COMPETITIVE ENTERPRISE INSTITUTE

March 10, 2023

Docket ID No. CEQ–2022–0005. National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change. Request for comments.

Comments of the Competitive Enterprise Institute (CEI)

Thank you for the opportunity to comment on the Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) guidance on consideration greenhouse gas (GHG) emissions and climate change.[1] CEQ should withdraw the guidance, which would require agencies to use NEPA as a climate policy framework—a purpose for which it was not designed and which Congress has not subsequently authorized.

CEQ clearly seeks to use NEPA proceedings to advance President Biden's climate policy agenda. The whole point of requiring agencies to review project-level GHG emissions is to encourage agencies to grant or deny permit applications based on the project's carbon-intensity, impact on U.S. emissions, or alignment with administration policy. For example, the proposal states:

> *CEQ encourages agencies to mitigate GHG emissions associated with their proposed actions to the greatest extent possible, consistent with national, science-based GHG reduction policies established to avoid the worst impacts of climate change.*[2]

The footnote at the end of that sentence references the April 22, 2021 White House Fact Sheet setting forth President Biden's Paris Agreement pledge to reduce U.S. emissions 50-52 percent below 2005 levels by 2030. The same document reaffirms the President's goal of achieving economy-wide net-zero emissions by 2050.[3]

Note also that "science-based GHG reduction policies established to avoid the worst impacts of climate change" is code for the Net Zero agenda—the degree of global emissions reduction the

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[1] Council on Environmental Quality (CEQ), National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, 88 FR 1196-1212, January 9, 2023, https://www.govinfo.gov/content/pkg/FR-2023-01-09/pdf/2023-00158.pdf.

[2] 88 FR 1197.

[3] White House, FACT Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies, April 22, 2021, https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/.

world must achieve by 2050 to keep global warming under 1.5°C by 2100, according to the Intergovernmental Panel on Climate Change (IPCC).[4]

A bit later on the same page, CEQ suggests that by promoting "Accurate and clear climate change analysis," the guidance "Enables agencies to make informed decisions to help meet applicable Federal, State, Tribal, regional, and local climate action goals."[5] The footnote at the end of that sentence states: "For example, the United States has set an economy-wide target of reducing its net GHG emissions by 50 to 52 percent below 2005 levels in 2030. See United Nations Framework Convention on Climate Change (UNFCC), U.S. Nationally Determined Contribution (Apr. 20, 2021), https://unfccc.int/NDCREG."

CEQ misses an important point. The President's pledges under the Paris Agreement, a treaty never submitted to the Senate for its constitutional advice and consent, do not enlarge or modify any federal agency's regulatory authority. No statute passed by Congress, including the Inflation Reduction Act, makes the President's Paris pledges the law of the land. None authorizes agencies to modify permitting decisions under their respective statutes to advance the NetZero agenda.

In *West Virginia v. EPA*, the Supreme Court struck down the Environmental Protection Agency's (EPA's) Clean Power Plan because it flouted the "major questions doctrine." According to that doctrine, courts should be skeptical, not deferential, when an agency purports to find in a long-extant statute an unheralded power to regulate a significant portion of the economy without a clear statement of congressional intent to delegate such authority.[6]

NEPA, the nation's foundational environmental statute, is about as long-extant as it gets. Claims that NEPA proceedings should suppress investment in fossil fuel infrastructure are of recent vintage, and cannot be squared with public convenience and necessity determinations under the Natural Gas Act (NGA). The NGA directs the Federal Energy Regulatory Commission (FERC) to follow NEPA when reviewing proposed natural gas infrastructure projects. Using NEPA to impose GHG-reduction requirements that deter investment in natural gas infrastructure would conflict with the NGA's "principal purpose," which is to "encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices."[7]

Far from NEPA containing a clear statement authorizing its use to make climate policy, the words "climate," "carbon," "greenhouse," "global," and "warming" do not occur in the statute.

More fundamentally, NEPA is centrally concerned with "major" federal actions "significantly affecting the quality of the human environment."[8] The GHG emissions of even the largest infrastructure project have no discernible, traceable, or verifiable impacts on the quality of the human environment. Project-related GHG emissions are not "significant" environmental effects

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[4] IPCC, Special Report on Global Warming of 1.5°C, Chapter 2, p. 2, https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SR15_Chapter_2_LR.pdf.
[5] 88 FR 1197.
[6] W. Virginia v. EPA, 142 S. Ct. 2587 (2022).
[7] NAACP v. FPC, 425 U.S. 662 (1976).
[8] 42 U.S.C. § 4332.

for NEPA purposes. Consequently, NEPA does not authorize CEQ or any other agency to use a project's GHG emissions as a factor determining its approval or rejection.

The rest of my comments address CEQ's climate policy rationales and assumptions. There will be some overlap with the legal commentary presented above. Herewith a brief summary.

- CEQ's central rationale for directing agencies to consider GHG emissions in NEPA proceedings is the opinion that America faces a "profound climate crisis" demanding urgent corrective action. That opinion conflicts with ongoing long-term improvements in global life expectancy, per capita income, and health; dramatic declines in climate-related mortality; and substantial declines in the relative economic impact of damaging weather. It also ignores the immense agricultural and ecological benefits of rising carbon dioxide concentration.
- The "science" underpinning the crisis narrative is a doubly-biased methodology in which overheated models are run with inflated emission scenarios. Absent those biases, climate change assessments would project less warming, smaller climate impacts, and lower tipping point risks.
- Project-related emissions are climatically inconsequential and therefore an inappropriate focus for NEPA review, which by statute addresses federal actions "significantly affecting the quality of the human environment."
- Not even a change in permitting policy, such as blocking all gas pipelines due to their GHG emissions, would have detectable impacts on global temperatures or other climate-related metrics.
- CEQ draws the wrong lesson from the "nature of the climate challenge." According to CEQ, the "relatively small additions" from numerous GHG emitters "collectively have a large effect." Therefore, CEQ reasons, it must require all project applicants to monitor and mitigate such emissions. The real lesson is different. Trying to solve the "climate challenge" one project at a time is a fool's errand—like trying to drain a swimming pool one thimbleful at a time.*
- CEQ's formulation has a mischievous implication. If "large impact" comes from myriad sources, permission to build GHG-emitting infrastructure should be denied to as many projects as possible—ideally to all.
- The chief problem with that policy—aside from the enormous economic losses it would entail—is that Congress has not authorized it. CEQ should take great care not to encourage agencies to do piecemeal what they clearly lack authority to do at the pace and scale dictated by the NetZero agenda.
- Contrary to CEQ, environmental equity is not a valid reason to apply NEPA to project-level GHG emissions. Anti-growth climate policies pose greater threats to the well-being of poor and minority communities than climate change does.
- Contrary to CEQ, the social cost of greenhouse gases is not an appropriate "context" for calculating the net benefits of NEPA-based GHG reductions. The climate change mitigation achieved by such reductions is too small to be detected or experienced. Such effects are "benefits" in name only. As such, they should not be weighed in the same

> scales with multi-billion-dollar compliance costs that verifiably impose measurable burdens on identifiable people and businesses.

CEQ's Climate Policy Rationales and Assumptions

Unscientific "Climate Crisis" Rationale

The Improving State of the Planet

CEQ's core rationale for requiring agencies to consider GHG emissions in NEPA proceedings is the opinion that America faces a "profound climate crisis" demanding urgent corrective action. As a matter of law, the climate crisis, even if it exists, cannot authorize NEPA's use for purposes not authorized by Congress. That said, let's now examine CEQ's policy rationales. The proposal's substantive argument begins:

> *The United States faces a profound climate crisis and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory*.[9]

That assessment is incorrect. If climate change were a global ecological and economic crisis, we would expect to find evidence of declining health, welfare, and environmental quality over the past 50 years. Instead, we find dramatic improvements in global life expectancy,[10] per capita income,[11] food security,[12] crop yields,[13] and various health-related metrics.[14] Disease mortality rates increased after January 2020 but that was due to the COVID-19 pandemic,[15] not climate change.

Increasing Climate Safety

Of particular relevance, the annual number of climate-related deaths per decade has declined by 96 percent since the 1920s.[16] This spectacular decrease in aggregate climate-related mortality occurred despite a fourfold increase in global population. That means the individual risk of dying from extreme weather events declined by 99.4 percent over the past 100 years.[17] Far from being an impediment to such progress, fossil fuels were its chief energy source.[18]

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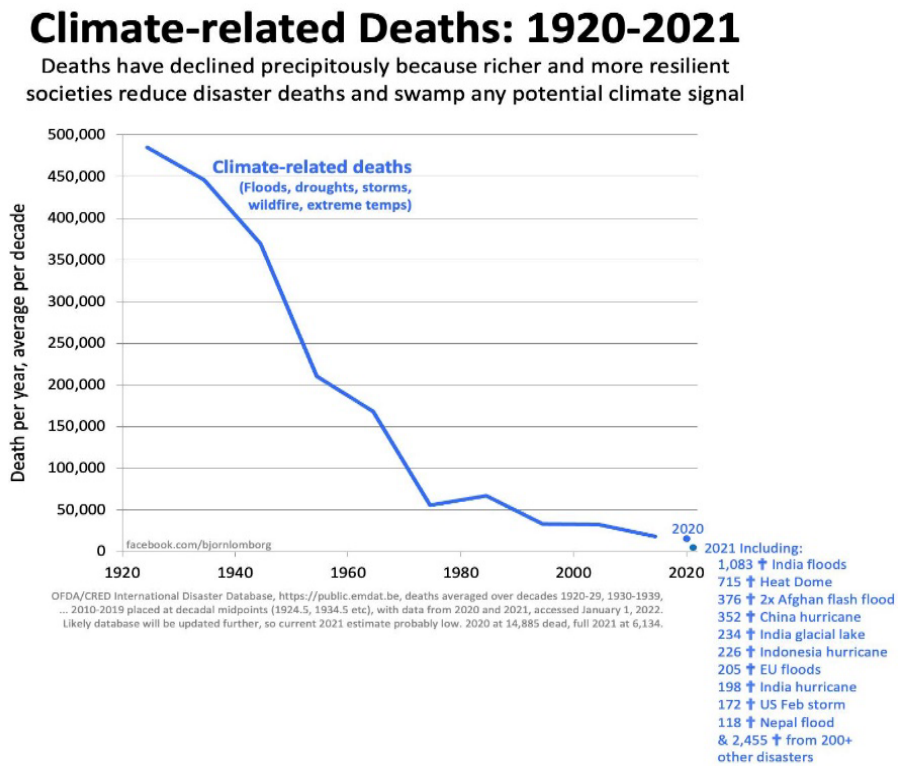
[9] 88 FR 1197.
[10] Our World in Data, Life Expectancy, https://ourworldindata.org/life-expectancy.
[11] Our World in Data, Economic Growth, https://ourworldindata.org/economic-growth.
[12] Our World in Data, Food Supply, https://ourworldindata.org/food-supply.
[13] Our World in Data, Crop Yields, https://ourworldindata.org/crop-yields.
[14] Our World in Data, Global Burden of Disease, https://ourworldindata.org/health-meta#burden-of-disease.
[15] Our World in Data, Cumulative Deaths from All Causes Compared to Projection Based on Previous Years, Per Million People, Sep. 11, 2022, https://ourworldindata.org/grapher/cumulative-excess-deaths-per-million-covid?time=2022-09-11&country=MEX~PER~FRA~BRA~USA~GBR~BGR~ISR~AUS.
[16] 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-global-warming-11635973538; "Fewer and Fewer People Die from Climate-Related Disasters," Facebook, https://www.facebook.com/bjornlomborg/posts/475702943914714/.
[17] Bjorn Lomborg, "The risk of dying from climate-related disasters has declined precipitously." Twitter, January 1, 2023, https://twitter.com/BjornLomborg/status/1609568094447456259.
[18] Alex Epstein, *Fossil Future: Why Human Flourishing Requires More Oil, Coal, and Natural Gas—Not Less* (New York: Penguin Random House, 2022).



Source: *Bjorn Lomborg*.[19]

Decreasing Climate Vulnerability

We often hear that the weather is becoming increasingly destructive. For example, the National Oceanic and Atmospheric Administration (NOAA) recently reported that, "In 2020 alone, a record 22 separate climate-related disasters with at least $1 billion in damages struck across the United States, surpassing the previous annual highs of 16 such events set in 2011 and 2017."[20] Citing NOAA's report, the Securities and Exchange Commission's (SEC's) climate risk disclosure proposal asserts that "the impact of climate-related risks on both individual businesses and the financial system as a whole are well documented."[21] Similarly, the Financial Stability Oversight Council cites the trend in billion-dollar weather disasters as evidence that climate change is a "threat to financial stability."[22]

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[19] Bjorn Lomborg Facebook Page, updating "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*, July 2020, Vol. 156, https://www.sciencedirect.com/science/article/pii/S0040162520304157.

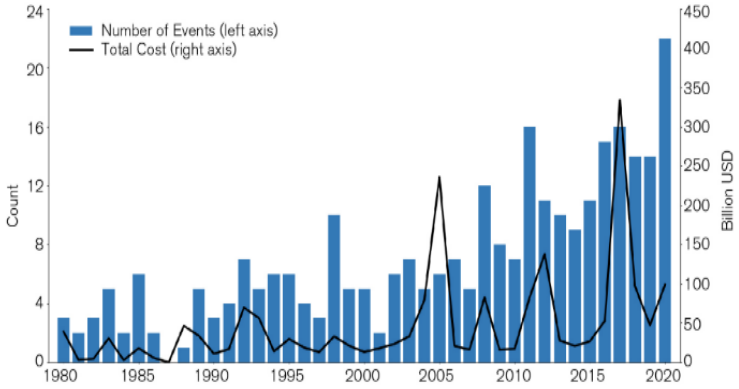
[20] NOAA, National Centers for Environmental Information (NCEI) U.S. Billion-Dollar Weather and Climate Disasters (2022), https://www.ncei.noaa.gov/access/billions/.

[21] SEC, The Enhancement and Standardization of Climate-Related Disclosures for Investors, 87 FR 21334, 21336, April 11, 2022, https://www.govinfo.gov/content/pkg/FR-2022-04-11/pdf/2022-06342.pdf.
87 FR 21336.

[22] FSOC, *Report on Climate-Related Financial Risk 2021*, p. 12, https://home.treasury.gov/system/files/261/FSOC-Climate-Report.pdf.

FSOC Report on Climate-Related Financial Risk

Figure 1.1: Billion-dollar Climate and Weather Disaster Events, United States



Note: Event counts and total cost estimates reflect weather and climate disaster events with costs exceeding one billion in CPI-adjusted 2020 dollars.

Source: NOAA NCEI, "Billion-Dollar Weather and Climate Disasters."

In reality, not only is the increasing number of billion-dollar disasters not evidence of a climate crisis, it is not even evidence of climate change.

NOAA's billion-dollar disaster charts adjust climate-related damages for inflation but not for population growth and exposed wealth. NOAA—and, thus, the SEC and FSOC—ignore what Danish economist Bjorn Lomborg calls the "expanding bull's eye." More people and more stuff in harm's way lead to bigger climate-related damages even if there is no change in the weather.

Since 1900, Lomborg notes, Florida's coastal population has "increased a phenomenal 67 times." In fact, just two Florida counties, Dade and Broward, have a larger population today than lived along the entire coast from Texas to Virginia in 1940. Consequently, "For a hurricane in 1940 to hit the same number of people as a modern hurricane ripping through Dade and Broward today, it would have had to tear through *the entire Gulf of Mexico and Atlantic coastline*."[23]

Normalizing the damages—estimating the economic losses from an historic extreme weather event if the same event were to occur under present societal conditions—creates a very different picture from that depicted by NOAA. Consider hurricane damages, which constitute the largest portion of U.S. weather-related damages. There has been no trend in normalized U.S. hurricane damages since 1900.[24]

This is what hurricane damages look like if adjusted only for inflation:

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[23] Bjorn Lomborg, Bjorn Lomborg, *False Alarm: How Climate Change Panic Costs Us Trillions, Hurts the Poor, and Fails to Fix the Planet* (New York: Basic Books, 2020), pp. 70-71 (original emphasis).

[24] Philip J. Klotzbach, Steven G. Bowen, Roger Pielke Jr., and Michael Bell. 2018. Continental U.S. Hurricane Landfall Frequency and Associated Damage: Observations and Future Risks. *Bulletin of the American Meteorological Society* Vol. 99, Issue 7, https://journals.ametsoc.org/view/journals/bams/99/7/bams-d-17-0184.1.xml?tab_body=pdf.

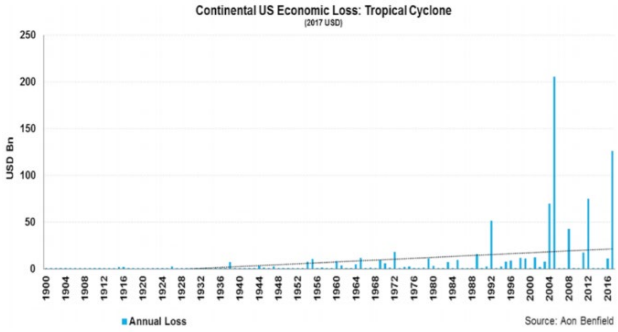

FIG. 1. CONUS total inflation-adjusted economic losses from TC landfalls (1900–2017). The dotted line represents the linear trend over the period. The *p* value for the linear trend is <0.01, indicating that the trend is significant.

Source: *Klotzbach et al. (2018). U.S. tropical cyclone losses adjusted only for inflation.*

Here are the same damages normalized for changes in population and exposed wealth:

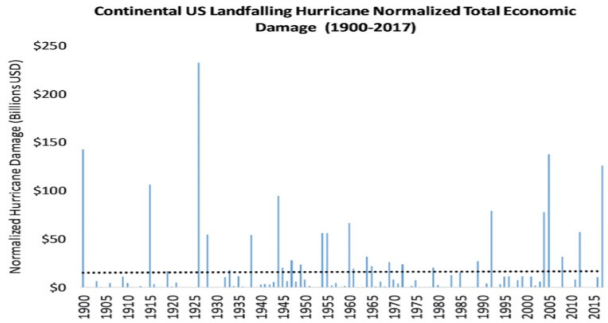

FIG. 3. Normalized CONUS landfalling hurricane damage from 1900 to 2017. The dotted line represents the linear trend in CONUS hurricane normalized damage during the period of record. The *p* value for the linear trend is 0.86, indicating that the trend is not significant.

Source: *Klotzbach et al. (2018). U.S. tropical cyclone damages also adjusted for population and wealth.*

Consistent with the chart above, meteorological data also show no trend in either the frequency or severity of U.S. landfalling hurricanes since 1900.

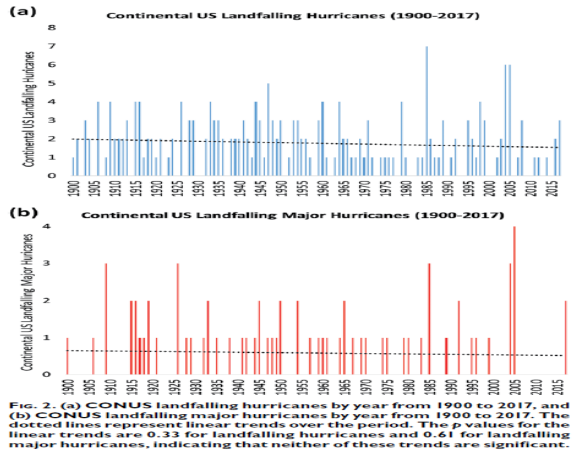

FIG. 2. (a) CONUS landfalling hurricanes by year from 1900 to 2017, and (b) CONUS landfalling major hurricanes by year from 1900 to 2017. The dotted lines represent linear trends over the period. The *p* values for the linear trends are 0.33 for landfalling hurricanes and 0.61 for landfalling major hurricanes, indicating that neither of these trends are significant.

Source: *Klotzbach et al. (2018). Frequency of total and major U.S. landfalling hurricanes (1900-2017).*

From a sustainability perspective, what matters is not total damages but relative economic impact—extreme weather damages as a share of GDP. Globally, weather-related losses per exposed GDP declined nearly five-fold from 1980–1989 to 2007–2016.[25]

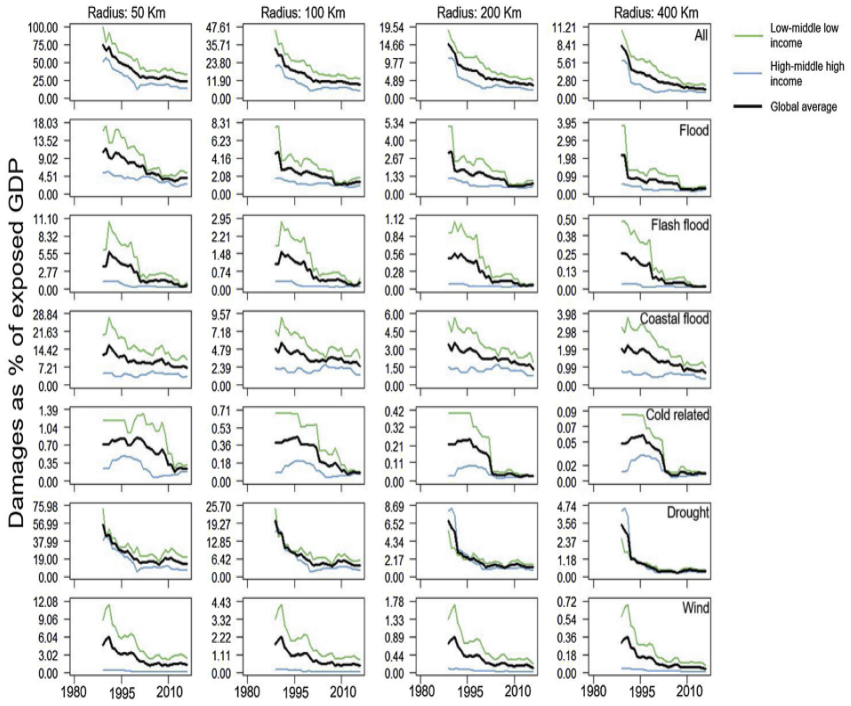

Fig. 3. Loss rates for the analyzed hazards. Results for each hazard represent 10-year moving average of the median (for each year per income class) loss rates for two income levels (low/middle-low income in green and high/middle-high income in blue) and all countries (average of low/middle-low and high/middle-high income classes). Multi-hazard loss rates are the sum of single hazard median values.

Source: *Formetta and Feyen (2019). Decreasing relative economic impact of six types of extreme weather in high- and low-income countries, 1980-1989 vs 2007-2016.*

In both rich and poor countries, economic growth outpaced the increase in climate-related damages. Note, too, that the relative impact of damaging weather declined more rapidly in poor countries than in rich countries.

Improving Global Ecology

Climate crisis advocacy seldom if ever mentions the immense agricultural and ecological benefits of carbon dioxide (CO_2) emissions. By increasing plant water-use efficiency and photosynthetic activity,[26] rising atmospheric CO_2 concentration boosts crop yields and greens the planet.

[25] 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.

[26] Plant Growth Database, Center for the Study of Carbon Dioxide and Global Change, http://co2science.org/data/plant_growth/plantgrowth.php.

Using Food and Agricultural Organization economic data on 45 major food crops and an extensive database on CO_2-growth response factors, climate researcher Craig Idso estimates that the ongoing rise in the air's CO_2 content added $3.2 trillion to global agricultural output during the 50-year period 1961-2011.[27]

Satellite data indicate that green foliage cover increased in arid environments by 11 percent during 1982-2010, due to the 14 percent rise in atmospheric CO_2 over the same period.[28] NASA satellite research found a global increase in plant and tree leaf cover during 1982-2015 "equivalent in area to two times the continental United States." The researchers attribute 70 percent of the greening to atmospheric CO_2 fertilization, 9 percent to nitrogen deposition, and 8 percent to global warming.[29] That makes fossil-fuel combustion responsible for 87 percent of the greening. A study of the long-term decrease in airborne carbonyl sulfide, a molecule destroyed by photosynthetic activity, estimates that terrestrial plants are converting 31 percent more CO_2 into organic matter than they did before the industrial revolution.[30]

Imagine if empirical data revealed that rising CO_2 concentration had depressed crop production by $3.2 trillion since 1961, diminished green foliage cover in arid regions by 11 percent since 1982, and reduced global green foliage cover by an amount equal to twice U.S. land area. Imagine further that since the dawn of the industrial revolution, CO_2 emissions decreased the quantity of plant biomass from photosynthesis by 31 percent. We would definitely have a climate crisis. But that did not happen. Instead, the exact opposite occurred.

Methodological Bias: Inflated Emission Scenarios

One often hears that climate change is happening so fast it will overwhelm humanity's adaptive capabilities. In CEQ's words, "there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory."[31] That assessment clashes with the positive trends discussed above. Three other considerations weigh heavily against the alleged urgency for "climate action."

First, the rate of warming in the lower-troposphere, as measured by satellites and weather balloons, has not accelerated over the past 44 years. In the University of Alabama in Huntsville satellite record, the warming rate is a slow and steady 0.13°C per decade.[32]

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[27] Craig D. Idso, *The Positive Externalities of Carbon Dioxide: Estimating the Monetary Benefits of Rising CO_2 Concentrations on Global Food Production*, Center for the Study of Carbon Dioxide and Global Change, October 21, 2013, http://co2science.org/education/reports/co2benefits/MonetaryBenefitsofRisingCO2onGlobalFoodProduction.pdf.

[28] Randall J. Donohue et al. 2013. *Geophysical Research Letters*, 40: 1-5, https://friendsofscience.org/assets/documents/CO2_Fertilization_grl_Donohue.pdf.

[29] Zaichun Zhu et al. 2016. Greening of the Earth and Its Drivers. *Nature Climate Change* 6: 791-795, https://www.nature.com/articles/nclimate3004.

[30] J.E. Campbell et al. 2017. Large Historical Growth in Global Gross Terrestrial Primary Production. *Nature* 544: 84-87, https://www.nature.com/articles/nature22030.

[31] 88 FR 1197.

[32] Roy Spencer, UAH Global Temperature Update for January, 2023: -0.04 deg. C, RoySpencer.Com, February 1, 2023, https://www.drroyspencer.com/2023/02/uah-global-temperature-update-for-january-2023-0-04-deg-c/.

A second major reason is that the emission baselines long used to project global warming and sea-level rise are wildly inflated. Those scenarios assume the world "returns to coal" absent aggressive political interventions to suppress the exploration, production, and utilization of fossil fuels.[33] That assumption underlies the high-end "radiative forcing" scenarios,[34] notably RCP8.5 and SSP5-8.5, featured in official and academic climate change impact estimates. Such scenarios are no longer credible.[35]

It is difficult to exaggerate the extent to which RCP8.5 and SSP5-8.5 distort climate science, needlessly scare the public, and mislead policymakers. According to Google Scholar, since 2019, researchers published 17,400 papers featuring RCP8.5 and 3,800 papers featuring SSP5-8.5.[36] One or both of those scenarios was the source of the scary-sounding climate impact projections in the Intergovernmental Panel on Climate Change's (IPCC's) 2013 Fifth Assessment Report (AR5), the IPCC's 2021 Sixth Assessment Report (AR6), and the U.S. Global Change Research Program's 2018 Fourth U.S. National Climate Assessment.

At its zenith, the academic "consensus" endorsing those scenarios may have reached the fabled 97 percent.[37] It is now crumbling.

SSP5-8.5 is a "socioeconomic pathway" calibrated to match the forcing trajectory of RCP8.5. RCP8.5, in turn, derives from an earlier storyline (A2r) from the IPCC's 2007 Fourth Assessment Report.[38] Such scenarios assumed that learning-by-extraction would make coal the increasingly affordable backstop energy for the global economy.[39] RCP8.5 was based on the expectation that global coal consumption would increase almost tenfold during 2000-2100. That is not happening and there is no evidence that it will.

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[33] Justin Ritchie and Hadi Dowlatabi. 2017. Why Do Climate Change Scenarios Return to Coal? *Energy* 140: 1276-1291, https://www.sciencedirect.com/science/article/abs/pii/S0360544217314597.

[34] RCP stands for "Representative Concentration Pathway"; SSP stands for Shared Socioeconomic Pathway. In both RCP8.5 and SSP5-8.5, the rise in GHG concentrations between 2000 and 2100 increases the preindustrial greenhouse effect by 8.5 watts per square meter (W/m^2).

[35] Roger Pielke, Jr. and Justin Ritchie, "How Climate Scenarios Lost Touch with Reality," *Issues in Science & Technology*, Vol. XXXVII, No. 4, Summary 2021, https://issues.org/climate-change-scenarios-lost-touch-reality-pielke-ritchie/.

[36] Some of those papers could, of course, be critical of high-end emission scenarios. However, the first 50 entries on SSP5-8.5 are exclusively studies that use the scenario to project climate change impacts. Hardly an exhaustive survey but quite suggestive.

[37] David R. Legates et al. 2015. Climate Consensus and 'Misinformation': A Rejoinder to Agnotology, Scientific Consensus, and the Teaching and Learning of Climate Change. *Sci & Educ* 24: 299-318, https://lweb.cfa.harvard.edu/~wsoon/myownPapers-d/LegatesSoonBriggsMonckton15-ScienceandEducation-FINAL.pdf.

[38] Kewan Riahi et al. 2011. RCP8.5—A Scenario of Comparatively High Greenhouse Gas Emissions. *Climate Change* 109: 33-57, https://link.springer.com/article/10.1007/s10584-011-0149-y.

[39] Justin Ritchie and Hadi Dowlatabadi, The 1,000 GtC Coal Question: Are Cases of High Future Coal Combustion Plausible? Resources for the Future, RFF DP 16-45, 2016, https://media.rff.org/documents/RFF-DP-16-45.pdf.

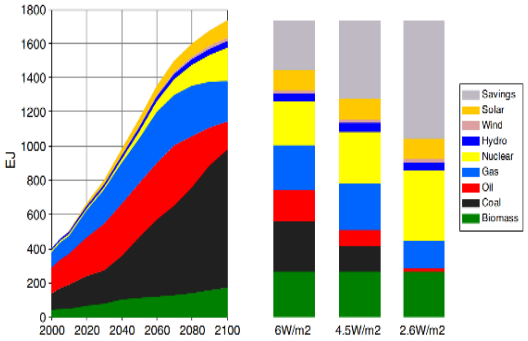
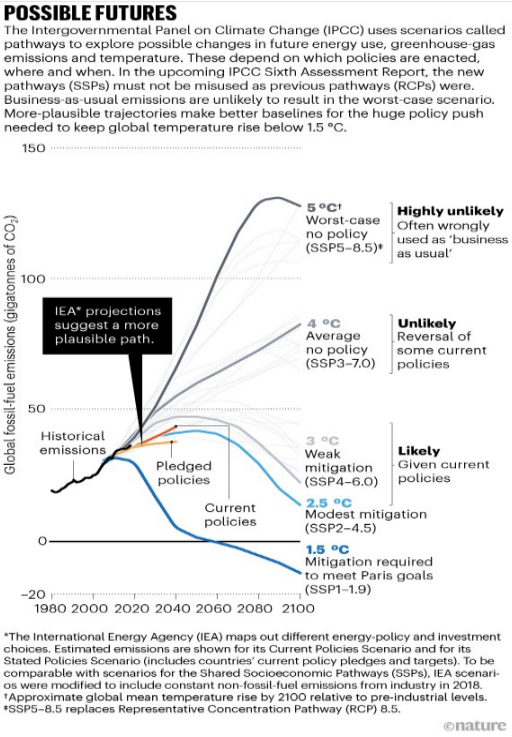


Fig. 5 Development of global primary energy supply in RCP8.5 (*left-hand panel*) and global primary energy supply in 2100 in the associated mitigation cases stabilizing radiative forcing at levels of 6, 4.5, and 2.6 W/m^2 (*right-hand bars*). Note that primary energy is accounted using the direct equivalent method

Source: *Riahi et al. (2011).*

As shown in the chart below by Zeke Hausfather of the Breakthrough Institute and Glenn Peters of the CICERO Center for International Climate Research, midcentury CO_2 emissions in the International Energy Agency's (IEA's) baseline scenarios ("current policies" and "pledged policies") are less than half those projected by SSP5-8.5.[40]

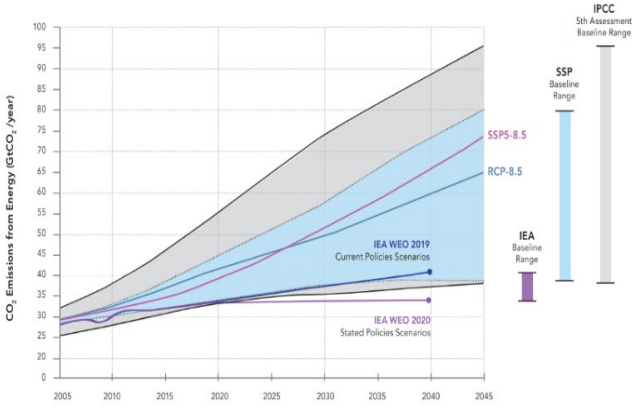


Source: *Hausfather and Peters (2020).*

To put this another way, the potential range of emissions in SSP5-8.5 and RCP8.5 lie almost entirely outside the range of the IEA's emission baselines.

[40] Zeke Hausfather and Glenn P. Peters, "Emissions – the 'business as usual' story is misleading," *Nature*, January 29, 2020, https://www.nature.com/articles/d41586-020-00177-3.

Figure 2. **IPCC BASELINE EMISSIONS SCENARIOS FROM 2005 TO 2040**

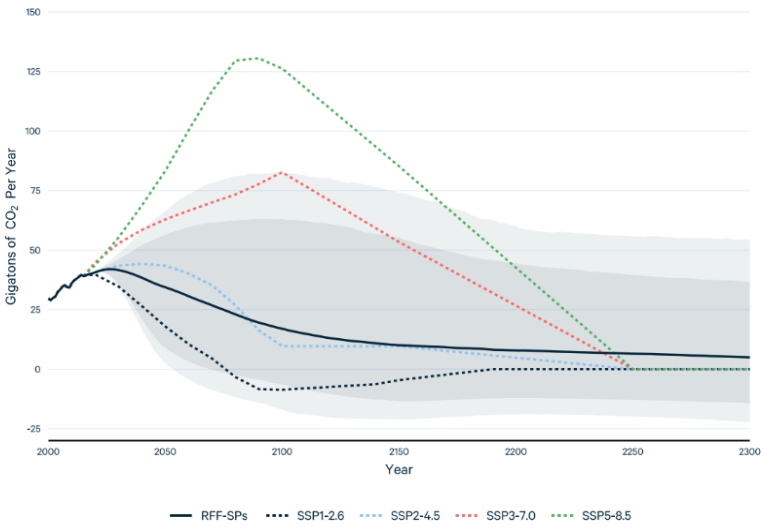


The range of fossil fuel baseline emissions projected by the International Energy Agency in 2019 and 2020 lie almost entirely outside the full range of baseline scenarios for the IPCC Fifth Assessment Report and the SSP scenarios shaping the IPCC Sixth Assessment Report.

Source: *Pielke and Richie (2021).*

The next chart is by Kevin Rennert and his team at Resources for the Future (RFF).[41] Annual CO_2 emissions in the new RFF baselines are less than half those projected by SSP5-8.5 in 2050 and less than one-fifth those projected by SSP5-8.5 in 2100.

Figure 8. Net Annual Emissions of CO_2 from RFF-SPs and SSPs



Notes. Lines represent median values, and dark and light shading represent the 5th to 95th (darker) and 1st to 99th (lighter) percentile ranges of the RFF-SPs.

Source: *Rennert et al. 2021.*

[41] 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-probabilistic-projections-of-population-gdp-emissions-and-discount-rates/.

CEQ should be aware that the EPA considers the RFF emission baselines to be the most rigorous available, and intends to use them in future calculations of the social cost of greenhouse gases (SC-GHG).[42]

The RFF baselines project less than one-third of the CO_2 emissions previously assumed by the U.S. Government's Interagency Working Group (IWG) in its 2010, 2013, 2016, and 2021 technical support documents (TSDs) on the social cost of carbon dioxide (SC-CO_2).

To project an emissions baseline against which to estimate the incremental impact of an additional ton of CO_2, the IWG averaged five baseline projections from a 2009 Stanford Energy Modeling Forum study called EMF-22.[43] Four of the five scenarios are no-policy baselines, the fifth scenario assumes international adoption of climate policies stabilizes CO_2 concentrations at 550 parts per million in 2100. The IWG assumes all five scenarios are equally plausible, yielding a mean baseline of 17,195 $GtCO_2$—roughly 2.4 to 4.6 times estimated fossil reserves.[44] The chart below shows the five baselines underpinning the IWG's SC-CO_2 estimates in 2010, 2013, 2016, and 2021.

Table 4-6
Cumulative fossil and industrial CO_2 emissions in the USG assumptions and estimated fossil fuel reserves

Cumulative CO_2 emissions ($GtCO_2$)		
	By 2200	By 2300
USG1	11,207	16,741
USG2	20,024	33,023
USG3	8,113	10,864
USG4	14,092	20,504
USG5	3,691	4,843
Estimated reserves ($GtCO_2$)	3,674 - 7,113	

Source: *Electric Power Research Institute (2014).*

The mean RFF baseline projection for 2000-2300 is 5,000 $GtCO_2$—less than one-third of the IWG mean projection.

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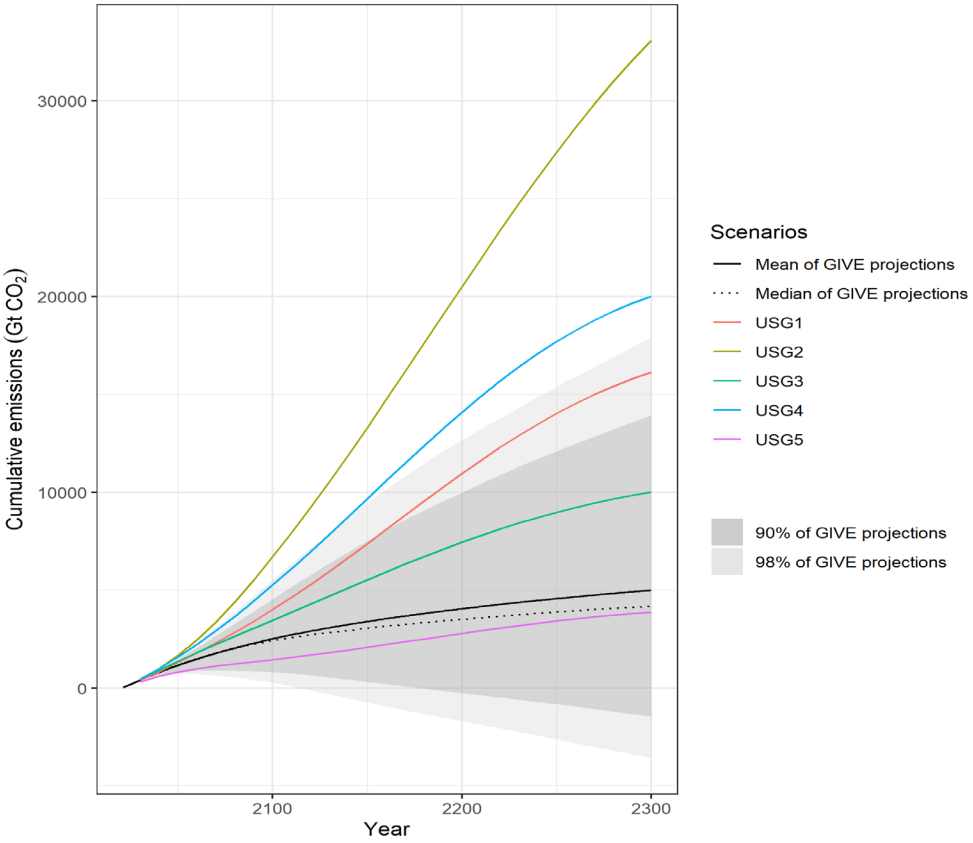
[42] EPA, External Review Draft of the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances, September 2022, https://www.epa.gov/system/files/documents/2022-11/epa_scghg_report_draft_0.pdf.

[43] Leon Clarke et al. 2009. International climate policy architectures: Overview of the EMF 22 International Scenarios. *Energy Economics* Volume 31, Supplement 2, S64-S81, https://www.sciencedirect.com/science/article/pii/S0140988309001960?via%3Dihub.

[44] EPRI, *Understanding the Social Cost of Carbon: A Technical Assessment*, October 2014, Section 4, pp. 3-4, https://www.epri.com/research/products/3002004657.



Source: *Kevin Rennert, December 2, 2022.*

In short, CEQ's notion that there is "little time left" to avert catastrophe is implausible. That might be the case if researchers suddenly realized that emissions will be more than double the level previously projected for 2050, more than five times the level previously projected for 2100, and more than three times the level previously projected for 2000-2300. However, the best available information now shows the reverse. The updated baseline emission projections for 2050, 2100, and 2300 are substantially lower than the baselines that anchored "consensus" climatology during the past decade and more.

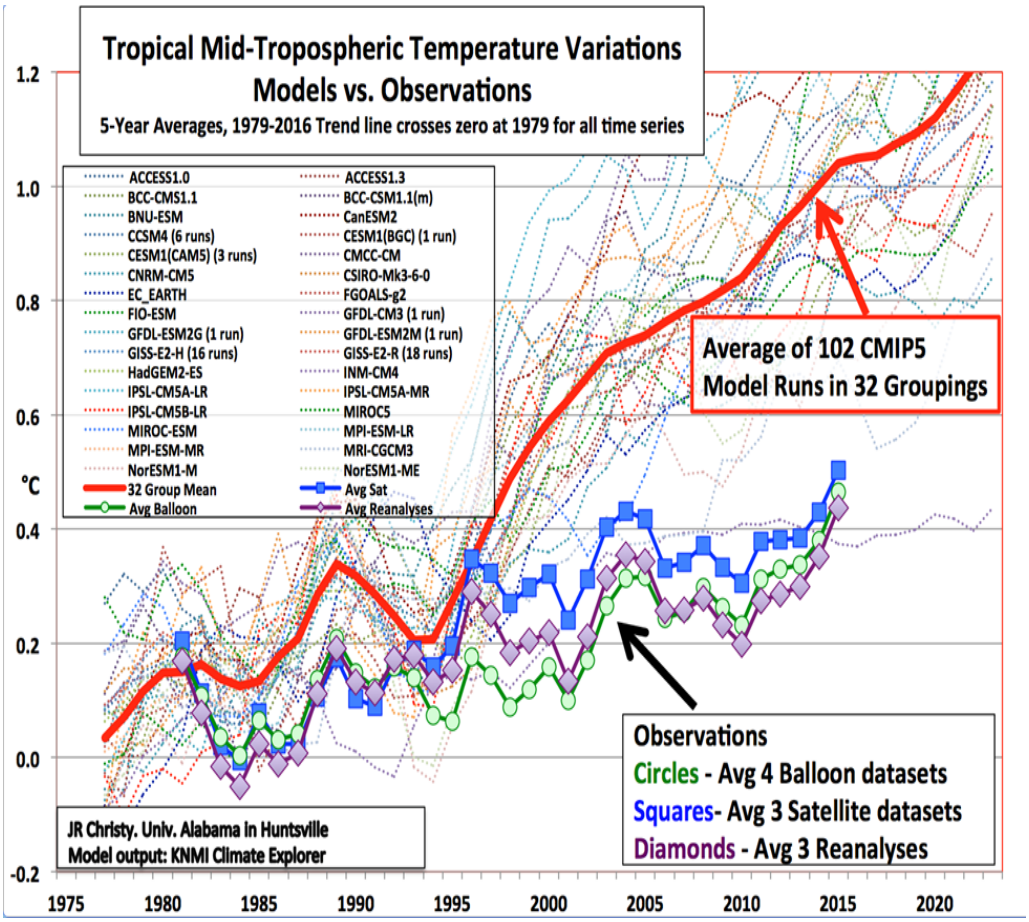
Consequently, the pace of global warming should be slower, the associated physical impacts smaller, and the risk of tipping points lower than previously supposed. That means the urgency for "climate action" is much reduced even if one disregards the positive global trends in health and welfare, the dramatic decline in climate-related mortality, the substantial decline in the relative impact of damaging weather, and the immense agricultural and ecological benefits of atmospheric CO_2 enrichment.

Methodological Bias: Overheated Models

The third major reason to doubt the reality and urgency of a "climate crisis" is the persistent mismatch between modeled and observed warming in the troposphere, the atmospheric layer where most of the greenhouse effect occurs. The IPCC used the CMIP5 generation of climate models in AR5 and the CMIP6 generation of models in AR6. According to Google Scholar,

since 2019, researchers published 68,000 papers featuring CMIP5 models and 22,600 papers featuring CMIP6 models.

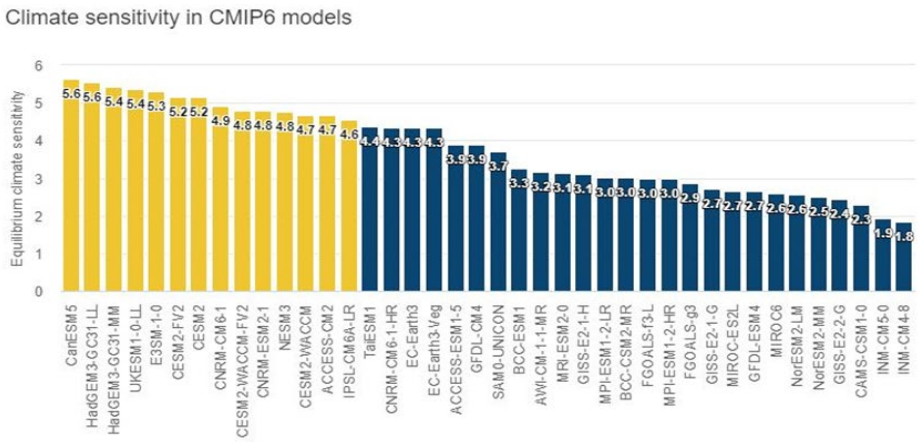
The CMIP5 models hindcast twice the observed warming in the tropical troposphere since 1979.[45]



Source: *Christy 2017. Solid red line—average of all the CMIP-5 climate models; Thin colored lines—individual CMIP-5 models; solid figures—weather balloon, satellite, and reanalysis data for the tropical troposphere.*

About one-third of the AR6 models have higher equilibrium climate sensitivities than any model in the AR5 ensemble.[46] Equilibrium climate sensitivity (ECS) is the term used to describe how much warming will occur after the climate system fully adjusts to a doubling of atmospheric CO_2 concentrations.

[45] John R. Christy and Richard T. McNider. 2017. Satellite Bulk Tropospheric Temperatures as a Metric for Climate Sensitivity. *Asia-Pac. J. Atmos. Sci.*, 53(4), 511-518, https://www.sealevel.info/christymcnider2017.pdf.
[46] Zeke Hausfather, "Cold Water on Hot Models," The Breakthrough Institute, February 11, 2020, https://thebreakthrough.org/issues/energy/cold-water-hot-models.



Source: *Hausfather 2020. The CMIP6 model suite. Models warmer than the warmest CMIP5 versions are in yellow.*

In a 2022 article in *Nature*, Zeke Hausfather and three co-authors caution that a subset of the CMIP6 models are "too hot" and produce warming projections "that might be larger than that supported by other evidence."[47] That's putting it mildly.

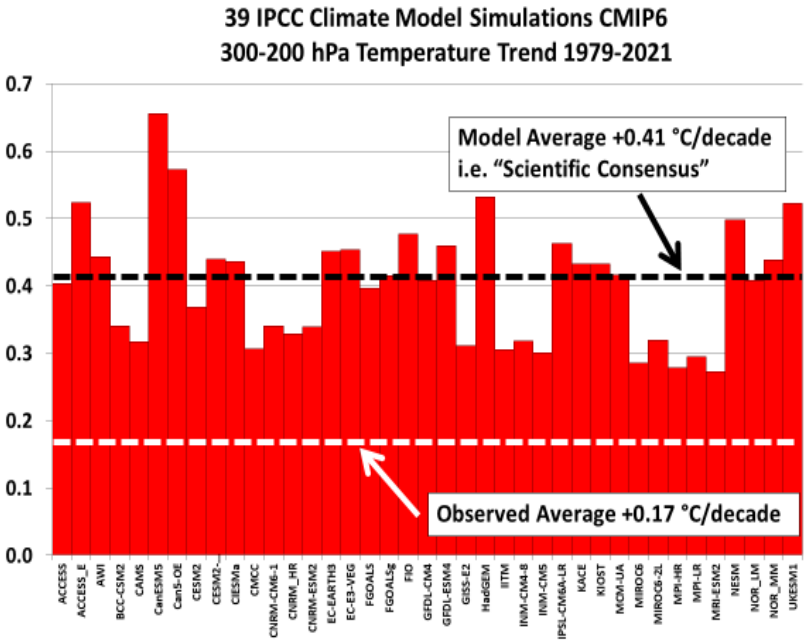
Zhu, Poulsen, and Otto-Bliesner (2020) ran the CESM2 model with an emission scenario in which CO_2 concentrations reach 855 parts per million (ppm) by 2100. The model produced a global mean temperature "5.5°C greater than the upper end of proxy temperature estimates for the Early Eocene Climate Optimum."[48] That was a period when CO_2 concentrations of about 1,000 ppm persisted for millions of years.[49] Moreover, the CESM2 tropical land temperature exceeds 55°C, "which is much higher than the temperature tolerance of plant photosynthesis and is inconsistent with fossil evidence of an Eocene Neotropical rainforest."[50]

In AR5 and previous IPCC reports, the authors "simply used the mean and spread of models to estimate impacts and their uncertainties"—a method dubbed "model democracy" because each model counts equally in the overall assessment. To address the "hot model" problem, AR6 authors decided to apply weights to the models before averaging them.[51]

While "weighting" avoids the embarrassment of treating all projections, even the most outlandish, as equally credible, it does not correct the basic methodological flaw—the IPCC's reliance on errant models. In the tropical mid-troposphere, the CMIP6 models overshoot

[47] Zeke Hausfather, Kate Marvel, Gavin A. Schmidt, John W. Nielsen-Gammon & Mark Zelinka, "Climate simulations: recognize the 'hot model' problem," *Nature* Vol. 605, May 5, 2022, https://media.nature.com/original/magazine-assets/d41586-022-01192-2/d41586-022-01192-2.pdf.
[48] Jiang Zhu, Christopher J. Poulsen & Bette L. Otto-Bliesner. 2020. High climate sensitivity in CMIP6 model not supported by paleoclimate. *Nature Climate Change* Vol. 10, pages 378–379, https://www.nature.com/articles/s41558-020-0764-6.
[49] NOAA National Centers for Environmental Information, Early Eocene Period, 54 to 48 Million Years Ago, https://www.ncdc.noaa.gov/global-warming/early-eocene-period.
[50] Zhu et al. (2020), Op. Cit.
[51] Hausfather et al. (2022), Op. Cit.

observed warming by more than a factor of two. Moreover, every CMIP6 model overestimates observed warming in that atmospheric region.[52]



Source: *John Christy. CMIP 6 models vs. observations.*

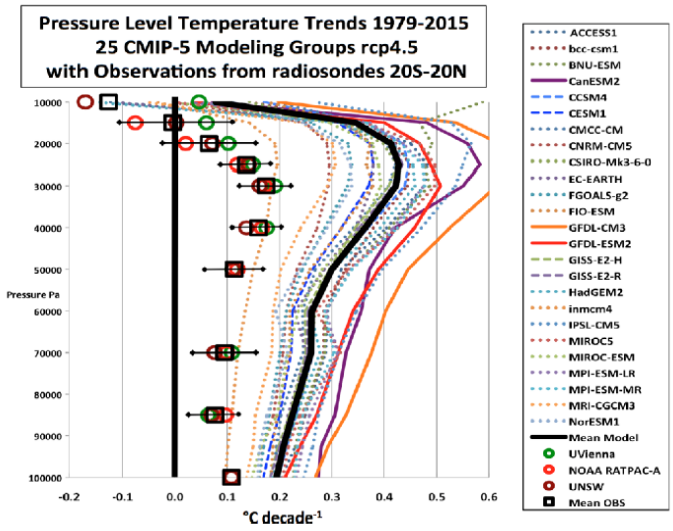
The mismatch is more significant than might at first appear. The tropics at altitude 300-200 hPa is the region best suited to test the validity of climate models. That is so because:

1. All models predict a strong warming signal at 300-200 hPa in the tropical atmosphere.
2. The region is well-monitored by satellites and weather balloons.
3. The region is too high in altitude to be influenced by urban heat islands.
4. Climate models are not "tuned" to match temperature trends in the tropical troposphere, so model simulations are genuinely independent of the data used to test them.[53]

My late colleague Dr. Patrick Michaels noted that meteorologists do not use the mean and spread of all models to forecast the weather. Rather, they use the model or models with proven skill. He also observed that only one climate model, the Russian INM-CM4, accurately estimates observed warming in the tropical troposphere.

[52] 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.

[53] Ross McKitrick and John Christy. 2018. A Test of the Tropical 200- to 300-hPaWarming Rate in Climate Models. *Earth and Space Science*, 5: 529–536, https://agupubs.onlinelibrary.wiley.com/doi/epdf/10.1029/2018EA000401.



Source: *John Christy (2017). Pressure-level temperature trends (1979-2016) for the tropical atmosphere as measured by four radiosonde datasets (circles with square as average, UVienna is average of two datasets) and 25 modeling groups (dotted, dashed and solid lines, mean is black line) used in IPCC AR5. The INM-CM4 projection is the leftmost dotted line.*

CEQ should invite the modeling community to run INM-CM4 with the new RFF emission baselines. I'm happy to bet anyone at CEQ that the projected pace of warming is slower, the associated physical impacts smaller, and the probability of tipping points lower than in previous "consensus" assessments.

Project-Related Emissions Are Climatically Inconsequential

CEQ's next stated reason for promulgating GHG emission guidelines is:

> *Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA's purview.*[54]

Even if climate change were a "crisis," the climatological impacts of specific projects would not "fall squarely within NEPA's purview." As noted above, NEPA is concerned with major agency actions "significantly affecting the quality of the human environment." 42 U.S.C. § 4332. It is well-known—and CEQ has acknowledged many times—that the GHG emissions of even the largest project (or set of projects) have no measurable, traceable, or verifiable impacts on the human environment, much less a significant impact.

Illusory Thresholds of Meaningfulness and Significance

Both the Obama and Trump CEQs acknowledged that individual projects do not discernibly influence global climate change, beginning with CEQ's 2010 Draft NEPA Guidance on Greenhouse Gas Emissions and Climate Change Effects. The document noted a stark difference between GHG sources and non-GHG emission sources: "From a quantitative perspective, there

[54] 88 FR 1197.

are no dominating sources and fewer sources that would even be close to dominating total GHG emissions."[55] Which of the large universe of non-dominating sources should be covered?

The 2010 Draft GHG Guidance proposed that 25,000 tons or more of annual carbon dioxide-equivalent (CO_2e) emissions could provide "an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public."[56] However, CEQ immediately clarified that it was not making a claim about climatic impact: "CEQ does not propose this as an indicator of a threshold of significant effects, but rather as an indicator of a minimum level of GHG emissions that may warrant some description in the appropriate NEPA analysis for agency actions involving direct emissions of GHGs."[57]

The 2010 Draft Guidance further stated: "CEQ does not propose this [25,000 ton] reference point as an indicator of a level of GHG emissions that may significantly affect the quality of the human environment." Lest anyone mistakenly infer climatic significance, CEQ reiterated: "However, it is not currently useful for the NEPA analysis to attempt to link [proposed projects to] specific climatological changes, as such direct linkage is difficult to isolate and to understand."[58]

Stakeholders were confused. How can NEPA analysis of a project emitting 25,000 tons of greenhouse gases per year be "meaningful" if that quantity of emissions is not environmentally significant?[59]

CEQ's 2014 Draft GHG Guidance devoted several pages to the issue without resolving it. CEQ again proposed a 25,000 metric ton reference point while disclaiming an intent to make a "determination of significance."[60] Rather, the significance of an agency action depends on multiple factors, such as "the degree to which the proposal affects public health or safety, the degree to which its effects on the quality of the human environment are likely to be highly controversial, and the degree to which its possible effects on the human environment are highly uncertain or involve unique unknown risks."[61]

However, that restates rather than resolves the perplexity. The degree to which GHG emissions from an individual project affect public health and safety is for all practical purposes zero. The climatic insignificance of individual projects is non-controversial and highly certain. Greenhouse gas emissions from individual projects are not suspected of posing unique unknown risks.

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[55] CEQ, Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions February 18, 2010, p. 2, https://obamawhitehouse.archives.gov/sites/default/files/microsites/ceq/20100218-nepa-consideration-effects-ghg-draft-guidance.pdf (hereafter CEQ, 2010 Draft GHG Guidance).
[56] CEQ, 2010 Draft GHG Guidance, p. 2.
[57] CEQ, 2010 Draft GHG Guidance, p. 2.
[58] CEQ, 2010 Draft GHG Guidance, p. 3.
[59] CEQ, Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews, 79 FR 77825, December 24, 2014, https://www.govinfo.gov/content/pkg/FR-2014-12-24/pdf/2014-30035.pdf.
[60] 79 FR 77810.
[61] 79 FR 77810.

After wrestling with comments ranging from 'no project-level emissions are big enough to quantify' to 'no project-level emissions are too small to quantify,' CEQ judged that a 25,000-ton disclosure threshold is "1) low enough to pull in the majority of large stationary sources of greenhouse gas emissions, but also 2) high enough to limit the number of sources covered that state and local air pollution permitting agencies could feasibly handle."[62] In other words, administrative convenience rather than climatic significance would determine the cutoff.

Then, two years later, the final 2016 GHG guidance silently dropped the 25,000-ton threshold. The whole topic disappeared without a word of explanation or comment. Perhaps CEQ just gave up trying to explain how quantifying emissions that are not climatically "significant" could still be "meaningful."[63]

False Proxies

Although the climatic insignificance of project-related emissions has been Council's consistent view since 2010, CEQ in 2014 continued to propose and in 2016 required agencies to quantify facility-level GHG emissions, and use that information to evaluate proposed actions, alternatives, and mitigation measures.

Based on what scientific rationale? CEQ argued that "projection of a proposed action's direct and reasonably foreseeable indirect GHG emissions may be used as a proxy for assessing potential climate effects."[64] However, that is tantamount to saying, 'Let's pretend we know what we don't know and regulate anyway.'

A proxy voter can cast a real, countable, ballot for an absentee voter. Data from tree rings, ice cores, fossil pollen, ocean sediments, and corals can be calibrated to instrumental data and then serve (albeit imperfectly) as proxies for climatic conditions in pre-industrial times. In contrast, no testable, measurable, or otherwise observable relationship exists between project-level GHG emissions and climate change effects. To call the former a "proxy" for the latter is inaccurate and misleading.

CEI's November 22, 2021 comments on CEQ's proposed repeal of the Trump administration's NEPA implementing regulations explained why project-related emissions are neither climatically significant nor valid proxies for climate change effects.[65] That may be why CEQ abstains from proposing "any particular quantity of GHG emissions as 'significantly' affecting the quality of the human environment"[66] and says nothing about proxies. However, that does not make the

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[62] 79 FR 77818.

[63] CEQ, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, August 1, 2016, https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf (hereafter CEQ, 2016 Final GHG Guidance).

[64] CEQ, 2010 Draft GHG Guidance, p. 3; 79 FR 77825; CEQ, 2016 Final GHG Guidance, pp. 4, 10.

[65] Comments submitted by Marlo Lewis, Docket ID No. CEQ–2021–0002. National Environmental Policy Act Implementing Regulations Revisions. Notice of Proposed Rulemaking, 86 FR 55757, October 7, 2021, https://cei.org/wp-content/uploads/2021/11/CEQ20210002-22-November-2021.pdf.

[66] 88 FR 1200.

proposed guidelines more reasonable than earlier iterations, because the exact same actions will be required.

Moreover, the absence of any tonnage threshold would seem to imply that no quantity of CO_2 emissions is too small to be estimated, reported, and mitigated. Neither science nor benefit-cost analysis supports such a policy. One suspects CEQ defaults to a report-all-emissions directive to avoid discussion of reporting thresholds, which immediately raise the issue of climatic significance, which in turn raises questions about why any permit applicant should spend time and trouble monitoring emissions, investigating alternatives, and developing mitigation strategies.

This much is clear. The report-all-emissions directive will put pressure on stakeholders to "think globally" (fret about the "climate crisis") whenever they "act locally" (file or review a permit application). The universal reporting imperative will also facilitate "naming and shaming," activist mobilization, and climate-themed litigation. Viewed from a political angle, the proposal may deliver plenty of bang for buck.

Permitting Policy Is Not Climatically Significant

Perhaps CEQ believes that a GHG-focused permitting policy could significantly affect the quality of the human environment, even if individual permitting decisions cannot. The proposal states:

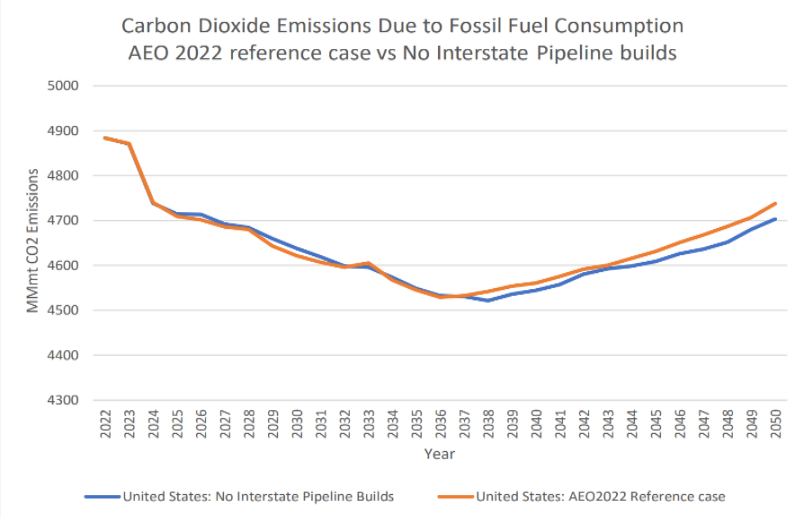
> *Major Federal actions may result in substantial GHG emissions or emissions reductions, so Federal leadership that is informed by sound analysis is crucial to addressing the climate crisis.*[67]

In fact, not even adoption of a GHG-centric permitting regime would discernibly affect global warming and any associated climate impacts. For example, a 2022 Heritage Foundation analysis shows that a complete ban on the construction of new natural gas pipelines would have only negligible impacts on U.S. annual CO_2 emissions through 2050 and global temperatures through 2100. This conclusion is based on a clone of the U.S. Energy Information Administration's (EIA's) National Energy Model Systems (NEMS) and the EPA's Model for the Assessment of Greenhouse Induced Climate Change (MAGICC).[68]

Compared to the AEO2022 Reference Case, a complete ban on natural gas pipeline constructions would reduce annual U.S. CO_2 emissions by less than 0.74 percent through 2050.

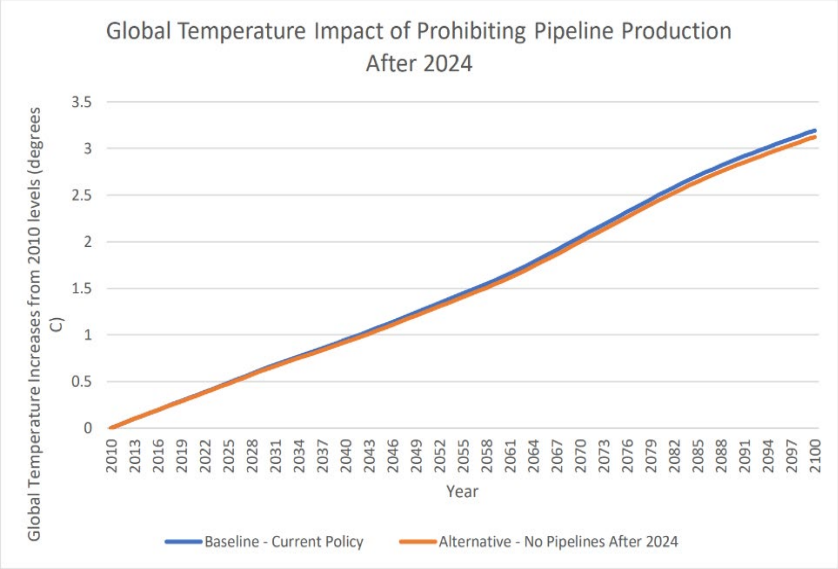
[67] 88 FR 1197.

[68] Comments submitted by Patrick Michaels, Kevin Dayaratna, and Marlo Lewis, Federal Energy Regulatory Commission, Order on Draft Policy Statements, Docket No. PL21-3-000, March 24, 2022, https://cei.org/wp-content/uploads/2022/04/CEI-Comments-Michaels-Dayaratna-Lewis-Docket-No.-PL21-3-000-April-25-2022.pdf.



Source: *Kevin Dayaratna (2022). U.S. CO2 emissions in two scenarios—the AEO2022 Reference Case and a Side Case in which no new pipelines are built after 2024.*

Even assuming a climate sensitivity of 4.5°C (the upper end of the IPCC's likely range) and using RCP6.0 as the baseline emission scenario, MAGICC projects temperature reductions of 0.034°C by 2050 and 0.069°C by 2100 compared to the reference case. For perspective, those mitigations are smaller than the 0.11°C standard deviation for estimating changes in annual average global surface temperatures.[69] Thus, their effects on climate change are undetectable.



Source: *Kevin Dayaratna (2022). Global warming projection in two scenarios—the AEO2022 Reference Case and a Side Case in which no new pipelines are built after 2024.*

[69] J. Hansen, et. al. 1999. GISS Analysis of Surface Temperature Change. *Journal of Geophysical Research*, Vol. 104, No. D24, 30,997-31,022, https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/1999JD900835.

CEQ's Rebuttal: A Response

While disavowing an attempt to establish a particular quantity of emissions as climatically significant, CEQ insists that NEPA "requires more than a statement that emissions from a proposed Federal action or its alternatives represent only a small fraction of global or domestic emissions." CEQ continues:

> *Such a statement merely notes the nature of the climate change challenge, and is not a useful basis for deciding whether or to what extent to consider climate change effects under NEPA. Moreover, such comparisons and fractions also are not an appropriate method for characterizing the extent of a proposed action's and its alternatives' contributions to climate change because this approach does not reveal anything beyond the nature of the climate change challenge itself—the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large effect.*[70]

Respectfully, CEQ ignores the obvious. The "nature of the climate challenge" is what renders scrutiny of project-level GHGs a waste of time and effort. Requiring such analyses turns NEPA into a make-work program. If climate change results from the "incremental addition of GHG emissions from millions of individual sources," and "emissions from a proposed federal action represent only a small fraction of global emissions" (perhaps no more than a few hundred thousandths of 1 percent),[71] then the GHG emissions from any individual action are climatically inconsequential. Attempting to solve the "climate change challenge" one project at a time is like trying to drain a swimming pool one thimbleful at a time. It is a fool's errand.

Unless, again, the objective is political, such as "promoting the flow of capital toward climate-aligned investments and away from high-carbon investments."[72] The proposed guidance could significantly increase the policy and litigation risks facing fossil-fuel infrastructure.

CEQ states that although "individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations," the myriad diverse sources "collectively have large impact."[73] The policy implication is obvious: To mitigate "large impact," permission should be denied to as many sources as possible—ideally to all.

The chief problem with that policy—aside from the enormous economic losses it would entail—is that Congress has not authorized it. CEQ should take great care not to encourage agencies to do piecemeal what they clearly lack authority to do at the pace and scale dictated by the NetZero agenda.

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[70] 88 FR 1201.
[71] 79 FR 77810.
[72] President Joseph R. Biden, "Executive Order on Tackling the Climate Crisis at Home and Abroad," January 27, 2021, https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/.
[73] 88 FR 1201.

Other CEQ Climate Policy Rationales

Environmental Equity Rationale

CEQ also suggests that project-level GHG reporting is desirable because it can help spotlight environmental justice concerns:

> *Further, climate change raises environmental justice concerns because it will disproportionately and adversely affect human health and the environment in some communities, including communities of color, low-income communities, and Tribal Nations and Indigenous communities.*[74]

CEQ ignores an "important aspect of the problem," which it should consider per the Administrative Procedure Act.[75] Climate policies raise profound equity concerns. For example, many economists regard a carbon tax as the most efficient decarbonization policy, because it disincentivizes carbon-intensive investments across all economic sectors. A recent Heritage Foundation analysis uses its clone of EIA's NEMS model to project the economic impacts and emission reductions from a revenue-neutral carbon tax, with per-ton prices ranging from $35 to $300.[76] Not even the $300 per ton carbon tax comes close to achieving NetZero emissions by 2050. Instead, it reduces emissions to 44 percent of 2005 levels in 2030 and 47 percent in 2040, with little if any additional reduction thereafter.

Nonetheless, a $300 per ton carbon tax has severe economic impacts, including:

- An overall average reduction of more than 1.2 million jobs per year.
- A peak employment reduction of more than 7.8 million jobs.
- An average annual income loss for a family of four of $5,100.
- A total income loss for a family of four exceeding $87,000 over the 18-year time horizon.
- An aggregate GDP loss of over $7.7 trillion over the 18-year time horizon.
- A rise in household electricity expenditures averaging 23 percent per year.

A disproportionate share of the job losses, household income losses, GDP losses, and rising fuel costs would be borne by "communities of color, low-income communities, and Tribal Nations and Indigenous communities." After all, many households in those communities already struggle with joblessness, low wages, and the high costs of fuel and food.

Deceptive Contexts

The word "context" appears 28 times in the proposed guidelines. Here is the first instance:

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[74] 88 FR 1197.

[75] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

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

> *NEPA reviews should quantify proposed actions' GHG emissions, place GHG emissions in appropriate context and disclose relevant GHG emissions and relevant climate impacts, and identify alternatives and mitigation measures to avoid or reduce GHG emissions*.[77]

The only appropriate context is the global context—the cumulative combined effect of all GHG sources and sinks from the start of the Industrial Revolution through 2100 and beyond. Viewed in that context, all analysis of project-related emissions is superfluous and mind-numbingly redundant. The same boilerplate on the greenhouse effect, fossil-fuel combustion, global emissions trends, and IPCC climate-impact projections would accompany each stakeholder's estimate of whatever climatically-inconsequential tons the proposed project would emit or avoid.

We later find that "context" means using SC-GHG estimates to translate undetectable climate impacts into "the more accessible metric of dollars":

> *Recommending that agencies provide additional context for GHG emissions, including through the use of the best available social cost of GHG (SC–GHG) estimates, to translate climate impacts into the more accessible metric of dollars, allow decision makers and the public to make comparisons, help evaluate the significance of an action's climate change effects, and better understand the tradeoffs associated with an action and its alternatives*.[78]

The SC-GHG is a deceptive context. Let's take a recent example. The EPA estimates that its proposed methane emission standards for the oil and gas sector will eliminate 920 million metric tons (MMT) of carbon dioxide-equivalent (CO_2e) methane emissions during 2023-2035.[79] The proposed standards supposedly generate $55 billion in climate benefits, $13 billion in compliance costs, $7.2 billion in net compliance costs (i.e. $13 billion minus $5.5 billion in recovered product sales), and net benefits of $48 billion.[80] The climate benefits are calculated by multiplying 920 million by the SC-CO_2 values estimated in the IWG's 2021 technical support document.[81]

The proposed methane standards thus look like an amazing deal, with climate benefits exceeding compliance costs by 4.2 to 1 or (factoring in product recoveries) 7.6 to 1. Upon inspection, however, those benefits are make-believe. The proposal would impose enormous costs for undetectably small benefits.

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[77] 88 FR 1197.
[78] 88 FR 1198.
[79] EPA, Regulatory Impact Analysis for the Proposed Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review (hereafter RIA), October 2021, Table 2-5, p. 2-25, https://www.epa.gov/system/files/documents/2021-11/proposal-ria-oil-and-gas-nsps-eg-climate-review_0.pdf.
[80] RIA, Table 5-4, p. 5-7.
[81] Interagency Working Group on the Social Cost of Greenhouse Gases, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990, February 2021, https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.

One hundred percent of the rule's quantified benefits are climate benefits, so curious minds may wonder how much global warming the proposed methane standards would avert. The EPA does not say. Here's a reasonable back-of-the-envelope.

The projected reduction of 920 MMT CO_2e over 13 years averages about 71 MMT per year. In 2019, U.S. GHG emissions in CO_2e were about 6.6 billion metric tons.[82] A reduction of 71 MMT is about one-tenth of 1 percent of 2019 U.S. GHG emissions. Using MAGICC, we get the following predicted temperature reductions by 2050 and 2100:

- 4.5°C sensitivity, 0.005°C reduction by 2050, 0.014°C reduction by 2100
- 3.0°C sensitivity, 0.004°C reduction by 2050, 0.011°C by 2100
- 2.0°C sensitivity, 0.003°C reduction by 2050, 0.008°C by 2100[83]

Again, since the standard deviation is 0.11°C, the methane rule's effects on global warming are undetectable. By the same token, the proposal's potential effects on weather patterns, crop yields, coastal flooding, polar bear populations, and other climate-related metrics are also undetectable. Most critically, such benefits are too small to be experienced by any person, community, or industry.

Effects that can neither be detected nor experienced are "benefits" in name only. Illusory benefits should not be weighed in the same scales with multi-billion-dollar compliance costs that verifiably impose measurable burdens on identifiable people and businesses.

"Climate action commitments and goals" provide another "relevant context" for reporting project-level GHG emissions, according to CEQ:

> *Therefore, when considering GHG emissions and their significance, agencies should use appropriate tools and methodologies to quantify GHG emissions, compare GHG emission quantities across alternative scenarios (including the no action alternative), and place emissions in relevant context, including how they relate to climate action commitments and goals. This approach allows an agency to present the environmental and public health effects of a proposed action in clear terms and with sufficient information to make a reasoned choice between no action and other alternatives and appropriate mitigation measures.*[84]

The phrase "climate commitments and goals" is code for the Paris Agreement and the NetZero 2050 agenda. By placing NEPA proceedings in that context, the guidelines will effectively make stakeholders subject to policies Congress has not enacted. To repeat, the Paris Agreement was never approved by a two-thirds vote in the Senate, NetZero2050 is not in NEPA, and no subsequent legislation, including the Inflation Reduction Act, establishes President Biden's

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[82] EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019, https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019.

[83] These estimates are linear extrapolations and not strictly correct because radiative forcing equations are logarithmic. Nonetheless, the calculations suffice as first order approximations.

[84] 88 FR 1201.

emission-reduction targets as a criterion for withholding or granting project permits in NEPA proceedings.

Conclusion

CEQ should withdraw the proposed GHG emission guidelines, which would require agencies to use NEPA as a climate policy framework—a purpose for which it was not designed and which Congress has not subsequently authorized.

Far from NEPA containing a clear statement authorizing its use to make climate policy, the words "climate," "carbon," "greenhouse," "global," and "warming" do not occur in the statute.

More fundamentally, NEPA is centrally concerned with "major" federal actions "significantly affecting the quality of the human environment." The GHG emissions of even the largest infrastructure project have no discernible, traceable, or verifiable impacts on the quality of the human environment. Project-related GHG emissions are not "significant" environmental effects for NEPA purposes. Consequently, NEPA does not authorize CEQ or any other agency to use a project's GHG emissions as a factor determining its approval or rejection.

CEQ proceeds as if the "climate crisis" is important enough to make any level of GHG emissions climatically significant, and dire enough to compel NEPA's alignment with Paris Agreement and NetZero 2050 emission reduction targets.

However, the climate crisis narrative conflicts with ongoing long-term improvements in global life expectancy, per capita income, and health; dramatic declines in climate-related mortality; and substantial declines in the relative economic impact of damaging weather. It also ignores the immense agricultural and ecological benefits of rising atmospheric CO_2 concentrations.

Moreover, the "science" underpinning the crisis narrative is a doubly-biased methodology in which overheated models are run with inflated emission scenarios. Absent those biases, climate change assessments would project less warming, smaller climate impacts, and lower tipping point risks.

Sincerely,

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[*] The last sentence of the fifth bullet on page 3 was incomplete in the comments as filed. It is corrected in this draft.