due to short-term fluctuations, such as 0.1-0.2°C per decade decline in Northern Hemisphere temperatures during 1950-1975, and a 12 percent decline in winter ice and snow cover in 1971.[1] The Great Pacific Climate Shift of 1976—a change from the negative (cold) phase to the positive (warm) phase of a newly discovered ocean cycle, the Pacific Decadal Oscillation[2]—reversed the cooling trend, ending ice age fears.

Similarly, some scientists (and many activists) feared the record-breaking 2005 Atlantic hurricane season presaged a new period of increasingly frequent and severe storms. Instead, the U.S. experienced a ten-year (2006-2016) "drought" in major (category 3-5) hurricane strikes—the longest such period since 1900 in the instrumental record.[3]

The root error of most apocalyptic predictions, however, is the age-old Malthusian failure to appreciate what the late Julian Simon called the "ultimate resource" of human ingenuity and the "master resource" of commercial energy. There is no limit to what the human mind can discover and invent, and commercial energy puts superhuman power at the beck and call of ordinary

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[1] Myron Ebell and Steven J. Milloy, *Wrong Again: 50 Years of Failed Apocalyptic Predictions*, Competitive Enterprise Institute, September 18, 2019, https://cei.org/blog/wrong-again-50-years-of-failed-eco-pocalyptic-predictions/, citing "International Team of Specialists Finds No End in Sight to 30-Year Cooling Trend in Northern Hemisphere," *New York Times*, January 5, 1978, and "Another Ice Age?" *Time*, June 24, 1974.

[2] Brian Hartmann and Gerd Wendler. 2005. The Significance of the 1976 Pacific Climate Shift in the Climatology of Alaska. *Journal of Climate*, 18: 4824-4839, https://journals.ametsoc.org/view/journals/clim/18/22/jcli3532.1.xml?tab_body=pdf.

[3] Roger Pielke, Jr., "The US Hurricane Drought in USA Today," June 9, 2014, https://rogerpielkejr.blogspot.com/2014/06/the-us-hurricane-drought-in-usa-today.html.

people. Consequently, Simon argued, as long as governments protect individual liberty and economic freedom, population growth will not lead to hunger, resource depletion, and environmental degradation, as Paul Ehrlich and other doomsayers claimed. Rather, people will produce more ideas about how to solve problems, and as productivity and efficiency improves, resources will become more abundant. Quality of life will improve, including environmental quality.

The following excerpts from Simon express concisely what eco-pessimists ignore, misunderstand, or disparage:[4]

> "Adding more people causes problems. But people are also the means to solve these problems. The main fuel to speed the world's progress is our stock of knowledge; the brakes are our lack of imagination and unsound social regulations of these activities. The ultimate resource is people—especially skilled, spirited, and hopeful young people endowed with liberty—who will exert their wills and imaginations for their own benefits, and so inevitably they will benefit the rest of us as well."
> – Julian Simon, "Introduction," *The State of Humanity* (Cambridge, MA: Blackwell), p. 27.

> "The world's problem is not too many people, but a lack of political and economic freedom."
> –Simon, *The Ultimate Resource 2* (Princeton, N.Y.: Princeton University Press, 1996), p. 11.

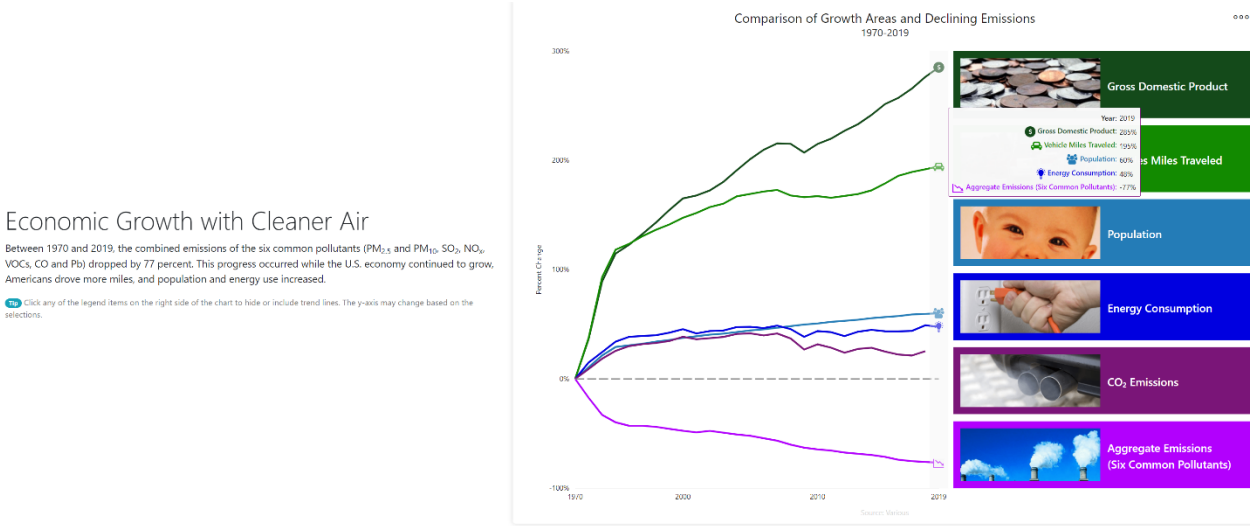
> "Discoveries, like resources, may well be infinite: the more we discover, the more we are able to discover."
> *– Simon, The Ultimate Resource 2, p. 82.*

> "Energy is the master resource, because energy enables us to convert one material into another. As natural scientists continue to learn more about the transformation of materials from one form to another with the aid of energy, energy will be even more important.... For example, low energy costs would enable people to create enormous quantities of useful land. The cost of energy is the prime reason that water desalination now is too expensive for general use; reduction in energy cost would make water desalination feasible, and irrigated farming would follow in many areas that are now deserts. And if energy were much cheaper, it would be feasible to transport sweet water from areas of surplus to arid areas far away. Another example: If energy costs were low enough, all kinds of raw materials could be mined from the sea."
> – Julian Simon, *The Ultimate Resource 2*, p. 162.

Simon's hopeful view is borne out by all major indicators of human well-being. As noted in my written testimony, the past 50 years—roughly the Age of Global Warming—have seen dramatic

[4] Excerpts courtesy of Robert L. Bradley, Jr., "Julian Simon on the 'Ultimate Resource' (Human Ingenuity, the Cascading Resource), MasterResource.Org, July 14, 2014, https://www.masterresource.org/master-resource/simon-ultimate-resource/.

improvements in global life expectancy, per capita income, food security, crop yields, and various health metrics.[5] In the U.S., increases in population, GDP, vehicle miles traveled, and energy consumption have coincided with large reductions in air pollutant emissions and concentrations.[6]



Tellingly, despite carbon dioxide concentrations increasing by more than one-third and global average temperatures rising by 1°C, global annual weather-related mortality has decreased by 96 percent since the 1920s.[7] Similarly, there has been an almost five-fold reduction in the relative economic impact of extreme weather (i.e. damages per exposed GDP) since the 1980s.[8]

The perennial appeal of apocalyptic scenarios despite abundant evidence of the improving state of the world is somewhat mystifying. Perhaps it has something to do with the political utility of such imagined crises to progressive politicians, environmental activists, regulatory agencies, and renewable energy lobbyists.

Question #2:

Dr. Lewis, Chairman Whitehouse implied that the Competitive Enterprise Institute (CEI) is funded solely by the fossil fuel industry during the hearing. Do you believe that CEI's research and publications are jaded to support a fossil fuel driven agenda? The Chairman also appeared to

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[5] My written testimony repeatedly cites to Our World in Data, https://ourworldindata.org/. Perhaps the best single source is Marian L. Tupy & Gale L. Pooley, *Superabundance: The Story of Population Growth, Innovation, and Human Flourishing on an Infinitely Bountiful Planet* (Cato Institute, 2022), https://www.superabundance.com/.

[6] EPA, Air Quality Trends, https://gispub.epa.gov/air/trendsreport/2020/#growth_w_cleaner_air.

[7] Bjorn Lomborg, "We're Safer from Climate Disasters than Ever Before," *Wall Street Journal*, November 3, 2021, https://www.wsj.com/articles/climate-activists-disasters-fire-storms-deaths-change-cop26-glasgow-globalwarming-11635973538.

[8] Giuseppe Formetta and Luc Feyen. 2019. Empirical Evidence of Declining Global Vulnerability to Climate-Related Hazards, *Global Environmental Change*, 57: 1-9, https://www.researchgate.net/publication/333507964_Empirical_evidence_of_declining_global_vulnerability_to_climate-related_hazards.

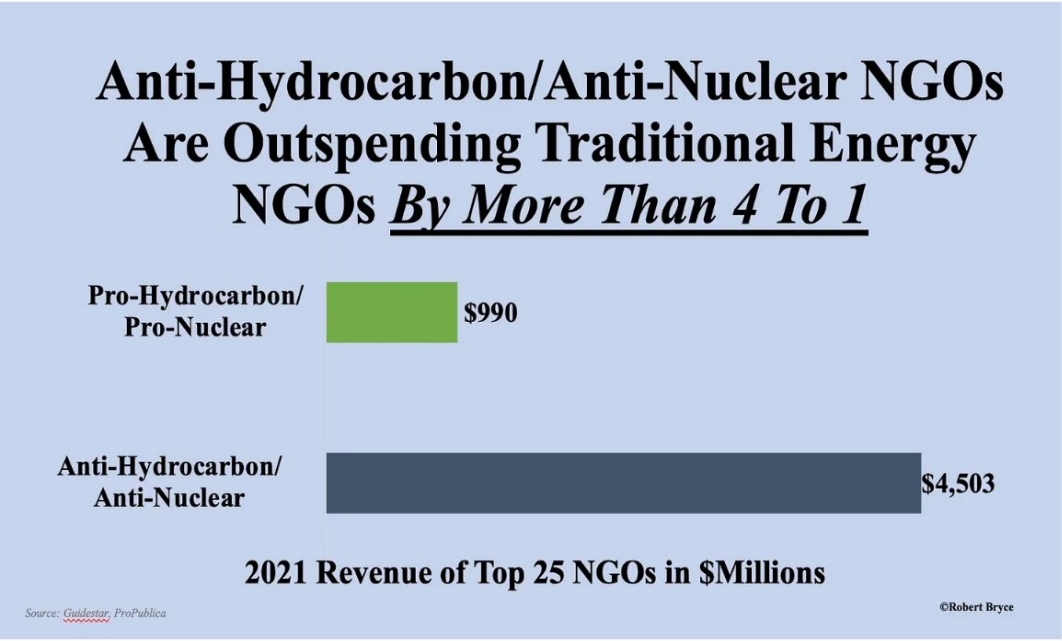
question your qualifications to testify by emphasizing that your PhD is in government, rather than environmental science. Can you set the record straight regarding your expertise?

Answer #2:

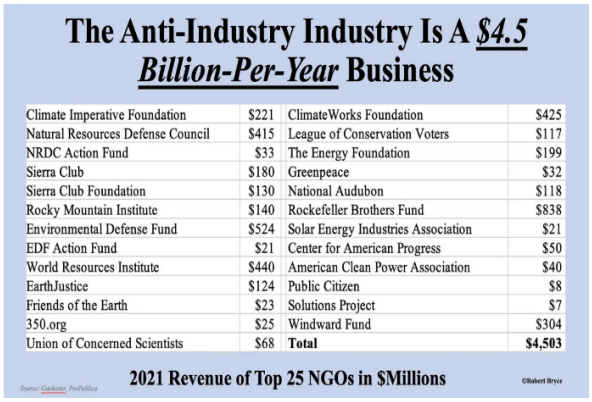
Sen. Whitehouse appears to be projecting when he insinuates that we dance to some piper's tune. Conspiratorial machinations come naturally to would-be central planners who demand conformity of thought and action to a multi-decade, multi-trillion-dollar global governance agenda. Or maybe he has in mind the way federal agencies fund many environmental organizations. Government money seldom comes without strings attached.

In contrast, CEI prizes independent thinking and accepts no funding from government entities. An ornery bunch, we are suspicious of any self-anointed "consensus" and would not take kindly to anyone who presumed to tell us what to think. In my 28 years at CEI, I do not recall even one instance of a donor—either directly or through channels—trying to meddle in my work.

At the hearing, Sen. Tim Kaine suggested fossil-fuel company donations exert an undue influence on the climate debate. Funding for anti-fossil-fuel non-profit organizations hugely exceeds funding for pro-fossil-fuel non-profits. The three charts below, recently posted by energy scholar Robert Bryce, make the big picture crystal clear.[9]



[9] Robert Bryce, "The Anti-Industry Industry: What the Media Won't Tell You about the $4.5 Billion NGO-Corporate-Industrial-Climate-Complex," *Substack*, February 9, 2023, https://robertbryce.substack.com/p/the-anti-industry-industry.



The Anti-Industry Industry Is A *$4.5 Billion-Per-Year* Business

Climate Imperative Foundation	$221	ClimateWorks Foundation	$425
Natural Resources Defense Council	$415	League of Conservation Voters	$117
NRDC Action Fund	$33	The Energy Foundation	$199
Sierra Club	$180	Greenpeace	$32
Sierra Club Foundation	$130	National Audubon	$118
Rocky Mountain Institute	$140	Rockefeller Brothers Fund	$838
Environmental Defense Fund	$524	Solar Energy Industries Association	$21
EDF Action Fund	$21	Center for American Progress	$50
World Resources Institute	$440	American Clean Power Association	$40
EarthJustice	$124	Public Citizen	$8
Friends of the Earth	$23	Solutions Project	$7
350.org	$25	Windward Fund	$304
Union of Concerned Scientists	$68	**Total**	**$4,503**

2021 Revenue of Top 25 NGOs in $Millions

Pro-Hydrocarbon/Pro-Nuclear NGOs Have Revenue Of *About $1B/Year*

Heritage Foundation	$106	Western States Petroleum Association	$43
Manhattan Institute	$19	Society of Petroleum Engineers	$37
Breakthrough Institute	$5	National Mining Association	$60
Competitive Enterprise Institute	$7	Southern Gas Association	$8
Third Way	$31	Propane Education and Research Council	$48
Empire Center	$2	National Propane Gas Association	$12
ClearPath	$9	Interstate Natural Gas Association of Amer	$8
Texas Public Policy Foundation	$26	Independent Petroleum Association of Am	$8
Clean Air Task Force	$20	American Association of Petroleum Geolo	$11
Center of the American Experiment	$6	American Fuel and Petrochemical Manufac	$45
American Petroleum Institute	$265	Clean Fuels Alliance America	$12
Nuclear Energy Institute	$143	Northeast Gas Association	$18
American Gas Association	$41	**Total**	**$990**

2021 Revenue of Top 25 NGOs in $Millions

As to qualifications, my Ph.D. is in government, with a concentration in Socratic political philosophy. Such study trains the mind to identify and rebut sophistry—sham wisdom—in any form of political advocacy, including climate advocacy.

I jumped into the climate debate in 1997, the Kyoto Protocol year. Thus, I have been engaged in "adult learning" about the scientific, economic, and legal issues in the climate policy debate for more than a quarter century. My book-length, line-by-line critique[10] of Al Gore's *An Inconvenient Truth* earned me a segment as the counterpoint to Vice President Gore when he was the featured guest on Oprah Winfrey Show.

Question #3:

Dr. Lewis, Dr. Becketti has written that economic and social disruption caused by rising sea levels will be greater than those experienced during the housing crisis. He seems to discount the ability of nations, particularly the United States, to plan and adapt over a long period of time. Why do you think adaptation will be a successful response to sea level rise?

Answer #3:

Dr. Becketti and I are closer on these topics than one might suppose at first glance. He notes that "sea level along the Eastern seaboard of the United States has been rising 3 to 4 times faster than the global average." That implies most of the *relative* sea-level rise—the increase in sea levels relative to the sea coast—is due to land subsidence (sinking). Although sogginess from rising seas contributes to subsidence, much or most of it (depending on location) may be due to water withdrawals, hydrocarbon withdrawals, isostatic adjustment, or seismic activity.

Dr. Becketti also notes, and I concur, that the National Flood Insurance Program—and, by implication, all subsidized flood insurance—"actually encourages development in the floodplain."

He concludes by observing that "sea level will continue to rise regardless of the course we choose." That was a major point of my testimony—global sea levels in 2050 will be pretty much the same whether the world achieves Net Zero emissions or abandons the Paris Agreement.

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[10] Marlo Lewis, *Al Gore's Science Fiction: A Skeptic's Guide to An Inconvenient Truth*, Competitive Enterprise Institute, March 16, 2007, https://cei.org/studies/al-gores-science-fiction/.

The prospect of a collapsing flood insurance market in Florida is real, and has been even before Hurricane Ian pummeled the State in September.[11] Property values in Florida could take an enormous hit. A bill passed by the State legislature in December would (a) require homeowners to buy flood insurance and (b) reduce litigation risks facing insurers.[12] Without endorsing any of the bill's specifics, making homeowners assume more of the financial risk of building in floodplains could reduce the likelihood of the scenario Dr. Becketti envisions.

Whatever may transpire in a particular State, I do not believe global sea-level rise will destabilize the global financial system. As discussed in my review of Hinkel et al. (2014),[13] even if sea levels increase by six feet, prudent adaptive investments could dramatically reduce the relative economic impact and number of flood victims to the point where people are much better off than they are today.

As also discussed in my testimony, carbon dioxide emissions in the new Resources for the Future baselines are less than half those projected for 2050 in the six-foot sea-level rise scenario and less than one-fifth those projected for 2100 in that scenario.[14] Note, too, that the CMIP6 models used by the IPCC and NOAA to project sea level rise overshoot observed warming in the tropical mid-troposphere by more than a factor of two.[15] Those facts suggest that sea level rise is likely to be at the low end of the projected range—two feet or less.

The world has coped fairly well the 6-10 inches of global sea level rise since 1900. With plenty of warning, increasing technological capability, and, let us hope, economies not held back by wealth-destroying assaults on affordable energy, humanity should be more than up to the challenge of 21st century sea-level rise.

Sincerely,

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Competitive Enterprise Institute

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[11] Carol Melear, "Hurricane Ian Devastates Florida. Will It Collapse the Homeowners Insurance Market?" R Street Institute, September 29, 2022, https://www.rstreet.org/commentary/hurricane-ian-devastates-florida-will-it-collapse-the-homeowners-insurance-market/.

[12] Thomas Frank, "Fla. Lawmakers Force Homeowners to Buy Flood Insurance," ClimateWire, December 15, 2023, https://www.eenews.net/articles/fla-lawmakers-force-homeowners-to-buy-flood-insurance/.

[13] Hinkel et al. 2014. Coastal flood damage and adaptation costs under21st century sea-level rise. PNAS 111: 3292-3297, https://www.pnas.org/doi/epdf/10.1073/pnas.1222469111.

[14] Kevin Rennert et al. The Social Cost of Carbon: Advances in Long-Term Probabilistic Projections of Population, GDP, Emissions, and Discount Rates, Resources for the Future, October 2021, https://www.rff.org/publications/working-papers/the-social-cost-of-carbon-advances-in-long-term-probabilisticprojections-of-population-gdp-emissions-and-discount-rates/.

[15] McKitrick and J. Christy. 2020. Pervasive Warming Bias in CMIP6 Tropospheric Layers. *Earth and Space Science*, 7, Issue 9, https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020EA001281.