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SABIN CENTER FOR CLIMATE CHANGE LAW

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Re: RFI Response - Proposed Amendment to NCA5

Dear Director Wielicki:

The Sabin Center for Climate Change Law (“Sabin Center”) submits these comments in response to the proposal issued by the United States Global Change Research Program (USGCRP) Office of Science and Technology Policy (OSTP) to amend the Fifth National Climate Assessment (NCA5).¹ The proposed amendment would add “interpretation guidelines” to NCA5 specifying that any findings based on Representative Concentration Pathway 8.5 (RCP8.5), Shared Socioeconomic Pathway 5-8.5 (SSP5-8.5), or equivalent high forcing “should be treated as an implausible-scenario output and should not be used as a policy, planning, regulatory, public-communication, or grant-making premise.”²

The proposed amendment to NCA5 is unprecedented. It is also rife with both procedural and substantive deficiencies. OSTP is proposing to amend a congressionally-mandated scientific assessment without adhering to the procedures that were used in the production of the original assessment. Moreover, OSTP has failed to provide a valid substantive justification for this action. The amendment is predicated on a fundamental mischaracterization of NCA5, as well as a distorted analysis of recent developments in climate modeling, and would result in a skewed and incoherent assessment of climate impacts and associated risks. We urge OSTP to withdraw this unlawful and poorly conceived proposal.

¹ USGCRP, Proposed Amendment to the Fifth National Climate Assessment (NCA5) (“Proposed Amendment”); USGCRP, Availability for Public Comment on the Proposed Amendment to NCA5, 91 Fed. Reg. 54893 (Aug. 25, 2026).

² Proposed Amendment at 3.

I. Legal Context

The Global Change Research Act of 1990 (GCRA) established the USGCRP as a coordinated federal research program spanning 14 federal departments and agencies, the core purpose of which is to “improve understanding of global change.”³ The GCRA requires the USGCRP to prepare and submit a “scientific assessment” to the President and Congress at least once every four years which: (i) “integrates, evaluates, and interprets the findings of the Program and discusses the scientific uncertainties associated with such findings;” (ii) “analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity;” and (iii) “analyzes current trends in global change both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.”⁴

The work products of the USGCRP are also subject to the Paperwork Reduction Act (PRA), which was enacted to “ensure the greatest possible public benefit from and maximize the utility of information created, collected, maintained, used, shared and disseminated by or for the Federal Government.”⁵ The PRA requires federal agencies to “ensure that the public has timely and equitable access to the agency’s public information” and to provide adequate notice when “substantially modifying[] or terminating significant information dissemination products.”⁶

In addition, the Information Quality Act (IQA) requires federal agencies subject to the PRA to ensure and maximize the quality, objectivity, and integrity of the information they share with the public.⁷ The Office of Management and Budget (OMB) has issued implementing guidelines for Section 515 which require federal agencies to ensure that disseminated information is “objective”, i.e., information must be presented in an “accurate, clear, complete, and unbiased manner” and must be based on “accurate, reliable, and unbiased information.”⁸ OMB Guidelines also specifically note that where “data and analytic results have been subjected to formal, independent, external peer review, the information may generally be presumed to be of acceptable objectivity.” Notably, OMB guidelines require peer review for “highly influential scientific assessments” (HISAs), and the national climate assessments (NCAs) clearly qualify as HISAs.⁹

The publication (or amendment) of the NCAs and other non-discretionary actions taken pursuant to the GCRA are subject to judicial review under the Administrative Procedure Act

³ 15 U.S.C. § 2933.

⁴ 15 U.S.C. § 2936. The GCRA also requires the USGCRP to develop and revise, at least once every three years, a “National Global Change Research Plan” for the program. 15 U.S.C. § 2934.

⁵ 44 U.S.C. § 3501(2).

⁶ 44 U.S.C. § 3506(d)(3).

⁷ Consolidated Appropriations Act, 2001, Pub. L. No. 106-554, § 515 (2000), codified at 44 U.S.C. § 3516 note).

⁸ Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, 67 Fed. Reg. 8452 (Feb. 22, 2002). *See also* OMB, Final Information Quality Bulletin for Peer Review (OMB Memorandum M-05-03), 70 Fed. Reg. 2664 (Jan. 14, 2005).

⁹ Final Information Quality Bulletin for Peer Review, Section III(2). *See also* USGCRP, FIFTH NATIONAL CLIMATE ASSESSMENT (2023) [hereinafter “NCA5”], Appendix 2. Information Quality (recognizing that the OMB Guidelines for HISAs apply to NCA5).

(APA),¹⁰ which provides that agency action may be set aside if it is arbitrary, capricious, an abuse of discretion or otherwise not in accordance with the law.¹¹ Under this standard, an agency must “examine the relevant data and provide a satisfactory explanation or its action, inducing a rational connection between the facts found and the choice made.”¹²

II. Legal and Scientific Problems with the Proposed Amendment

1. The proposed amendment bypasses the scientific assessment and review procedures underpinning the original report

NCA5 was developed through an extensive interagency process, drawing on contributions from more than 750 scientists and experts, and subject to multiple rounds of review and revision before it was published in 2023. The review mechanisms included: (i) internal technical review, (ii) multiple rounds of agency review, (iii) public review, including opportunities for public comment and 34 public engagement workshops; (iv) independent review by a National Academies of Sciences, Engineering, and Medicine (NASEM) committee; and (v) final agency review and clearance.¹³

OSTP is now proposing to amend NCA5 pursuant to a political directive from President Trump¹⁴ without adhering to the scientific assessment and peer review procedures that were used in the production of the original report. The proposed amendment is not a minor correction being issued in response to a specific technical or scientific error – rather, OSTP is proposing to update the entire report with language aimed at minimizing and categorically devaluing all scientific findings based on RCP8.5 or SSP5-8.5. For example, the text would be updated to specify that these findings are “no longer policy-plausible” and “should not be used as a policy, planning, regulatory, public-communication or grant-making premise.” The effect of this amendment would be to skew the analyses of climate impacts and risks by effectively disregarding high-end impacts and risks (more on this below). The amendment is not based on a formal scientific assessment – in fact, there is no evidence that *any* climate scientists were consulted on this proposal – and it has not undergone any form of scientific peer review or interagency review.

¹⁰ See *Ctr. for Biological Diversity v. Brennan*, 571 F. Supp. 2d 1105, 1131 (N.D. Cal. 2007) (holding that the USGCRPs failure to publish the scientific assessment within the timeframe established by the GCRA was subject to judicial review under the APA).

¹¹ 5 U.S.C. § 706(2)(A).

¹² *Motor Vehicle Manufacturers Ass’n v. State Farm*, 463 U.S. 29, 43 (1983). Agencies must also provide a “reasoned explanation” when changing position on a particular policy or action. *F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). An agency action is arbitrary and capricious if the agency has “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” *State Farm*, 463 U.S. at 43.

¹³ NCA5: *Appendix 1—The NCA5 Process*.

¹⁴ See Proposed Amendment at 2 (“[t]his proposed amendment is also necessary to align NCA5 with Executive Order 14303, *Restoring Gold Standard Science*”).

It is also remarkable that this amendment is being proposed three years after the publication of NCA5, and just one year before the deadline for the next NCA. The GCRA provides a clear pathway for updating the NCA in these circumstances: the USGCRP should be working on the next report. We recognize that the Trump administration has thwarted such efforts by firing all of the NCA6 contributors and cutting funding to the USGCRP – and this is no doubt one of the factors contributing to the lack of scientific engagement on the proposed amendment to NCA5 – but this does not in any way justify the amendment to the previous report.

In sum: the proposed amendment is a post-hoc revision to a congressionally mandated scientific assessment that underwent years of rigorous multi-agency vetting, public comment, and peer review before its 2023 release. This action is unlawful for a number of reasons. First, the OSTP has not provided (and cannot provide) a reasoned explanation for issuing a major amendment to NCA5 without adhering to the scientific assessment and peer review processes that were used to produce the original report. Second, the proposed amendment violates OMB guidelines related to peer review and information quality. Third, the amendment would infuse NCA5 with political judgments and directives that fall outside the scope of permissible considerations under the GCRA. Finally, the substantive justifications for the amendment are completely erroneous, as discussed in the following sections.

2. The proposed amendment is based on a false premise about NCA5

The justification for this action rests on a fundamental mischaracterization of how NCA5 presents findings from the RCP8.5/SSP5-8.5 pathways. Specifically, the OSTP claims that the proposed amendment is necessary because “RCP8.5-type outcomes do not represent plausible policy-relevant baseline futures and should not be used to frame expected, likely, central, or business as-usual-conditions for federal decision-making.”¹⁵ However, NCA5 did not frame the RCP8./SSP5-85 pathways as “expected, likely, central, or business-as-usual-conditions,” and its use of these pathways was entirely consistent with prevailing scientific practice in climate modelling.

NCA5 used statistically downscaled projections derived from the Coupled Model Intercomparison Project Phases 5 (CMIP5) and 6 (CMIP6) to assess climate change impacts and associated risks through the end of this century. Specifically, it used five “climate scenarios” that corresponded with the CMIP5 “representative concentration pathways” (RCPs) and CMIP6 “shared socioeconomic pathways” (SSPs) as follows:¹⁶

¹⁵ Proposed Amendment at 1.

¹⁶ U.S. Global Change Research Program, *Fifth National Climate Assessment* (Allison R. Crimmins et al., eds., 2023), Table 3: Descriptive Terms for Common Climate Scenarios Used in NCA5. *See also* Claudia Tebaldi et al., *Climate model projections from the Scenario Model Intercomparison Project (ScenarioMIP) of CMIP6*, 12(1) EARTH SYSTEM DYNAMICS 253 (2021), <https://esd.copernicus.org/articles/12/253/2021/>; Detlef P. van Vuuren et al., *The representative concentration pathways: an overview*, 109 CLIMATIC CHANGE 5 (2011), <https://link.springer.com/article/10.1007/s10584-011-0148-z>.

- Very High Scenario – RCP8.5 / SSP5-8.5
- High Scenario – RCP6.0 / SSP3-7.0
- Intermediate Scenario – RCP4.5 / SSP2-4.5
- Low Scenario – RCP2.6 / SSP1-2.6
- Very Low Scenario – n/a / SSP1-1.19

NCA5 explained that these scenarios “are not predictions but instead reflect multiple potential pathways for our collective future.”¹⁷ The report did not characterize the “very high scenario” as a reflection of “baseline” or “business-as-usual” conditions – rather, it treated this as the upper bound of potential anthropogenic forcing by 2100. The report explicitly acknowledged that “analyses have narrowed the plausible range of current emissions outcomes based on policies in place [in 2023]” while also recognizing that “current policy projections represent neither a ceiling nor a floor on future climate outcomes.”¹⁸ NCA5 also noted that the “very high” scenario was useful for assessing climate change impacts 100 years in the future – as mandated by the GCRA – because most projections did not extend past 2100, and the “very high” scenario provided insights on “plausible greenhouse gas concentrations past 2100.”¹⁹

The approach taken in NCA5 is entirely consistent with how the RCP8.5 and SSP5-8.5 scenarios were used in CMIP5 and CMIP6, respectively, as well as other climate impact assessments predicated on these modeling frameworks. The Intergovernmental Panel on Climate Change (IPCC) used these scenarios in its Sixth Assessment Report (AR6), noting that although there was some debate about the “plausibility” of some scenarios with high CO₂ emissions due to recent developments in the energy sector, the scenarios were “still valuable because the concentration levels reached in RCP8.5 or SSP5-8.5 and corresponding simulated climate futures cannot be ruled out.”²⁰

3. The proposed amendment is not a valid response to the CMIP7 scenario update

OSTP claims that the proposed amendment is necessary because the RCP8.5/SSP5-8.5 scenarios are “inconsistent with current observations, mainstream projections and present understanding of global energy markets.”²¹ To support this claim, OSTP refers to the CMIP7 scenario update,²² and describes CMIP7 as “the most current basis” for the proposed amendment, claiming that it “changes the scientific context in which NCA5 high scenario results should be

¹⁷ NCA5 at xxvi.

¹⁸ NCA5 at 2-29. *See also id.* at 3-40 (recognizing that there was some debate regarding the plausibility of the RCP8.5/SSP5-8.5 as part of the discussion of scientific uncertainty).

¹⁹ NCA5 at A3-4.

²⁰ IPCC AR6 WGI, Technical Summary, p. TS-15.

²¹ Proposed Amendment at 2.

²² *Id.* at FN 4 (citing Detlef P. van Vuren et al., *The Scenario Model Intercomparison Project for CMIP7 (ScenarioMIP-CMIP7)*, 19 GEOSCIENTIFIC MODEL DEVELOPMENT 2627 (2026), <https://gmd.copernicus.org/articles/19/2627/2026/>).

interpreted.”²³ Even setting aside the fact that an appropriate response to CMIP7 is the production and publication of NCA6, not a revision to NCA5, the proposed amendment is itself not a scientifically sound response to the CMIP7 scenario updates for the following reasons:

First, the proposal is based on the misleading narrative that scientists are only retiring RCP8.5/SSP5-8.5. The reality is that climate modelers are retiring *all* of the RCPs and adopting an entirely new system that uses baseline emission scenarios (rather than forcing scenarios) for CMIP7. Notably, the upper end (“high”) emission scenario for CMIP7 falls somewhere in between RCP6.0 and RCP8.5 in terms of the expected anthropogenic forcing by 2100, and the lower bound (“very low”) scenario entails a higher level of emissions and anticipated forcing than the lowest scenarios used in previous CMIP phases (RCP 2.6 and SSP1-1.9). In other words: the CMIP7 scenarios reflect a narrowing of the plausible range of emission pathways at both the low and high ends.²⁴ Simply removing – or discounting – findings from RCP8.5/SSP5-8.5 will not bring NCA5 into alignment with the new CMIP7 framework.

Second, CMIP7 is still in development and researchers have only generated preliminary estimates of the end-of-century warming levels associated with the different emissions pathways. These preliminary estimates are central estimates of future warming under each emission scenario, and there is a wide range of variability in terms of actual climate responses. The World Climate Research Program (WCRP) has explicitly noted that although the preliminary estimate of average warming under CMIP7’s “high” scenario is lower than that of CMIP6/5, climate-system uncertainties could mean that warming will still exceed 4°C by 2100.²⁵ Part of this uncertainty stems from the fact that the scenarios are based on emissions rather than forcing levels, so the CMIP7 models are designed to receive raw emissions data and then simulate forcing based on dynamic processes in the carbon cycle, including positive feedback loops resulting in increased emissions from wildfires and melting permafrost.²⁶ These feedback loops could significantly increase the amount of warming predicted under the various CMIP7 emission scenarios.

Finally, it simply does not make sense to use the CMIP7 scenario framework when discussing findings from CMIP5 and CMIP6. It would be necessary to re-run projections using the new CMIP7 pathways in order to generate an assessment that is consistent with the CMIP7 framework.

²³ *Id.* at 4.

²⁴ See van Vuren et al. (2026), *supra* note 22; Zeke Hausfather, *Explainer: The CMIP7 emissions scenarios – and how they explore future climate change*, CARBON BRIEF (Jan 9, 2026), <https://www.carbonbrief.org/explainer-the-cmip7-emissions-scenarios-and-how-they-explore-future-climate-change>.

²⁵ Coupled Model Intercomparison Project, *Explainer: Scenarios for CMIP7*, <https://wcrp-cmip.org/explainer-scenarios-for-cmip7>.

²⁶ James Dinneen, *A Missing Piece in Climate Models: Nature’s Own Emissions*, YALE ENVIRONMENT 360 (June 18, 2026), <https://e360.yale.edu/features/warming-induced-ecosystem-emissions>.

4. President Trump’s Executive Order Does Not Override GCRA Mandates

OSTP further claims that the proposed amendment is necessary to “align NCA5 with Executive Order 14303, *Restoring Gold Standard Science*” which “directs federal agencies to be transparent regarding assumptions and scenario likelihood, to communicate uncertainty, to employ a weight-of-evidence approach, and to avoid reliance on highly unlikely or overly precautionary assumptions in decision-making unless otherwise regarded by law or directly relevant to the agency action.”²⁷ This justification is also erroneous.

As discussed above, NCA5 was drafted and published pursuant to a congressional directive and an Executive Order cannot override or supersede that statutory mandate or other relevant legal standards discussed in Part I of this comment letter. The GCRA specifically calls for an assessment which “projects major trends for the subsequent 25 to 100 years” and “discusses the scientific uncertainties” associated with its findings.²⁸ Because there is considerable uncertainty about future emissions and resulting forcing levels over a 25- to 100-year horizon, a faithful assessment of long-term climate trends must consider a wide range of possible emission pathways. In other words: it is necessary to consider the “unlikely” scenarios in order to comply with the Act’s directive.

III. Conclusion

For the reasons stated above, OSTP should withdraw the proposed amendment. NCA5 is a congressionally mandated scientific assessment—not a policy document to be revised whenever the Administration’s preferred policy judgments change. The proposed amendment would bypass the rigorous scientific and peer-review processes underpinning NCA5 and categorically invalidate information about high-end climate impacts and risks based on an incomplete and premature interpretation of CMIP7. Most fundamentally, it would undermine the GCRA’s core purpose to help our Nation and the world understand, assess, predict, and respond to global change.

Sincerely,

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²⁷ Proposed Amendment at 2.

²⁸ 15 U.S.C. § 2936.