September 30, 2022

Christopher Kirkpatrick
Secretary
Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street NW
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Re: Request for Information on Climate-Related Financial Risk
CFTC-2022-0029-0001
Via: CFTC Comments Portal (https://comments.cftc.gov)

Dear Mr. Kirkpatrick,

Thank you for the opportunity to provides comments to the Commission's request for information on climate-related financial risk.[1] If the Commission truly seeks to advance its mission[2] and to "promote responsible innovation, ensure financial integrity[…], and avoid systemic risk," it must not use an expansive interpretation of its mission and authorities to force markets into a "net zero economy" or compliance with related political aspirations, such as the Paris Agreement which the U.S. Senate has not ratified with its advice and consent.

In the comments below, I raise three cautions against further action by the Commission, namely: the Commission's premise for action is dubious, the Commission lacks relevant expertise, and the Commission is potentially seeking information that is useless to its responsibilities and mission.

The Commission's premise for action is dubious. The Commission is considering action based on the determination that "the effects of climate change and the transition to a low-carbon economy present emerging climate-related financial risks." These are debatable assumptions.

For example, in both concluding that there are climate-related financial risks and defining their scope, the Commission cites the Financial Stability Oversight Council's (FSOC) "Report on Climate-Related Financial Risk 2021."[3] However, FSOC's brief discussion concluding that climate change is a threat to financial stability – and apparently also the CFTC's premise for action - incorrectly interpreted data from the National Oceanic and Atmospheric Administration

[1] "Request for Information on Climate-Related Financial Risk," Commodity Futures Trading Commission, Federal Register, Vol. 87, No. 110, June 8, 2022, pp. 34856-34862 https://downloads.regulations.gov/CFTC-2022-0029-0001/content.pdf.
[2] The CFTC's mission is "to promote the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation." Commodity Futures Trading Commission, "CFTC Mission Statement," https://www.cftc.gov/About/AboutTheCommission.
[3] CFTC, "RFI," footnote 2, p. 34857.

(NOAA) on economic damages from weather disasters.[4] In fact, the NOAA data does not support the Commission's reasoning for action.

Citing NOAA's analysis, the FSOC report which the Commission relies on says that:

> 2020 was a "historic year of extremes" for the United States. The year 2020 witnessed 22 billion-dollar-or-greater weather and climate disasters, a record number of such events, which caused a combined $95 billion in damages. Moreover, the 2020 experience reflected a long-running trend, as the frequency and costs of severe weather-related events have been rising over the last two decades (Figure 1.1). This trend reflects the impact of climate change, as well as other factors, such as increased economic development in high-risk areas.[5]

This is a misuse of data, telling an incomplete story that is being perpetuated from NOAA to FSOC to the Commission, which are each attempting to convey a mandate to act by appealing to authority via footnote that climate-related financial risk is allegedly more costly than ever before. Property damage from weather disasters has indeed increased in the U.S. However, this does not tell us whether climate change is getting worse. When normalizing for economic growth (as recommended by the U.N.'s Agenda for Sustainable Development) to reflect an accurate picture of progress (or lack thereof),[6] disaster losses in both the U.S. and globally have been *decreasing*.[7] More importantly and to put this trend into a different context, the death toll from climate-related disasters has decreased over 96 percent in the past century.[8]

This is a far cry from risk to the financial system induced by climate change which the Commission claims to be concerned about and is considering such mechanisms as greenhouse

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[4] Financial Stability Oversight Council, "Report on Climate-Related Financial Risk 2021," October 21, 2021, pp. 11-12, https://home.treasury.gov/system/files/261/FSOC-Climate-Report.pdf.

[5] FSOC, "Report on Climate," p. 11.

[6] See Goal 11.5. "Transforming Our World: The 2030 Agenda for Sustainable Development," United Nations, A/RES/70/1, 2015, https://sdgs.un.org/sites/default/files/publications/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf.

[7] Bjorn Lomborg, "Welfare in the 21st Century: Increasing Development, Reducing Inequality, the Impact of Climate Change, and the Cost of Climate Policies," *Technological Forecasting and Social Change,* Vol. 156, July 2020, https://doi.org/10.1016/j.techfore.2020.119981. Roger Pielke, Jr., "U.S. Disaster Costs 1990 to 2019," The Honest Broker, February 2, 2022, https://rogerpielkejr.substack.com/p/us-disaster-costs-1990-to-2019. Roger Pielke, Jr. "Tracking Progress on the Economic Costs of Disasters under the Indicators of the Sustainable Development Goals," *Environmental Hazards,* Vol 1 Is. 8, October 27, 2018, https://doi.org/10.1080/17477891.2018.1540343.

[8] To put this in perspective, Our World in Data (a project of Oxford University) records 15,071 people died in natural disasters in 2020; the Centers for Disease Control records 93,331 deaths in the U.S. from drug overdose in 2020. Progress on climate resiliency is the result of more people living under economic freedom, enjoying the benefits of economic growth, and benefitting from improved access to energy. Poverty makes people more vulnerable to the whims of climate. In the past century, extreme poverty—the normal condition for most people and for most of human history—plummeted 80 percent. Hannah Ritchie and Max Roser, "Natural Disasters," November 2021, Our World in Data, https://ourworldindata.org/natural-disasters#what-share-of-deaths-are-from-natural-disasters. News release, National Center for Health Statistics, "Drug Overdose Deaths in the U.S. Up 30% in 2020," Centers for Disease Control and Prevention, July 14, 2021, https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2021/20210714.htm. Joe Hasell and Max Roser, "How do we know the history of extreme poverty?" Our World in Data, February 5, 2019, https://ourworldindata.org/extreme-history-methods.

gas emissions disclosures of registrants and other market participants.[9] If the Commission does not correctly identify the problem (and rather simply assumes climate change is to blame because FSOC says so) then it will very likely prescribe the wrong solutions (setting aside the very debatable question of *who* ought to be prescribing solutions once a problem is identified).

The Commission also references "transition risks" as cause for possible expanded engagement in climate policy. These include "shifts in policy, regulations, customer and business preferences, technology, credit or insurance availability, or other market or social forces that can affect business operations." In and of themselves, such categories of "shifts" are part and parcel with markets and doing business – they are nothing new. In order for the Commission to engage in the context of these transition risks without injecting *even more* risk, let alone confusion or economic damage, the Commission must have a very clear and confident understanding of each of these shifts well into the future.

That hardly seems the case (and indeed is an impossible moving target), and ultimately begs the wisdom of moving forward as the Commission appears to be contemplating. While the Commission presumes a number of times that a radical energy transition away from conventional energy (coal, oil, and natural gas) is certain and perhaps even encourages such a transition, a "transition to a low-carbon economy" is far from a foregone conclusion.

Conventional, carbon-intensive fuels meet over 90 percent of Americans' transportation fuel needs,[10] 79 percent of Americans' total energy needs,[11] and 82 percent of global energy needs.[12] Conventional energy's share of total global energy consumption has remained roughly unchanged for decades, even as global energy consumption has increased and renewable energy technologies have entered energy markets.[13] The U.S. Energy Information Administration's *International Energy Outlook* projects global energy use to increase 50 percent by 2050, and projects no scenario in which global demand for oil and natural gas do not increase through at least 2050.[14] Additionally, thousands of products are made with oil, coal, and natural gas as feedstocks.

Despite the aspirational policies, executive orders, and regulations attempting to define a transition away from conventional fuels, actions speak louder than words. Countries and

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[9] Unfortunately, FSOC is not the only financial entity to make similar mistakes in misusing climate information in financial contexts. See the discussion on former Bank of England Governor Mark Carney's misuse of flood data and forecasting: Steven E. Koonin, *Unsettled*, (BenBella Books: Dallas), 2021, pp. 145-146.

[10] U.S. Energy Information Administration, "U.S. Energy Consumption by Source and Sector, 2021," https://www.eia.gov/energyexplained/us-energy-facts/images/consumption-by-source-and-sector.pdf.

[11] U.S. Energy Information Administration, "U.S. Energy Facts Explained—Consumption and Production," June 10, 2021, https://www.eia.gov/energyexplained/us-energy-facts/ (accessed July 9, 2022). The remaining energy came from nuclear power (8 percent) and renewables, including biomass, wind power, hydropower, and solar power (12 percent).

[12] BP, "Statistical Review of World Energy," 71st edition, July 2022, https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2022-full-report.pdf.

[13] Hannah Ritchie and Max Roser, "Energy Production and Consumption," Our World in Data, 2020, https://ourworldindata.org/energy-production-consumption.

[14] U.S. Energy Information Administration, "International Energy Outlook 2021," October 2021, https://www.eia.gov/outlooks/ieo/pdf/IEO2021_Narrative.pdf.

businesses are showing every day that they are more interested in affordable energy and products than in paying a green premium. This is proving particularly true in light of the energy price crisis, whether considering China's interest in buying Russian oil, climate warrior Germany's decision to hold onto coal, or the choices of individual companies looking to keep costs low for customers in the face of rampant inflation.[15] The Commission should not aid a policy "gamble"[16] and in so doing raise the stakes of failure.

Even so, it is inappropriate and unreasonable for the Commission to guess at the future or to require companies and/or their consultants to do so. Anyone who purports to have knowledge of the "shifts in policy, regulations, customer and business preferences, technology, credit or insurance availability, or other market or social forces"[17] is either misleading, over confident about human abilities to forecast the future, or woefully self-deceived. Could the Commission of 1974 reasonably have asked coal companies to anticipate the technological innovations and policy changes that brought on the shale gas revolution and decline of thermal coal use a mere four decades later? And yet the Commission is considering 30-year or 50-year stress testing scenarios (Question 6).

In fact, almost no one (including the U.S. Energy Information Administration) anticipated the major oil and gas boom that began in the late 2000s with the onset of affordable directional drilling and hydraulic fracturing (a technology which had been in existence for decades already). Yet this innovation turned the U.S. from projections of energy production shortages and high imports to becoming a major global energy producer in less than a decade.[18] The example is worth noting because hydraulic fracking is what unlocked affordable access to vast natural gas supplies in the U.S. and consequently the major contributing reason for national greenhouse gas emissions reductions in the last decade[19] – the clear reason the Commission is now considering how it can expand its authority to include environmental regulation.

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[15] Huileng Tan, "China and India Now Account for About 50% of Russia's Seaborne Oil Exports, as Asian Demand Props Up Moscow's Energy Revenues," Market Insider, June 14, 2022, https://markets.businessinsider.com/news/commodities/china-india-half-russia-crude-oil-exports-sanctions-2022-6. Madeleine Bruder, "EU Accepts It Will Burn More Coal in Move Away from Russian Gas," *Financial Times*, May 18, 2022, https://www.ft.com/content/5d95b294-280f-4b38-9d23-70035e077392. Anmar Frangoul, "Volkswagen is Prolonging Its Use of Coal Due to Russian Energy 'Threat,'" CNBC, May 4, 2022, https://www.cnbc.com/2022/05/04/volkswagen-to-prolong-coal-fired-power-as-russia-concerns-continue.html. Andy Beill, "Talking Point: Are You More Concerned with the Rising Cost of Living than Climate Change?" Evening Standard, May 18, 2022, https://www.standard.co.uk/comment/comment/millennials-genz-concerned-rising-cost-living-climate-change-talking-point-b1000861.html.

[16] Quoting FERC Commissioner Mark Christie on the implications for electric grid reliability. Katie Tubb, "Fueling the Climate Crisis: Examining Big Oil's Climate Pledges," testimony before the Committee on Oversight and Reform, U.S. House of Representatives, February 8, 2022, https://oversight.house.gov/sites/democrats.oversight.house.gov/files/Tubb%20Testimony.pdf.

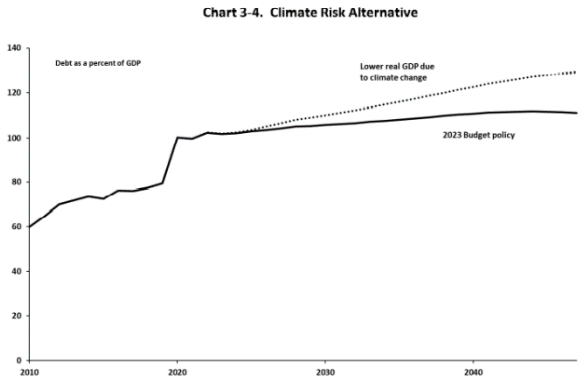
[17] CFTC, "RFI," p. 34857.

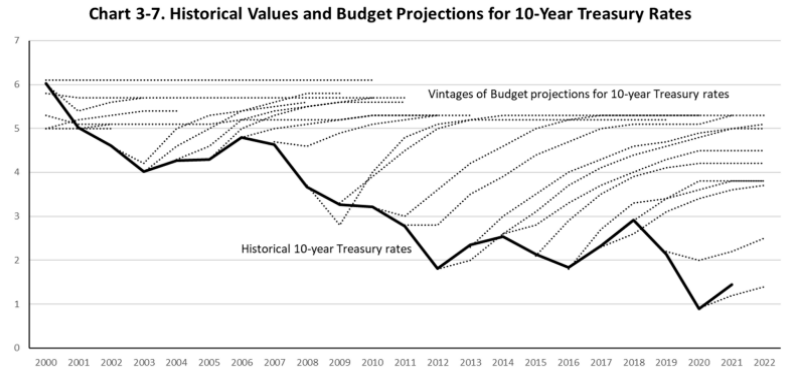
[18] U.S. Energy Information Administration, "United States Continued to Lead Global Petroleum and Natural Gas Production in 2020," *Today In Energy*, July 19, 2021, https://www.eia.gov/todayinenergy/detail.php?id=48756.

[19] U.S. Energy Information Administration, "U.S. Energy-Related Carbon Dioxide Emissions Fell in 2019, Mainly in Electric Generation," *Today In Energy*, November 10, 2020, https://www.eia.gov/todayinenergy/detail.php?id=45836. U.S. Energy Information Administration, "Carbon Dioxide Emissions from the U.S. Power Sector have Declined 28% Since 2005," *Today In Energy*, December 21, 2018, https://www.eia.gov/todayinenergy/detail.php?id=37816.

The Office of Management and Budget (OMB) also unwittingly advises humility when making projections about the future, as shown in President Biden's proposed budget for fiscal year 2023. To require registrants and other market participants to report transition or climate risk in the near-, mid-, or long-term is to require what even the U.S. government cannot do for one of its chief functions (budgeting), and it to mislead (rather than provide certainty).

For the first time, the OMB included the federal government's climate-related fiscal risk assumptions and exposure into its long-term budget outlook.[20] The chapter also includes a chart (Chart 3-7) showing historical interest rate projections compared to historical data, unintentionally showing the danger of having too much confidence in the limited abilities of people, and even the U.S. government, of predicting the future.





Arguably, projecting federal budgets in ten-year time windows is a more developed and understood "science" than is climate science in its current state and climate related modeling over the next 50, 100, 200, or 300 years.

The Commission lacks relevant expertise to make necessary judgments. The Commission's questions ask for recommendations on specific climate data, scenarios, models, and frameworks which the Commission could use to develop, implement, and enforce guidance, reporting standards, and/or regulations. The Commission must have relevant expertise in the climate policy frameworks and metrics used, why they were chosen, and how these (as opposed to any number of others, or any at all) relate useful information. Additionally, the Commission must have relevant climate expertise to evaluate the sufficiency of information provided by registrants and other market participants if the Commission requires information disclosure and if standards are to be enforced in any comparable, reliable, and consistent manner that is neither arbitrary nor capricious.

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[20] Thanks to David Kreutzer for finding this example. Office of Management and Budget, *Budget of the U.S. Government: Fiscal Year 2023,*" Analytical Perspectives: Long-Term Budget Outlook, pp. 34, 36, https://www.whitehouse.gov/wp-content/uploads/2022/04/ap_3_long_term_fy2023.pdf. Candace Vahlsing, "Quantifying Risks to the Federal Budget from Climate Change," The White House, April 4, 2022, https://www.whitehouse.gov/omb/briefing-room/2022/04/04/quantifying-risks-to-the-federal-budget-from-climate-change/.

The need for expertise is especially apparent in the Commission's questions regarding scenario analysis and stress testing (Questions 4-7). For example, the Intergovernmental Panel on Climate Change (IPCC) presents a variety of scenarios to project alternative greenhouse gas concentration pathways which are used by researchers, policymakers, academia, consulting firms, and others. These scenarios project drastically different climate, energy, and economic impacts – to say nothing of the vast array of assumptions built into each scenario regarding the "pace" of warming (the equilibrium climate sensitivity), trajectory of population growth, energy consumption, energy production mix, economic growth, and innovation not just in the United States but globally.

Is the Commission prepared to evaluate and judge which climate scenarios should be used by registrants and/or their consultants? Yet these are the kinds of decisions the Commission must be able to make if it intends to promote responsible innovation, ensure the financial integrity of all transactions, and avoid systemic risk as suggested by the published request for information, or to "promote the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation" according to the Commission's mission.

To further illustrate the point with an example: many, including the Securities and Exchange Commission, have relied upon a Swiss Re Institute study on the economics of climate change, a study which also undergirds Swiss Re Institute's New Climate Economics Index stress test.[21] The Swiss Re Institute "estimated how global warming could affect 48 countries – representing 90% of the world economy – and found that the decrease in GDP in North America could range from – 3.1% if Paris Agreement targets are met (a well-below 2°C increase), to – 9.5% if no mitigating actions are taken (3.2°C increase)."

Upon further investigation, the study relies on IPCC emissions scenario Representative Concentration Pathway 8.5 (RCP8.5, or SSP5-8.5) to project an upper bound of economic costs, which Swiss Re Institute describes as its "business as usual" scenario. Yet the IPCC no longer considers RCP8.5 the most likely reference case (as it did in the 2014 *Fifth Assessment Report*), but rather of low likelihood according to Working Group I's contribution ("Climate Change 2021: The Physical Science Basis") for the upcoming *Sixth Assessment Report.*

And for good reason. RCP8.5 is the most extreme emissions scenario, assuming high emissions growth (an assumption which has already diverged from historical data as an overestimation), massive population growth, minimal technological progress, low economic growth, and a sixfold increase in global *per capita* coal consumption by 2100 that far exceeds the International Energy Agency's projections (an assumption which also has already diverged from historical data as an overestimation).[22] This would be more coal than has been used globally since 1870.

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[21] Swiss Re Institute, "The Economics of Climate Change: No Action Not an Option," April 2021, https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf. For use by the SEC, see: "The Enhancement and Standardization of Climate-Related Disclosures for Investors," Securities and Exchange Commission, Proposed Rule, Federal Register, Vol. 87, No. 69, April 11, 2022, pp. 21334-21473 https://www.govinfo.gov/content/pkg/FR-2022-04-11/pdf/2022-06342.pdf.

[22] Roger Pielke, Jr. and Jason Ritchie, "How Climate Scenarios Lost Touch With Reality," *Issues in Science and Technology*, Vol. 37 (No. 4), Summer 2021, https://issues.org/climate-change-scenarios-lost-touch-reality-pielke-

It is hard to see how this is a scenario that describes "business as usual" as the Swiss Re Institute study characterizes RCP8.5. Far from elucidating market risks or trends, these scenarios incorporate so many assumptions as to possibly *create* market risk if they are mandated or relied upon too heavily by deeply distorting understanding of policy or encouraging a severe misallocation of capital.

The Commission does not have the relevant expertise in climate models, climate scenarios, and climate risk analysis, which each entail a vast number of assumptions and about economic growth, energy production and consumption, and technological change in this country and globally. Which is to say, the Commission should focus on what it does have expertise in - derivatives markets - rather than tread into environmental regulation.

Because the Commission lacks relevant expertise to evaluate these options on its own, it is already considering reliance on third parties to inform its reasons for additional disclosure, guidance, and/or regulation. For example, the Commission suggests (for no stated reason) use of the Task Force on Climate-Related Financial Disclosures and the Network for Greening the Financial System in contemplating mandated disclosures (Questions 14 and 15) or scenario frameworks (Question 5), respectively.

But reliance on third parties is deeply problematic. In many cases, these are *not* neutral entities but self-interested parties who stand to gain significant economic benefit if the Commission relies on them directly through standards, guidance, and regulatory frameworks, or indirectly by imposing requirements on registrants and other market participants that engender a robust new special interest of climate risk consultants.[23]

The Commission contemplates collection or disclosure of useless information. A final observation from the Commission's questions is the Commission's potential interest in irrelevant information from registrants and other market participants, particularly that of disclosure of greenhouse gas emissions (Question 17). Broadly speaking, emissions disclosure from an individual registrant does not provide meaningful information about climate-related financial risks as experienced locally by the individual company or globally.[24] This is so, regardless of one's opinion about the degree of severity of human caused climate change.

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ritchie/. Matthew Burgess, Justin Ritchie, John Shapland, and Roger Pielke, Jr. "IPCC Baseline Scenarios Have Over-Projected CO2 Emissions and Economic Growth," *Environmental Research Letters,* December 23, 2020, https://iopscience.iop.org/article/10.1088/1748-9326/abcdd2/pdf. Larry Kummer, "A Closer Look at Scenario RCP8.5," Climate Etc., December 13, 2015, https://judithcurry.com/2015/12/13/a-closer-look-at-scenario-rcp8-5/.

[23] For example, there are questionable and concerning connections between Michael Bloomberg's current position as President Biden's U.N. Special Envoy for Climate Ambition and Global Ambassador for Race to Zero Campaign, Bloomberg LP's role in developing the TCFD framework, and how this particular company would stand to benefit economically from the Commission's choice in climate disclosure frameworks. "Deciphering the Task Force on Climate-related Financial Disclosures (TCFD)," Bloomberg Professional Services, May 2, 2018, https://www.bloomberg.com/professional/blog/deciphering-task-force-climate-related-financial-disclosures-tcfd/. See also: Government Accountability and Oversight, "Disclosing the Real "Climate Risk" - Case Study: UK "ESG" Billionaire Behind U.S. Climate Regulatory, Litigation Campaigns," June 2022, https://govoversight.org/wp-content/uploads/2022/06/Hohn-TCI-CIFF-Paper.pdf.

[24] One conceivable exception is a company whose business falls under an existing (not hypothetical, possible, "someday maybe") tax or tariff on greenhouse gas emissions which presumably would already be captured in the

An individual registrant's greenhouse gas emissions are infinitesimally small, having no significant or detectable impact on global temperatures or regional weather events. Assuming the entire United States could eliminate *all* greenhouse gas emissions immediately, this would mitigate global temperatures by less than 0.2 degrees Celsius by 2100.[25] Additionally, even climate models (in which greenhouse gas emissions are but one component) cannot be used as reliable regional forecasters.[26] In other words, an individual registrant's total greenhouse gas emissions is a number without meaning or context, and is trivial information in trying to assess "climate risk."

A myopic focus on greenhouse gas emissions will almost certainly have unintended consequences elsewhere, namely massive diversion of financial and human capital by registrants and other market participants to comply with any such information collection and an increase in litigation. The Commission would be doing exploratory work for activists rather than useful information for the Commission or market participants. It is not the task of the Commission to require, collect, evaluate additional climate information of any sort, but that which is financially relevant to the mission of "promot[ing] the integrity, resilience, and vibrancy of the U.S. derivatives markets through sound regulation."

Thank you for your consideration,

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Commission's existing regulatory framework. However, this is not a generally applicable condition relevant to all public companies. Congress has declined multiple times to implement a carbon tax, carbon border adjustment, or similar tool such that the greenhouse gas emissions of every public company would be relevant to the Commission.

[25] Kevin Dayaratna, Katie Tubb, and David Kreutzer, "The Unsustainable Costs of President Biden's Climate Agenda," The Heritage Foundation, *Backgrounder* No. 3713, June 16, 2022, https://www.heritage.org/sites/default/files/2022-06/BG3713_0.pdf.

[26] "The IPCC has noted some of the problems with CMIP5, such that it "cannot be taken as a reliability regional probability forecast." The models in CMIP6 appear not to have reduced uncertainty across models, but rather increased it even as models have become more sophisticated." Tubb comment to the SEC, "Public Input Welcomed on Climate Change Disclosures," June 11, 2021, p. 3, https://www.sec.gov/comments/climate-disclosure/cll12-8907322-244259.pdf.