



July 31, 2023

World Bank Group  
1818 H Street  
NW Washington, DC 20433 USA

VIA EMAIL: [EvolutionRoadmap@worldbankgroup.org](mailto:EvolutionRoadmap@worldbankgroup.org)

**Re: Comments on World Bank Group Evolution Roadmap**

To Whom it May Concern with the World Bank Group (WBG):

Bank Climate Advocates (BCA) and the co-signed civil society organizations (CSOs) are writing in response to the World Bank Group's (WBG) public consultation on its Evolution Roadmap (Roadmap) specifically in regards to the WBG's climate change policies and practices. As detailed below, the WBG's mission and operating model must be drastically improved - well beyond what the Roadmap outlines - to better address climate change to achieve the WBGs goals of poverty reduction, shared prosperity, and the Sustainable Development Goals.<sup>1</sup>

According to the Roadmap, the WBG's focus "will continue to be on poverty reduction and shared prosperity, while also addressing the interlinkages with global challenges, such as climate change..." and on "fostering sustainable, resilient, and inclusive development." The Roadmap details that an enhanced emphasis on sustainability, "reflects the need to ensure that WBG impact is positive including in fiscal, economic, social, and environmental terms." To address the climate crisis and to ensure that the WBG's climate change related environmental, economic, and social impacts are positive, the WBG must go substantially further than the current iteration of the Roadmap provides.

As BCA's and the undersigned Civil Society CSOs May 1, 2023 attached request to

---

<sup>1</sup> The undersigned CSOs echo the positions in "Civil Society calls for rethink of World Bank's Evolution Roadmap as part of wider reforms to highly unequal global financial architecture *CSO joint paper*" authored by *Bretton Woods Project, Re-Course, Eurodad, Third World Network, We Do, and Christian Aid (July 2023)*.

International Finance Corporation (IFC) Management (Request) demonstrates, the WBG has historically and continues to systematically fail to follow its Director adopted policies (Sustainability Policies)<sup>2</sup> applicable to each project prior to financing approval for securing greenhouse gas (GHG): emissions quantification, affected community impact analysis and mitigation, alternatives analysis, emissions avoidance/mitigation requirements (e.g. the mitigation hierarchy requirements applicable to GHG emissions), and emissions and mitigation disclosure. Without following its board adopted policies applicable to GHGs, the WBG:

- Will never align with the Paris Agreement’s 1.5°C warming limitation objective and will continue its failures in addressing GHG emissions impacts to affected communities - as adherence to its policies applicable to GHG emissions is needed to fill gaping holes in its Paris Alignment Methods and Sector Notes. For instance, without implementation of the policies the IFC has in place, application of its Paris Alignment Methods and Sector Notes alone would allow for project financing without: quantification and feasible avoidance of substantial GHG emissions for “universally aligned” projects such as poultry and swine farming; achievement of a mitigation hierarchy for GHG emissions (see below); an alternatives analysis that could result in feasible avoidance of GHG emissions through informing pursuit of projects with substantially less GHG emissions (see below); and consultation and redress for local communities affected by climate change when a project will emit significant GHGs;
- For each project it finances or guarantees financing for, will miss opportunities to avoid GHG emissions as far as economically and technically feasible as a first priority, then minimize and or offset GHG emissions as far as economically and technically feasible as the mitigation hierarchy requirements in its Board Adopted Policies require; The WBG’s failures to fully quantify, quantify at all, and or include all significant GHG emissions in GHG estimates from a project it finances or guarantees, also precludes achieving its mitigation hierarchy requirements – which the WBG is not ensuring or even pursuing for each project’s GHG emissions despite the possibility and room in a project’s business profit model;
- By not securing a GHG emissions / climate change alternatives analysis that is consistent with good international industry practice as its Sustainability Policies require, and as consistent with the National Environmental Policy Act (NEPA) that its own Guidelines<sup>3</sup> provide is an example of good international industry

---

<sup>2</sup> The Sustainability Policies include the: IFC Policy on Environmental and Social Sustainability (January 1, 2012) (hereinafter, “E&S Policy”), IFC Performance Standards on Environmental and Social Sustainability (“PS” or “Performance Standards”) (Effective January 1, 2012), and the IFC Access to Information Policy (January 1, 2012) (hereinafter, “Access to Info Policy”).

<sup>3</sup> The IFC cites NEPA as an example of good international industry practice (Guidance Note 1 Assessment and Management of Environmental and Social Risks and Impacts, Published January 1, 2012 (updated June 14, 2021) at 49). The updated interim U.S. Council of Environmental Quality (CEQ) NEPA guidance effective January 8, 2023 for GHG emissions and climate change assessments, alternatives analysis and mitigation in environmental impact statements, is Exhibit 2 to the attached Request and available at: <https://www.regulations.gov/document/CEQ-2022-0005-0001>.

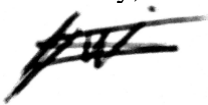
practice, will continue to not have the information that (1) should prevent the WBG from financing fossil fuel projects and (2) instead best ensures the WBG pursues financing or guarantees for feasible renewable energy projects that can meet a region's energy demand in lieu of fossil fuel projects; and

- Despite its clear ability to do so for quite some time considering the current state of practice on GHG accounting and reporting, will never be able to quantify and report on the carbon footprint of its investment, financing, and guarantee portfolio 11 years after adoption of the IFC's Access to Information Policy,<sup>4</sup> and thus never be able to measure its Paris Alignment.

To meet its Roadmap objectives to address the climate crisis and to align its financing flows with the Paris Agreement's 1.5°C warming limitation objective, in addition to adhering and committing to adhere to the GHG and climate change requirements its policies have in place,<sup>5</sup> the undersign also request the WBG immediately commit to stop financing and enabling fossil fuel projects. As such the WBG must rule out support for all oil, coal and fossil gas, including co-firing of power stations, gas for hydrogen, the gasification of coal, the building of ports that facilitate the trade of liquefied natural gas, policy advice, as well as false and unfeasible "solutions" like carbon capture and storage that simply prolong the use of fossil fuels.<sup>6</sup>

Thank you for consideration of our comments. We urge swift action as requested above in response. Please confirm receipt at your earliest convenience, and feel free to contact us with any questions or to schedule a meeting to discuss.

Sincerely,



Jason Weiner  
Executive Director & Legal Director  
Bank Climate Advocates  
303 Sacramento Street, Floor 2  
San Francisco, CA 94111  
+1 (310) 439-8702  
jason@bankclimateadvocates.org  
www.bankclimateadvocates.org

---

<sup>4</sup> IFC Access to Info Policy at ¶ 26.

<sup>5</sup> For IFC, these are detailed in the attached Request; MIGA's policies have most of the same requirements as the IFC, and the WBG policies have similar requirements to IFC/MIGA.

<sup>6</sup> See positions in "Civil Society calls for rethink of World Bank's Evolution Roadmap as part of wider reforms to highly unequal global financial architecture *CSO joint paper*" authored by Bretton Woods Project, Re-Course, Eurodad, Third World Network, We Do, and Christian Aid (July 2023) for other measures the WBG and its Evolution roadmap must take and commit to in regards to the climate crisis, global warming, climate justice and climate vulnerable communities, and cessation of financing and guarantees for fossil fuel projects.

**Co-Signatory Civil Society Organizations:**

Indus Consortium (Pakistan)

Maryknoll Office for Global Concerns (United States of America)

Oil Change International (International)

Recourse (Netherlands)

Sinergia Animal (Brazil)

Trend Asia (Indonesia)

**Enclosures:** May 1, 2023 Request to IFC Management (PDF document with all Exhibits except for Exhibit 1); Exhibit 1 of May 1, 2023 Request to IFC Management (excel spreadsheet, multiple tabs within).

**cc:** WBG Directors



POWER SHIFT  
AFRICA



WISHTOYO  
CHUMASH FOUNDATION



May 1, 2023

International Finance Corporation

Attn: IFC Management, Vivek Pathak, Anup Jagwani, Julia Oliver, Paolo Lombardo

2121 Pennsylvania Avenue, NW, Washington, DC 20433 USA

Via Email: [vpathak@ifc.org](mailto:vpathak@ifc.org), [ajagwani@ifc.org](mailto:ajagwani@ifc.org), [joliver@ifc.org](mailto:joliver@ifc.org), [plombardo1@ifc.org](mailto:plombardo1@ifc.org)

Dear Mr. Pathak, Mr. Jagwani, and Whom it May Concern with International Finance Corporation (IFC) Staff Management:

After analyzing over 200 category A & B direct investments by the IFC from 2020-2023, and approximately 300 over the last 10 years, we discovered that in nearly all cases the IFC has failed to ensure it adheres to the requirements of its own policies pertaining to greenhouse gas (GHG) emissions disclosure, analysis, mitigation, and affected communities impact assessment that apply at the environmental and social assessment stage before the IFC approves financing for a project.


The frequency and magnitude of these failures have greatly impacted global warming and continue to cause severe harm to communities all over the world, especially those who are differentially or disproportionately affected by changing climate. The IFC, which is the largest global private sector financial institution for developing countries whose investments span dozens of countries and impact millions of people around the world, acknowledges climate change is deepening poverty. But its alarming practices and lack of accountability mean it is systematically working against its own mandate for sustainable development and poverty reduction by causing harm to communities in its investment regions.

The extensive documentation included within and attached to Bank Climate Advocates' (BCA's) and the undersigned Civil Society Organizations' enclosed Request to IFC Management clearly details the IFC's ongoing and continuous systematic failures to address climate change as its policies require. We are writing to request that IFC Management: (1) issue a formal response to our Request in short order, (2) immediately verify its systematic failures and rectify them by committing to ensure its current portfolio and future investments adhere to its policies' requirements pertaining to GHG emissions

analysis, impact assessments, mitigation commitments, and disclosure, and (3) take immediate steps to avoid, mitigate, and remedy harms to communities caused by the IFC's lack of compliance with its policies' GHG requirements. This internal IFC reform and corrective action must be accomplished as soon as possible for the IFC to play its part in assuring the 1.5°C warming goal is met, to meet its objectives of coming into alignment with the Paris Agreement and mitigating climate change, to prevent its projects from harming Affected Communities as its policies require, and to ensure it will and can implement its policies and Paris Agreement Methodology as applied to both its direct and financial intermediary investments.

We kindly request that you share this letter with all applicable IFC staff and Directors. Please let us know if we can provide any additional information, or further explain any of the details in our Request and BCA's documentation enclosed in Exhibit 1 as evidence. Thank you for your consideration and we look forward to your timely response.

Sincerely,



Jason Weiner (he/him/his)  
Executive Director & Legal Director  
Bank Climate Advocates  
303 Sacramento Street, Floor 2, San Francisco, CA 94111  
+1 (310) 439-8702, jason@bankclimateadvocates.org  
www.bankclimateadvocates.org

**Co-Signatory Civil Society Organizations:**

**Powershift Africa** - *Bhekumuzi Dean Bhebhe, Campaigns Lead*, bbhebhe@powershiftafrica.org

**Indus Consortium** - *Fiza Naz Qureshi, Manager Program Implementation*, fiza.queshi@indusconsortium.pk

**Ecumenical Institute for Labor Education and Research (EILER)** - *Rochelle Porras, Executive Director*, rochporras@eiler.ph

**Sustentarse** - *Maia Seeger Pfeiffer, Directora Ejecutiva*, mseeger@sustentarse.cl

**Trend Asia** - *Andri Prasetyo, Research & Senior Program Manager*, andri.prasetyo@trendasia.org

**Wishtoyo Chumash Foundation** - *Mati Waiya, President & Executive Director, Chumash Ceremonial Elder*, matiwaiya@wishtoyo.org

**Accountability Counsel** - *Margaux Day, Policy Director*, margaux@accountabilitycounsel.org

**Recourse** - *Kate Geary, Co-Director*, kate@re-course.org

**Oxfam** - *Christian V. Donaldson, Senior Policy Advisor*, Christian.Donaldson@oxfam.org

**The Bretton Woods Project** - *Jon Sword, Environment Project Manager*, jsward@brettonwoodsproject.org

**Oil Change International** - *Bronwen Tucker, Global Public Finance Campaign Co-Manager*, bronwen@priceofoil.org

**Enclosures:** Request for IFC Management Response to and Redress of IFC's Systematic Failures to Adhere to its Policies Applicable to Greenhouse Gas Emissions and Mitigation; Request Exhibits 1-4.

**cc:** IFC Directors



POWER SHIFT  
A F R I C A



sustentarse



WISHTOYO  
CHUMASH FOUNDATION



May 1, 2023

International Finance Corporation  
Attn: IFC Management, Vivek Pathak, Anup Jagwani, Julia Oliver, Paolo Lombardo  
2121 Pennsylvania Avenue, NW  
Washington, DC 20433 USA

**Re: Request for IFC Management Response to and Redress of IFC’s Systematic Failures to Adhere to its Policies Applicable to Greenhouse Gas Emissions and Mitigation**

Dear International Finance Corporation (IFC) Management:

Bank Climate Advocates (BCA) and the co-signed civil society organizations (CSOs) are writing to request IFC Management respond to and cure the IFC’s apparent systematic continuous and ongoing failures from 2012 to the present to adhere its environmental and social sustainability policies’ (Sustainability Policies<sup>1</sup>) requirements pertaining to greenhouse gas (GHG) emissions impact assessment and mitigation that apply before the IFC approves financing for a project (Request). These failures are detailed and documented herein and in Exhibit 1. Their frequencies and cumulative magnitude cause, and unless prevented and redressed will cause, severe harms to current and future generations and communities all over the world and especially to those that are vulnerable to the adverse effects of climate change.

An important part of the IFC’s Paris Alignment is adhering to the requirements in its Sustainability Policies applicable to GHG emissions so that it prevents individually and

<sup>1</sup> These policies include the: IFC Policy on Environmental and Social Sustainability (January 1, 2012) (hereinafter, “E&S Policy”), IFC Performance Standards on Environmental and Social Sustainability (“PS” or “Performance Standards”) (Effective January 1, 2012), and the IFC Access to Information Policy (January 1, 2012) (hereinafter, “Access to Info Policy”).

cumulatively significant GHG emissions from all its projects to the furthest extent feasible. If the IFC adheres to its Sustainability Policies, and commits to other necessary reform such as cessation of fossil fuel financing, and achievement of net zero emissions for all projects it funds,<sup>2</sup> the GHG emissions from IFC financed projects and their contributions to the catastrophic impacts from climate change, can and should be avoided. This internal IFC reform must be accomplished as soon as possible for the IFC to play its part in assuring the Paris Agreement's 1.5°C warming objective is met. It also must be accomplished to ensure the IFC will and can implement all its policies applicable to GHGs, including its Sustainability Policies and Paris Agreement Methodology, for its direct and financial intermediary (FI) investments.

This Request provides extensive documentation of, and recommended redress for, the IFC's apparent deficiencies in implementing its Sustainability Policies applicable to GHG emissions. It does so in order to facilitate a pro-active and expeditious response that acknowledges and commits to curing these deficiencies.

This Request is organized as follows:

- Section I. details the methodology used to inform and support this Request.
- Section II. provides a summary of the IFC's systematic failures to adhere to its Sustainability Policies.
- Section III. details the IFC's apparent systematic non-compliance with its Sustainability Policies.
- Section IV. recaps and further presents the harms resulting from the IFC's systematic non-compliance with its Sustainability Policies.
- Section V. requests additional information from the IFC to ensure its financing contracts require adherence to sufficient GHG emissions monitoring and mitigation, and to ensure proper client reporting of emissions after financing approval.
- Section VI. includes requests for redress the IFC must implement in order to cure and prevent IFC failures to adhere to its Sustainability Policies' requirements pertaining to GHG emissions analysis and mitigation.

---

<sup>2</sup> As consistent with IFC's Performance Standards that account for the international law principles of sustainable development, common but differentiated responsibilities, equity, special circumstance, and harm prevention and precaution, the IFC should ensure each project it funds for its corporate clients achieves net zero emissions to the extent financially feasible. If the client demonstrates it is financially infeasible to achieve net zero GHG emissions, the IFC – as these international legal principles support - should finance such measures needed for a project to achieve net zero emissions, including, as a last resort, by purchasing carbon offsets that respects and protects Indigenous Peoples' full rights, territories, sovereignty, and jurisprudence over the land, air, water, and biodiversity they depend upon.



- Section VII. provides concluding remarks and requests the IFC takes expeditious corrective action.

## **I. Methodology Used to Inform and Support this Request**

The data in Exhibit 1, that informs and supports the findings and request for redress in this Request, was obtained from review of the Environmental and Social Review Summaries (ESRS) and Summaries of Investment Information (SII) that the IFC publicly discloses on its Project Information & Data Portal website for each project it finances or its Board considers for financing. To obtain relevant results, the ESRSs and SIIs were reviewed for 297 IFC Category A & B Direct Investments<sup>3</sup> disclosed between 2012-2022 that would likely result in GHG emissions (98 of these were Category A projects). To ensure BCA's findings are applicable to the IFC's current day practices, 212 of the 297 projects analyzed were disclosed and brought to the IFC board for approval between January 2020 and March 2023. The review excluded solar, wind, projects specifically to reduce/mitigate GHG emissions, and financial intermediary investments.

BCA's analysis acknowledges it is possible that the IFC may not capture or report the requisite GHG emissions and mitigation analysis and figures in these publicly available ESRS and SII summaries that the IFC had in its possession prior to approving financing for each project. To reasonably ensure that all of the assertions and findings in this Request are sufficiently supported to sound an alarm of IFC apparent non-compliance with its Sustainability Policies, 67 projects from 2012 – 2022 (59 Category A and 8 Category B) were reviewed where in addition to the SII and ESRS, the environmental impact statements / assessments / studies or documents with similar information and analysis (ESIA) for the project were also available for download on the IFC Project Information and Data Portal. Review of these detailed ESIA documents, most of which contain GHG analysis and mitigation measures for a project with the exception of those projects where it is clear no GHG analysis was conducted, confirm the trends and findings derived from the ESRS and SII for each project. In addition, these ESIA documents highlight the apparent severe ongoing and continuous frequency and magnitude of the IFC's failures to adhere to its Sustainability Policies, including its Access to Info Policy requiring the critical disclosure of GHG emissions and mitigation prior to financing approval that helps ensure projects the IFC funds adequately quantify and mitigate GHG emissions.

## **II. Summary of the IFC's Systematic Failures to Adhere to its Sustainability Policies**

From 2012 to the present, the IFC has and continues to systematically fail to adhere to its policies governing GHG impact assessment and mitigation for each project prior to IFC financing approval and investment. As detailed in Section III, BCA's review of 297 Category A & B projects the IFC approved for financing from 2012 to 2022, 212 of which were disclosed between 2020 and 2022, reveals the IFC has and continues to routinely fail to

---

<sup>3</sup> Category A and B investments are IFC projects likely to have a significant environmental and social impacts. See E&S Policy at ¶ 40.

ensure that adequate GHG emissions quantification, impact assessment, and mitigation commitments have been secured and disclosed prior to financing approval as required by its Sustainability Policies. In most cases, the requisite assessments or critical components of them are entirely missing, along with the GHG mitigation commitments that the IFC's Sustainability Policies require. In addition, the IFC Compliance Advisor Ombudsman (CAO) has accepted complaints from Affected Communities for at least 13 of these IFC financed projects.<sup>4</sup> This is indicative of the IFC's overall failure to adhere to its environmental and social impact procedural safeguards beyond those applicable to GHG emissions. It further raises the question that if the IFC disclosed the GHG emissions amounts, impacts, and analysis as its rules require, whether the communities affected by these 13 projects would have also raised concerns to the CAO that could prevent, or result in necessary redress from, each project's localized climate change impacts.

In summary and as further detailed in Section III and Exhibit 1, contrary to the IFC's E&S Policy and or Access to Info Policy, from 2012 to the present at the environmental assessment stage before the IFC approves financing for a project, *it is apparent the IFC has failed and continues to fail to ensure and secure for approximately:*

#### **Mitigation & Alternatives Analysis**

- 100% of projects, a mitigation hierarchy analysis and adoption of an adequate mitigation hierarchy as required by Performance Standard (PS) 1;
- 100% of projects, an analysis of the technical and financial feasibility of mitigation measures to prevent/avoid (as a 1<sup>st</sup> priority), minimize, and offset GHG emissions the furthest extent technically and economically feasible as required by PS 1;
- at least 82% of projects, quantification of the GHG emissions mitigation amounts or reductions in GHG emissions resulting from mitigation measures that PS 1 necessarily requires;
- 53% of applicable projects, a GHG emissions alternatives analysis required by PS 1 (and only approximately 6% of alternatives analysis conducted could be considered consistent with good international industry practice as PS 1 requires);
- 90% of projects, a GHG emissions avoidance analysis that is necessarily required by PS 1 (and almost all avoidance analysis were inadequate or did not result in avoidance of GHG emissions);
- 99% of projects, as PS 1 requires, the offset of GHG emissions to the furthest extent financially feasible through the purchase or commitment to purchase

---

<sup>4</sup> These 13 projects in Exhibit 1 for which the CAO has accepted a Complaint from an Affected Community include IFC project numbers: 32253, 36706, 34602, 37673, 39102, 29007, 31632, 33435, 36699, 33557, 33479, 34203, and 43466.

carbon offsets, when after the application of avoidance and other mitigation to the furthest extent feasible a project still results in net GHG emissions;

- 12% of projects, adoption of any GHG emissions mitigation measures required by PS 1 (and for about 4% of projects, impermissible deferral of GHG emissions mitigation until after project financing occurred);
- 62% of projects with construction, adoption of mitigation measures for GHG emissions from the construction activities as required by PS 1;

### **Quantification of GHG Emissions**

- 22% of projects, quantification of any GHG emissions (and for about 10% of projects, impermissible deferral of GHG emissions quantification until after project financing occurred);
- 35% of projects, where a significant portion of the project funded is an addition to or expansion of an existing activity / operation / facility, quantification of GHG emissions figures for the expansion or addition as required by PS 1;
- 100% of projects, quantification of GHG emissions that include all of a project's clearly recognized sources of GHG emissions as necessarily required by PS 1;
- 7% of projects, quantification of exact GHG emissions estimates when the ESRS indicates GHG emissions would either be greater than 25,000 CO2 Equivalent Tons/Year as necessarily required by PS 1;
- 28% of projects, quantification of exact GHG emissions estimates when the ESRS indicates GHG emissions would either be less than 25,000 CO2 Equivalent Tons/Year as necessarily required by PS 1;
- 92% of projects, if prior to the adoption of mitigation an increase in Scope 1 GHGs in the atmosphere from the loss of carbon sequestration due to the Project is foreseeable, a GHG analysis for this as necessarily required by PS 1;
- 10% of projects, quantification and analysis of Scope 3 indirect GHG emissions as necessarily required by PS 1;
- almost 100% of projects, if transportation related Scope 3 GHG emissions due to project are foreseeable, a GHG analysis for these emissions as necessarily required by PS 1 (e.g. if significant new community or workforce commutes (not counting company vehicle use or 3rd party contracted vehicles) is foreseeable, a GHG analysis was conducted for this);
- 100% of projects, if local population growth related Scope 3 GHG emissions due to project are foreseeable, a GHG analysis for these emissions as necessarily

required by PS 1 (e.g. if deforestation from influx of people due to project is foreseeable, a GHG analysis was conducted for this);

- 16% of projects with construction, that a GHG emissions quantification and analysis for the construction activities was conducted as necessarily required by PS 1;

### **Cumulative Impacts Analysis**

- 49% of projects, a cumulative impacts analysis was conducted as necessarily required by PS 1;
- 39% of projects, that Paris Agreement, Kyoto Protocol, UNFCCC, 1.5°C - 2°C warming objectives, National Determined Contributions (NDCs) or other applicable regional, national and global GHG emission plans were taken into account as necessarily required by PS 1;

### **Affected Communities Analysis**

- 90% of projects, analysis of a Project's GHG emissions' contribution to global warming impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent as required by PS 1;
- 100% of projects, adoption of adequate mitigation for project's GHG emissions' contribution to global warming impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent as required by PS 1 (and out of the 8% of projects that acknowledged these impacts in an analysis, 80% of these adopted mitigation measures, but none of these adopted (or analyzed) a mitigation hierarchy as required by PS 1);
- 97% of projects, analysis was conducted as to whether individuals or groups may be directly and differentially or disproportionately affected by the Project's GHG emissions' contribution to global warming because of their disadvantaged or vulnerable status as required by PS 1;
- 88% of projects, identification of risks and potential impacts of the Project on priority ecosystem services (outside of those services on which the project is directly dependent for its operations) that may be exacerbated by climate change as required by PS 1 and 4 (of these risks and potential impacts identified, 87% failed to adhere to PS 4's requirements for avoidance and redress);

### **Additional E&S Policy and Access to Info Policy Violations**

In addition, and as further detailed in Section III and Exhibit 1, contrary to the IFC's E&S Policy and or Access to Info Policy, from 2012 to the present at the environmental assessment stage before the IFC approves financing for a project, *for approximately and as demonstrated by:*

- 100% of projects, it is apparent the IFC has violated and continues to violate the requirement in paragraph 28 of its E&S Policy to ensure that a project's non-compliance with the PS' GHG emissions analysis and mitigation requirements are addressed in an Environmental and Social Management System (via an amendment, Action Plan, or other action) prior to financing;
- 100% of projects, it is apparent the IFC has violated and continues to violate the requirement in paragraph 42 of its E&S Policy to assign a proper risk categorization commensurate with the severity of a project's GHG emissions risks and impacts, as it appears not to have factored GHG emissions into its risk categorizations;
- 78% of projects, it is apparent the IFC has violated and continues to violate section 31(a)(vi) and 8 of its Access to Information Policy for its failure to publicly provide GHG Environmental and Social Impact Assessments and documents with GHG emissions and mitigation analysis and figures for projects;
- 22% -100% of projects, it is apparent the IFC has violated and continues to violate section 31(a)(v) of its Access to Information Policy for its failure to provide and publicly disclose a project's expected GHG emissions amounts when these amounts will exceed a total 25,000 tCO<sub>2</sub> throughout a project's life cycle (some GHG emissions, but not all, were disclosed for 78% of these projects); and
- 100% of projects, it is apparent the IFC has violated and continues to violate ¶ 31(a)(iv) of its Access to Information Policy for its failure to publicly disclose supplemental actions PS 1 requires to be implemented to mitigate the GHG emissions risks and impacts of projects, including for projects that are expected to emit over 25,000 MT CO<sub>2</sub>-equivalent over their life cycle or on an annual basis.

Further, the IFC is not complying with section 26 of its Access to Information Policy, as it is not quantifying and reporting, or collecting the requisite information to quantify and report on, the carbon footprint of its Portfolio 11 years after adoption of its Sustainability Policies.

### **III. IFC's Systematic Failures to Adhere to its Sustainability Policies.**

#### **A. The IFC is Required to Ensure Implementation of Performance Standard 1 Prior to Approval of Financing for a Project.**

The IFC Policy on Environmental and Social Sustainability (2012) (E&S Policy) requires the IFC to ensure implementation of PS 1 prior to approval of financing for a project. Specifically, the E&S Policy requires the IFC to conduct, consider, and provide its board with environmental and social due diligence of all of its investment activities proposed for its support, whether in the design, construction, operation stage, or whether the investment activity is for a new element of a project the IFC already funded. E&S Policy ¶¶ 2, 20, 21, 22, 26, 29. This diligence requires the IFC, amongst other things, to (a) "analyze the business activity's environmental and social performance in relation to the requirements

of the Performance Standards and provisions of the World Bank Group Environmental, Health and Safety Guidelines or other internationally recognized sources, as appropriate;” and (b) “identify[ ] any gaps therewith, and corresponding additional measures and actions beyond those identified by the client’s in-place management practices,” and (c) “[t]o ensure the business activity meets the Performance Standards [by making] these supplemental actions (Environmental and Social Action Plan) necessary conditions of IFC’s investment.” E&S Policy ¶ 28. Because Performance Standard 1 sets forth the requirements for assessing and mitigating a project’s environmental and social impacts, the IFC must assure itself PS 1’s requirements are met prior to approving financing for a project. *Id.*; Performance Standards at pages 5-15. The assurance of an adequate environmental and social assessment prior to IFC financing that complies with the requirements of PS 1, is also a requisite component to inform Environmental and Social Action Plans that become “necessary conditions of the IFC’s investment.” E&S Policy ¶ 28. Moreover, this assurance is necessary for the IFC to ensure it can meet its requirements to “only finance investment activities that are expected to meet the requirements of the Performance Standards within a reasonable period of time.” E&S Policy ¶ 22. For all these reasons, a failure of the IFC to ensure the requirements are met for PS 1 prior to project financing is a violation of its E&S Policy.

The IFC Access to Information Policy (2012) (“Access to Info Policy”) further demonstrates that the IFC must ensure the requirements are met for PS 1 before the IFC finances a particular project. The IFC’s Access to Info Policy, in its section entitled “Pre-Approval Disclosure”, requires the IFC to make a Summary of Investment Information (SII) and Environmental and Social Review Summary (ESRS) available 30-60 days “prior to consideration of the investment for approval by IFC’s Board of Directors.” Access to Info Policy at ¶ 34. The Access to Info Policy provides that a project’s SII: “is made publicly available once the relevant IFC department has determined that: ... (b) IFC has assured itself that the client can be expected to undertake the project in a manner consistent with the Performance Standards.” Access to Info Policy at ¶ 33. The IFC cannot determine a client can be expected to undertake a project in a manner consistent with the Performance Standards if it does not adhere to the requirements of PS 1 governing the contents of an environmental and social assessment. The Access to Info Policy thus requires that the IFC necessarily assure itself that all PS 1 environmental and social assessment requirements are met before public disclosure and consideration of the investment for approval by the IFC Board. Therefore, a failure of the IFC to ensure that the conditions of PS 1 are met prior to project financing also constitutes a violation of its Access to Info Policy.

### **B. The IFC’s Failures to Adhere its E&S and Access to Information Policies by Not Assuring Itself of Satisfaction of Performance Standard 1’s Requirements Before Project Financing**

In the following ways from 2012 to the present, the IFC has systematically violated its E&S Policy and Access to Info Policy for failures to assure itself of and secure adherence to Performance Standard 1’s GHG emissions quantification, impact analysis, and mitigation requirements prior to IFC approval of financing for projects:

#### **Mitigation & Alternatives Analysis**

**i. Failure to Assure Itself of an Adequate Mitigation Hierarchy Analysis and Adoption of an Adequate Mitigation Hierarchy – 100% of Projects:**

Performance Standard 1’s objectives require the “adopt[ion] [of] a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate/offset for risks and impacts to workers, Affected Communities, and the environment.” PS 1 at 6. The provisions of PS1 mirrors this requirement and provides that if avoidance of risks and impacts is not possible as a first priority, impacts must be offset to the extent technically and financially feasible, and the client must identify mitigation and performance measures and establish corresponding actions:

The mitigation hierarchy to address identified risks and impacts will favor the avoidance of impacts over minimization, and, where residual impacts remain, compensation/ offset, wherever technically and financially feasible... Where the identified risks and impacts cannot be avoided, the client will identify mitigation and performance measures and establish corresponding actions to ensure the project will meet the requirements of Performance Standards 1 through 8.

PS 1 at ¶¶ 14, 15.<sup>5 6</sup> Thus, PS 1 clearly requires not only the adoption and commitment to implement a mitigation hierarchy, but to support it:

- an avoidance analysis detailing whether avoidance of impacts is possible;

---

<sup>5</sup> IFC’s Guidance Notes: Performance Standards (updated June 14, 2021), Guidance Note 1 Assessment and Management of Environmental and Social Risks and Impacts (Guidance Note 1), GN61, further supports a mitigation hierarchy analysis must be conducted and documented “focusing on measures to prevent these from occurring in the first place,” that “mitigation measures should be drawn from options that are technically and financially feasible (as defined in footnotes 21 and 22 of PS 1)”, and that “where trade-offs between avoidance and mitigation / compensation are considered, these should also be documented.”

<sup>6</sup> IFC’s Guidance Notes: Performance Standards (updated June 14, 2021), Guidance Note 1, GN62, confirms adoption of this mitigation hierarchy ... “is widely regarded as a good international industry practice approach to managing environmental and social risks and impacts, and that [a]s such, it is a general principle of the Performance Standards that clients adopt (and demonstrate to have adopted) an approach consistent with this practice, as follows:

- (1) Avoidance requires the client to identify and, where available and technically and financially feasible, make changes to the project’s design (or potential location) to avoid adverse risks and impacts on social and/or environmental features. Avoidance is considered to be the most acceptable form of mitigation.
- (2) Minimization: where avoidance is not possible, adverse impacts and risks can be minimized through environmental and social measures/treatments/design. Acceptable options to minimize will vary and include: abate, rectify, repair, and/or restore impacts, as appropriate.
- (3) Compensation/Offset: where avoidance or minimization measures are not available, it may be appropriate to design and implement measures that compensate/offset for residual risks and impacts. It should be noted that these measures do not eliminate the identified adverse risks and impacts, but they seek to offset it with an (at least) comparable positive one.”

- an analysis of the technical and economic feasibility of GHG mitigation measures and offsets, including an analysis demonstrating the technical and economic infeasibility of any measures not adopted that could result in complete avoidance of GHG emissions, additional minimization of GHG emissions to the furthest extent possible, or carbon offsets of GHG emissions to the furthest extent possible;
- quantification of the totality of scope 1, 2, and 3 GHG emissions to inform the amount of GHG emissions that must be avoided, minimized, and or offset, and the quantification of the total amount of GHG emissions mitigated as a result of avoidance, minimization, and offsets.

100% of the 297 projects evaluated appear to violate PS 1 because for all of the 67 projects evaluated with ESIA documents available, neither these documents nor the project’s ESRS or SII, include adoption of a mitigation hierarchy for GHG emissions (see Exhibit 1). In addition, 100% of these projects appear to violate PS 1 because for the projects with ESIA documents available, neither these documents nor the project’s ESRS or SII, contain an adequate or any mitigation hierarchy analysis needed to inform adoption of a mitigation hierarchy. *Id.* The information from ESRSs and SIIs for projects with only a ESRS and/or SII available do not demonstrate inconsistency with and further support these trends. *Id.* This is because for some projects, the ESRS contains information about the adoption of a mitigation hierarchy for certain environmental impacts, but never for impacts associated with a project’s GHG emissions.

As the E&S Policy provides,<sup>7</sup> adoption of a mitigation hierarchy is “central” to the Performance Standards. E&S Policy at ¶ 6. Importantly, like the PS 1 requirement to conduct a complete GHG analysis in the first instance, regardless of the anticipated GHG emissions amount, the PS 1 requirement to adopt a sufficient mitigation hierarchy applies to all projects with GHG emissions.

Aside from thwarting achievement of a cornerstone of the Performance Standards, these violations are particularly harmful and preclude the IFC from coming into alignment with the Paris Agreement. This is because a mitigation hierarchy analysis and adoption of a mitigation hierarchy is needed for projects to achieve net zero GHG emissions if possible, and for the individual and cumulative climate change impacts and GHG emissions of all the projects the IFC funds to be avoided, and if not avoided, minimized to the maximum extent feasible.

**ii. Failure to Assure Itself of Quantification of the GHG Emissions Mitigation Amount – at least 82% of Projects:** As detailed in (i) above, before the IFC

---

<sup>7</sup> The E&S Policy provides that “[c]entral to [Performance Standard] requirements is the application of a mitigation hierarchy to anticipate and avoid adverse impacts on workers, communities, and the environment, or where avoidance is not possible, to minimize, and where residual impacts remain, compensate/offset for the risks and impacts, as appropriate.” E&S Policy at ¶ 6.



approves financing for a project, PS 1 requires the quantification of the total amount of GHG emissions mitigated as a result of avoidance, minimization, and offsets. At least approximately 82% of projects appear to violate PS 1 because for 82% of the projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII, provide figures for the GHG mitigation amounts or reductions in GHG emissions resulting from project mitigation measures (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate this trend is likely significantly worse. *Id.* By failing to provide this quantification, the IFC did not have the information it needed to evaluate the adequacy of any GHG mitigation hierarchy or overall impact and effectiveness of the GHG measures adopted.

- iii. Failure to Ensure Completion of an Alternatives Analysis to Avoid or Reduce GHG Emissions– 53% of Projects:** Before financing is provided, for “greenfield developments and large expansions with specifically identified physical elements, aspects, and facilities likely to generate potential significant environmental and social impacts,” PS 1 requires an analysis of possible alternatives to a project to avoid and reduce GHG emissions. PS 1 at ¶7, fn.11.<sup>8</sup> This analysis is critical because without this analysis, the IFC cannot assure itself that there are not feasible project alternatives that could be implemented instead, that avoid as a first priority, or if avoidance is not feasible that minimize, GHG emissions. At least approximately 53% of all projects evaluated appear to violate PS 1 because for 53% of the projects evaluated for which an alternatives analysis was required and for which ESIA documents are available, neither these documents nor the project's ESRS or SII include an analysis that examines alternatives to avoid and minimize GHG emissions (see Exhibit 1).

In addition, when an alternatives analysis was conducted, review of project ESIA documents demonstrate that only 6% of the alternatives analysis are adequate and in line with good international industry practice as the Performance Standards require (see Exhibit 1).<sup>9</sup> PS 1 at ¶7. For instance, while projects 39630

---

<sup>8</sup> PS 3 further provides support for GHG alternatives analysis and considerations for what such an analysis should include, but does not replace the requirements in PS 1 for a full alternatives analysis that is in line with good international industry practice (PS 3 at ¶ 7 provides “the client will consider alternatives and implement technically and financially feasible and cost-effective options to reduce project-related GHG emissions during the design and operation of the project. These options may include, but are not limited to, alternative project locations, adoption of renewable or low carbon energy sources, sustainable agricultural, forestry and livestock management practices, the reduction of fugitive emissions and the reduction of gas flaring.”).

<sup>9</sup> The IFC cites NEPA as an example of good international industry practice (Guidance Note 1 Assessment and Management of Environmental and Social Risks and Impacts, Published January 1, 2012 (updated June 14, 2021) at 49). The updated interim U.S. Council of Environmental Quality (CEQ) NEPA guidance effective January 8, 2023 for GHG emissions and climate change assessments, alternatives analysis and mitigation in environmental impact statements, is attached as Exhibit 2 and available at: <https://www.regulations.gov/document/CEQ-2022-0005-0001> (“Interim CEQ GHG NEPA Guidance”). This Interim CEQ GHG NEPA Guidance builds upon

(YEREVAN CGT in Armenia) and 43099 (Central Termica de Temane in Mozambique) provide a paragraph as to why solar, wind, and other renewables are not viable alternatives to the natural gas power plant funded, all of these analyses are cursory and dismiss the renewable energy options without a supportable technical and financial feasibility analysis. Other alternatives analysis for natural gas plants fail to contain any analysis of the feasibility of renewable power generation in lieu of the natural gas project. Instead, they only compare the natural gas plant to coal powered plants and or various natural gas plant configurations (see e.g. in Exhibit 1, IFC project numbers 32258 - Gama Energy in Turkiye; 39879 RIAU PP in Indonesia; 39096 FCS RE CIPREL V in Cote D'Ivoire, and 39652 – CELSE in Brazil). Furthermore, in the projects evaluated with ESIA documents available, no alternatives analysis for IFC financed mid and downstream natural gas projects meets the U.S. Department of the Treasury non-opposition to / support for project financing requirement for these types of projects that “[t]here is a credible alternatives analysis that demonstrates that there is no economically and technically feasible clean energy alternative.”<sup>10</sup>

The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate this trend - that no or an inadequate alternatives analysis is being performed - could be significantly worse (see Exhibit 1). This is because as opposed to projects with ESIA documents available which are primarily Category A projects, these projects which are mostly Category B cases, appear in many cases to not have ESIA documents at all nor ESIA type analysis consistent with good international industry practice.

- iv. Failure to Assure Itself of Analysis of the Technical and Financial Feasibility of Mitigation Measures to Prevent or Minimize Net GHG Emissions to the Furthest Extent Possible – 100% of Projects:** As detailed in (i) above, before financing is provided, PS1 requires an analysis of the technical and economic feasibility of GHG mitigation measures and offsets, which includes an analysis demonstrating the technical and economic infeasibility of measures not adopted that could result in additional avoidance, additional minimization, or complete offset of GHG impacts. This analysis is critical to prevent or minimize net GHG emissions as much as possible. 100% of projects appear to violate PS 1 because for all of the projects evaluated with ESIA documents available, neither these documents nor the project’s ESRS or SII, include this analysis (see Exhibit 1).

---

and updates CEQ’s 2016 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 (“2016 GHG Guidance”) attached as Exhibit 3 and available at [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa\\_final\\_ghg\\_guidance.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf). See Interim CEQ GHG NEPA Guidance at page 1198.

<sup>10</sup> See U.S. Department of the Treasury, “Guidance on Fossil Fuel Energy at the Multilateral Development Banks,” available at: <https://home.treasury.gov/system/files/136/Fossil-Fuel-Energy-Guidance-for-the-Multilateral-Development-Banks.pdf> and U.S. Department of the Treasury, and “FAQ for New Fossil Fuel Energy Guidance for the Multilateral Development Banks,” available at: <https://home.treasury.gov/faq-for-new-fossil-fuel-energy-guidance-for-the-multilateral-development-banks> (Attached as Exhibit 4).

The information from ESRSs and SIIs for projects with only a ESRS and/or SII available do not demonstrate inconsistency with this trend. *Id.*

In addition, as consistent with the requirement of PS 3, the technical feasibility analysis should include a comparison of energy, fuel and other GHG relevant efficiency measures to benchmarks, if such benchmarks are applicable, to ensure the most efficient GHG reduction measures are implemented. PS 3 at ¶ 6. It appears however from project's ESIA documents, ESRS, and SIIs, that approximately 60% of projects fail to make use of benchmarks or fail to specify that no benchmarks are available.

- v. **Failure to Assure Itself of Avoidance of GHG Emissions to the furthest extent technically and financially feasible - 90% of Projects:** As detailed in (i) above, before financing is provided for a project, a mitigation hierarchy to address identified risks and impacts is required to be adopted to favor the avoidance of impacts over minimization, and, where residual impacts remain, compensation / offset, wherever technically and financially feasible. PS 1 at ¶¶ 14, 6. This PS 1 requirement necessarily requires the IFC to ensure an adequate avoidance analysis is conducted that is sufficient to determine the furthest extent avoidance of GHG emissions can be achieved that is technically and economically feasible. *Id.* 90% of projects appear to violate PS 1 because for 90% of the projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII, include a GHG avoidance analysis (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available do not demonstrate inconsistency with these trends. *Id.* In addition, when an avoidance analysis was conducted, review of projects with ESIA documents demonstrate that all GHG avoidance analysis that have been conducted, absent consideration of such analysis for some renewable energy projects, are likely inadequate and inconsistent with good international industry practice.
- vi. **Failure to Assure Itself of Implementation of GHG Emissions Offsets to the furthest extent financially feasible when after the application of avoidance and other mitigation measures to the furthest extent feasible, a Project still results in net GHG emissions - 99% of Projects:** As detailed in (i) above, before financing is provided for a project, a mitigation hierarchy to address identified risks and impacts is required to be adopted to favor the avoidance of impacts over minimization, and, where residual impacts remain, compensation / offset, wherever technically and financially feasible. PS 1 at ¶¶ 14, 6. In addition, this PS 1 requirement necessarily requires the IFC to ensure that any offsets purchased in carbon markets to prevent or mitigate a project's GHG emissions meet environmental integrity requirements accepted as good international practice.<sup>11</sup> This is important so that a project's offsets result in appropriate and actual additional reductions, avoidance, or removals of GHG emissions from the

---

<sup>11</sup> These environmental integrity requirements for offsets include additionality, permanence, not overestimated, not claimed by another entity, and not associated with significant social and environmental harms.

atmosphere for the lifecycle of the project beyond what would otherwise occur. Furthermore and moreover, considering carbon offsets can and have often imparted harms on Affected Communities local to where carbon offsets are generated, PS 1 and 4 require analysis, consultation, and mitigation for any such harms, so that purchasing carbon offsets respects and protects the ecosystem services Indigenous Peoples and Affected Communities depend upon, and their full rights, territories, sovereignty, and jurisprudence over the land, air, water, and biodiversity.<sup>12</sup> PS 1 at ¶¶ 8, 12; PS 4 at ¶ 8.

Approximately 99% of projects appear to violate PS 1 because the ESIA documents, ESRS and or SII for 99% of projects evaluated indicate the projects will result in GHG emissions after implementation of all mitigation measures, but fail to indicate that the projects will offset any of their GHG emissions with carbon offsets or demonstrate why it is not financially feasible to use carbon offsets to offset some or all of their GHG emissions after the adoption of other mitigation measures (see Exhibit 1). The ESIA documents, ESRS, and or SII evaluated indicate that in all instances and contrary to PS 1 and 4, where carbon offsets were utilized to mitigate a project’s GHG emissions, the impacts of carbon offsets on Affected Communities and Indigenous Peoples were not analyzed.

The PS 1 requirement for GHG emissions to be offset to the extent financially feasible is also reflected IFC’s strategic priorities. The E&S Policy provides the “IFC also recognizes the importance of supporting sector-wide market transformation initiatives that are consistent with sustainable development objectives...” “IFC, in its efforts to support its climate-related commitments, will build on its experience in ... carbon markets] ...to produce instruments and develop practices that allow its clients to consider climate-related risks and opportunities in their investment decisions.” E&S Policy at ¶¶ 9, 11. In addition, the IFC touts on its website that “[w]e also work with the WB and other MDBs as part of the Carbon Pricing Leadership Coalition (CPLC), a voluntary initiative that catalyzes action towards the successful implementation of carbon pricing around the world.”<sup>13</sup> As such, the IFC should facilitate and ensure carbon offsets for all of its projects where avoidance and other mitigations measures are not feasible, as a means to ensure client satisfaction of the PS 1 mitigation hierarchy requirements as long as such use (1) adheres to all of the Performance Standards’ impact analysis and mitigation requirements, and (2) otherwise and moreover respects and protects the ecosystem services Indigenous Peoples and Affected Communities depend upon, and their full rights, territories, sovereignty, and jurisprudence over the land, air, water, and biodiversity.

**vii. Failure to Assure Itself that any Mitigation for GHG Emissions was Adopted – 12% of Projects, and Impermissible Deferral of Mitigation Until After Approval of Project Financing:** As detailed in (i) above, before financing is

---

<sup>12</sup> Banking on Climate Chaos Fossil Fuel Financing Report 2023 at 8, 33, 38-41.

<sup>13</sup> See: [https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/climate+business/our+approach/setting+standards](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/climate+business/our+approach/setting+standards) (last visited April 25, 2023).

provided for a project, PS 1 requires analysis and adoption of mitigation as part of a project's mitigation hierarchy. PS 1 does not provide for the deferral of mitigation before project financing except for the case in which assets to be developed, acquired or financed have yet to be defined. PS 1 at ¶ 7. In cases where projects are defined prior to financing, at least approximately 12% of projects appear to violate PS 1 because for 12% of applicable projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII, indicate adoption of any GHG Emissions mitigation measures (see Exhibit 1). In addition, in these same cases, approximately 10% of projects with ESIA and or ESRS and SII available appear to violate PS 1 because the project's ESRS, SII, and or ESIA documents indicate these projects impermissibly deferred analysis and selection of GHG mitigation measures to a later time with no commitment to select particular measures or achieve a particular amount of GHG reductions. *Id.* In addition, the 12% of projects that fail to adopt any GHG mitigation measures violate PS 1 because they (a) fail to contain a description of GHG mitigation measures (PS 1 at ¶ 13) and (b) fail to adopt Environmental and Social Action Plans to address/mitigate GHG emissions in a measurable way such as through performance indicators, targets, or acceptable criteria that can be tracked over defined time periods. PS 1 at ¶ 16.

- viii. Failure to Assure Itself that any Mitigation for GHG Emissions from Construction Activities was Adopted – at least approximately 62% of Projects:** As detailed in (i) above, before financing is provided for a project, PS 1 requires analysis and adoption of mitigation as part of a project's mitigation hierarchy. At least 62% of projects for which construction is part of the project appear to have failed to meet the requirements of PS 1 because for 62% of these projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII provide any mitigation of GHG Emissions for a project's construction activities (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

#### **Quantification of GHG Emissions**

- ix. Failure to Assure Itself of Quantification of any GHG Emissions - 22% of Projects.** PS1 provides that the process of risks and impact identification will consider the emissions of GHGs, and that “[t]he scope of the risks and impacts identification process will be consistent with good international industry practice. PS 1 at ¶ 7. It is well established that good international industry practice includes the consideration and analysis and calculation of estimates for all GHG emissions for each project at the environmental assessment stage to determine the total direct and indirect (Scope 1, 2, and 3 combined) GHG emissions of a project so that the impact of a project's GHG emissions can be assessed and mitigation can

be pursued to avoid as much GHG emissions as feasible.<sup>14</sup> Indeed, the IFC CAO opined that “good practice would include the FI and sub-project publicly disclosing Scope 1, 2 and 3 GHG emissions following the Greenhouse Gas Protocol. Office of the Compliance Advisor Ombudsman (CAO), *Compliance Investigation Report, IFC Investments in Rizal Commercial Banking Corporation (RCBC), The Philippines*, November 19, 2021 (CAO RCBC Report).<sup>15</sup> By extension, this applies to all projects with estimated GHG emissions the IFC funds directly as well.

As detailed in (i) above, the PS 1 mitigation hierarchy analysis and adoption requirement also requires an adequate analysis and calculation of Scope 1, 2, and 3 GHG emissions. This is critical not only to identify the severity of a project’s impact on climate change, but for each project to include and adopt an adequate mitigation hierarchy that avoids or reduces a project’s GHG emissions to the fullest extent economically and technically feasible. In addition, it is critical because fully comprehensive GHG emissions quantification and disclosure before project financing could reveal that a project’s GHG emissions exceeds the PS 3 threshold of 25,000 tons of CO<sub>2</sub>-equivalent annually that triggers annual reporting of a Project’s GHG emissions to the IFC. PS 3 at ¶ 8. Without quantification of a project’s full GHG emissions, the IFC cannot ascertain whether this annual GHG emissions monitoring and reporting threshold is met.

Approximately 21% to 22% of projects appear to violate PS 1’s requirement to quantify GHG emissions prior to IFC financing approval. This is because (i) for 22% of the 67 projects evaluated with ESIA documents available, neither these documents nor the project’s ESRS or SII, include any GHG emissions figures (see Exhibit 1), and (ii) for 21% of the 297 projects evaluated with ESIA documents, ESRS and or SII available, none of these sources provide GHG emissions figures.

- x. **Failure to Assure Itself of Quantification of any GHG Emissions for the Project Expansion or Addition Funded - 35% to 48% of Projects:** Performance Standard 1 provides that the process of risk and impact identification will consider the emissions of GHGs, and that “[t]he scope of the risks and impacts identification process will be consistent with good international industry practice. PS 1 at ¶ 7. Good international industry practice includes analysis/quantification and mitigation for all scope 1, 2, and 3 GHG emissions resulting from a project, including GHG emissions from new additions to or expansion of a project already in place or funded. See section ix and fn. 9, *ante*. These calculations are also required to meet the Performance Standard 1

---

<sup>14</sup> See fn. 9, *ante* (detailing that the IFC cites NEPA as good international industry practice); The Interim CEQ GHG NEPA Guidance provides “Agencies should quantify the reasonably foreseeable direct and indirect GHG emissions of their proposed actions.”

<sup>15</sup> For the Greenhouse Gas Protocol referenced in the CAO RCBC Report see: Task Force on Climate-related Financial Disclosure, 2017, Recommendations and Implementation Guidance available at <https://bit.ly/3D0FvdR> and Greenhouse Gas Protocol, *Technical Guidance for Calculating Scope 3 Emissions* available at <https://bit.ly/3mSchby>.

requirements to adopt a sufficient mitigation hierarchy to prevent GHG emissions to the furthest extent economically and technically feasible.

Where a significant portion of the project funded is an addition to or expansion of an existing activity / operation / facility, approximately at least 35% to 48% of applicable projects appear to violate PS 1 because they fail to quantify GHG emissions for the significant expansion or addition funded (for 35% of these projects evaluated with ESIA documents, ESRS, and SII available, neither these documents nor the project's ESRS or SII, include GHG emissions figures for the significant expansion or addition funded; for 48% of projects evaluated with ESIA documents and or ESRS and SII information available, none of these sources provide GHG Emissions figures for the significant expansion or addition funded) (see Exhibit 1). Instead of quantifying and disclosing the GHG emissions for the significant expansion or addition funded, for many of these Projects, it appears from information included in the ESRS and SII that the IFC is impermissibly only requiring and utilizing quantification of GHG emissions from a project's existing components.

- xi. Failure to Assure Itself that Impermissible Deferral of Quantification of GHG Emissions to After Project Financing Does not Occur – 11% of Projects:** PS1 provides that the process of risk and impact identification will consider the emissions of GHGs, and that “[t]he scope of the risks and impacts identification process will be consistent with good international industry practice. PS 1 at ¶ 7. PS 1 does not provide for the deferral of GHG emissions analysis and quantification before project financing except for the case in which assets to be developed, acquired or financed have yet to be defined. PS 1 at ¶ 7. In cases where projects are defined prior to financing, 11% of projects appear to violate PS 1 because the ESIA documents, ESRS, and SII for approximately 11% of these projects evaluated provide that the analysis and quantification of GHG emissions was deferred to a later time after project financing (see Exhibit 1). Without quantification of a project's emission at the environmental assessment stage prior to financing, the extent of a project's impacts from GHG emissions cannot be determined and a mitigation hierarchy cannot be crafted and adopted to avoid and prevent GHG emissions from a Project to the fullest extent feasible.
- xii. Failure to Assure Itself of Quantification and Analysis of the Complete Scope of a Project's GHG Emissions Including all clearly recognized sources of GHG Emissions – 100% of Projects, such as from: (i) aspects of projects well known to emit significant GHG emissions; (ii) the loss of carbon sequestration due to the Project (iii) Scope 3 indirect emissions; (iv) construction activities, (v) unplanned but predictable Developments caused by the project that may occur later in time or at a different location and or caused by associated facilities.** PS1 provides that the process of risk and impact identification will consider the emissions of GHG, and that “[t]he scope of the risks and impacts identification process will be consistent with good international industry practice. PS 1 at ¶ 7. Good international industry practice includes analysis, quantification, and mitigation for all scope 1, 2, and 3 GHG emissions

resulting from a project, including GHG emissions related to construction activities of a project, and all recognized and apparent sources of GHG emissions from a particular project over its lifecycle.<sup>16</sup> These calculations are also required to meet the PS 1 requirements to adopt a sufficient mitigation hierarchy to prevent GHG emissions where economically and technically feasible. Indeed, the IFC CAO opined in 2021 that “good practice would include the FI and sub-project publicly disclosing Scope 1, 2 and 3 GHG emissions following the Greenhouse Gas Protocol. CAO RCBC Report.<sup>17</sup> By extension, this applies to all Category A, B, and Projects with estimated GHG emissions the IFC funds directly as well.

**Almost all projects appear to fail to meet the requirements of PS 1 to include analysis and calculations of particular sources of GHG emissions widely known to be associated with a project activity.** This is because for all projects evaluated, these components are not included in the project’s ESIA documents, ESRS or SII despite information about these emissions sources being readily available and identified through a simple Google search. These include for example failures to quantify and analyze: scope 1 GHG emissions from livestock manure (methane) and scope 3 GHG emissions from the cereals and soy used to feed livestock, both of which are the largest sources of GHG emissions from that industry (see e.g. project no. 45292 – the Mavin swine farm); fugitive GHG emissions from fossil fuel infrastructure, including from natural gas storage tanks, LNG facilities, and natural gas pipelines; scope 3 GHG emissions; GHG emissions from construction activities; and GHG emissions from unplanned but predictable developments caused by the project that may occur later in time or at a different location and or caused by associated facilities.

**At least 92% of projects for which an increase in GHGs in the atmosphere from the loss of carbon sequestration due to the Project is foreseeable prior to the adoption of mitigation** (e.g. if for instance tree loss will occur as part of the project), appear to have failed to meet the requirements of PS 1 because for 92% of these projects evaluated with ESIA documents available, neither these documents nor the project’s ESRS or SII provide quantification of increased GHGs in the atmosphere from the loss of carbon sequestration due to the project (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

**At least 90% of projects fail to include an analysis or quantification of Scope 3 GHG Emissions.** Scope 3 GHG emissions are emissions that are a consequence of a project’s activities, which occur at sources not owned or controlled by the project, and which are not classified as scope 2 indirect emissions (scope 2 indirect emissions are GHG emissions associated with a project’s consumption of

---

<sup>16</sup> See fn. 9, *ante* (detailing that the IFC cites NEPA as good international industry practice; The Interim CEQ GHG NEPA Guidance provides “[a]gencies should quantify the reasonably foreseeable direct and indirect GHG emissions of their proposed actions.”).

<sup>17</sup> See fn. 15, *ante*.



purchased electricity, heat, steam, and or cooling).<sup>18</sup> Examples of scope 3 emissions are business travel; delivery, transport, shipping or distribution of goods by a 3<sup>rd</sup> party by means not owned or controlled by the project owners; purchased materials and fuels (e.g. emissions from extraction, processing, and production of purchased materials and fuels); emissions from construction or operation activities carried out by 3<sup>rd</sup> parties or contractors; emissions from waste disposal, waste decomposition, or recycling; emissions from leased assets, franchising, and outsourcing; and emissions from use of sold goods and services.

While some projects may have little scope 3 emissions, other projects may have significant scope 3 emissions. Regardless, as detailed above in this section, PS 1 requires scope 3 emissions resulting from Projects to be taken into consideration and included in the total GHG emissions amount at the environmental assessment stage before the IFC decides to finance a project. This is critical not only to identify the severity of a project's impact on climate change, but for each project to include and adopt an adequate mitigation hierarchy that avoids or reduces a project's net GHG impact to the fullest extent economically and technically feasible. In addition, it is critical because the inclusion of scope 3 emissions in a project's GHG analysis at the environmental assessment stage before project financing could reveal that a project's GHG emissions exceeds the PS 3 threshold of 25,000 tons of CO<sub>2</sub>-equivalent annually, that triggers annual reporting of a project's GHG emissions to the IFC. PS 3 at ¶ 8.

At least 90% of projects appear to fail to meet PS 1's requirements because for 90% of the projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII quantify or analyze scope 3 GHG emissions (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

**84% of projects for which construction is a part of the project appear to have failed to meet the requirements of PS 1** because for 84% of these projects with ESIA documents available, neither these documents nor the project's ESRS or SII provide GHG Emissions figures for the construction activities that will occur as part of the project (see Exhibit 1). The projects with only information available from the ESRS or SII indicate these trends could be significantly worse. *Id.*

**Almost 100% of projects fail to include GHG emissions from unplanned but predictable developments caused by the project that may occur later or at a different location and or caused by associated facilities.** Read as a whole, PS 1 provides that “[w]here the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts,” GHG impacts will be identified for “impacts from unplanned but predictable developments caused by the project that may occur later or at a different location” and

---

<sup>18</sup> IFC's Guidance Notes: Performance Standards on Environmental and Social Sustainability, January 1, 2012, at Guidance Note 3 GN17 at 6; Guidance Note 3 Annex A at 17.

“[a]ssociated facilities, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.” PS 1 at ¶¶ 8, 7. Examples of some types of these GHG impacts include: GHG emissions from new vehicular traffic resulting from the project (employees, residents, customers ect. traveling to and from the project); new or expanded residential areas resulting from project induced population increases that deforests surrounding vegetation (resulting in more GHGs in the atmosphere) and that result in GHG emissions from the new or expanded population as a consequence of the project; and or the impacts of new roads that open a forest up to timber harvesting activities. However, approximately 99% of projects where GHG emissions from increases in transportation related emissions due to projects are foreseeable (e.g. significant new community or workforce commutes, not counting company vehicle use or use of 3rd party contracted vehicles, caused by the project is foreseeable), appear to have failed to meet the requirements of PS 1 because approximately 99% of these projects’ ESIA documents, ESRS, and SII fail to provide quantification or analysis of these GHG emissions (see Exhibit 1). In addition, 100% of projects where local population growth related Scope 3 GHG emissions due to project are foreseeable (e.g. if deforestation from influx of people due to project is foreseeable), appear to have failed to meet the requirements of PS 1 because all of these projects’ ESIA documents, ESRS, and SII fail to provide quantification or analysis of these GHG emissions (see Exhibit 1).

- xiii. Failure to Assure Itself of Quantification of Exact GHG Emissions – 8% to 15% of projects:** PS1 provides that the process of risks and impact identification will consider the emissions of GHGs, and that “[t]he scope of the risks and impacts identification process will be consistent with good international industry practice. PS 1 at ¶ 7. It is well established that good international industry practice includes the consideration and analysis and calculation of estimates for all GHG emissions for each project at the environmental assessment stage (see section ix, *ante*). As detailed in section (i) above, the PS 1 requirement for adoption and analysis of a mitigation hierarchy requires calculation and disclosure of an exact amount of estimated Scope 1, 2, and 3 GHG emissions. This is critical not only to identify the severity of a project’s impact on climate change, but for each Project to include and adopt an adequate mitigation hierarchy that avoids or reduces a project’s net GHG impact to the fullest extent possible and economically and technically feasible.

The IFC appears to have failed to ensure approximately 8% - 15% of projects adhere to PS 1 because for (a) 8% of projects evaluated with ESIA documents, ESRS, and SII available, and (b) 15% of projects evaluated with only ESRSs and or SIIs available, these documents only indicate project GHG emissions would be greater or less than 25,000 MT CO<sub>2</sub> equivalent per year, and do not quantify or disclose exact GHG emissions amounts (see Exhibit 1). These failures are harmful because they preclude identifying the extent of project’s climate change impact. Moreover, they are harmful and violate PS 1 because they preclude crafting and

adopting a mitigation hierarchy that avoids or reduces a project’s net GHG impact to the fullest extent economically and technically feasible.

### **Cumulative Impacts Analysis**

- xiv. Failure to Assure Itself of a Cumulative Impacts Analysis – 49% of projects:** A cumulative impact is universally defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what entity or person undertakes such other actions. A cumulative impacts analysis is a cornerstone of environmental assessments because it is well accepted that the most devastating environmental effects may result not from the direct effects of a particular action, but from the combination of individually minor effects of multiple actions over time.<sup>19</sup> PS 1 provides that the scope of the impacts identification process will be consistent with good international industry practice, and that the impacts identification process will consider the emissions of GHGs. The inclusion of a cumulative GHG impacts analysis that quantifies all of a project’s GHG emissions (no matter how big or small) in an impact identification process during a project’s environmental impact assessment stage is required because it is necessary for consistency with good international industry practice.<sup>20</sup> PS 1 at ¶ 7.<sup>21</sup> An adequate cumulative GHG impact assessment that includes quantification of all of project’s GHG emissions, must necessarily analyze a project’s impact on a country’s ability to meet its Paris Agreement obligations, including a country’s ability to achieve its National Determined Contributions (NDCs); the impact on Paris Agreement goals more generally, including its 1.5°C warming limitation objective; the project’s incremental contribution combined with all other emissions to global GHG emissions; and any local, regional, nation-wide or global GHG plans and agreements. Such a cumulative analysis that includes quantification of all of project’s GHG emissions is also needed to ensure

---

<sup>19</sup> See NEPA Guidance available at: <https://ceq.doe.gov/docs/ceq-publications/ccenepa/sec1.pdf>.

<sup>20</sup> *Id.*; See e.g., the National Environmental Protection Act (USA); California Environmental Quality Act (CEQA); The IFC sites NEPA as an example of good international industry practice (Guidance Note 1 Assessment and Management of Environmental and Social Risks and Impacts, Published January 1, 2012 (updated June 14, 2021) at 49); See fn. 9, *ante* (The Interim CEQ GHG NEPA Guidance details the cumulative GHG emissions analysis NEPA requires).

<sup>21</sup> A collection of other clauses in PS 1 reiterate the requirement for a cumulative impacts analysis. PS 1 provides that when a project involves specifically identified physical elements, aspects, and facilities that are likely to generate GHG emissions, cumulative GHG emissions impacts will be identified that result from the incremental impact of the project’s GHG emissions in addition to other existing GHG emissions, planned projects with GHG emissions or reasonably defined developments with GHG emissions at the time the risks and impacts identification process is conducted. PS 1 at ¶¶ 8, 7. PS 1 also provides that when a project involves specifically identified physical elements, aspects, and facilities that are likely to generate GHG emissions, the identification of impacts “will take into account the findings and conclusions of related and applicable plans, studies, or assessments prepared by relevant government authorities or other parties” that are related to the incremental effects of its GHG emissions on global warming. PS 1 at ¶¶ 11, 7, 8.

that a mitigation hierarchy can be created and adopted that reduces a project's incremental impacts on global warming to the fullest extent feasible.

At least 49% of projects appear to fail to meet the requirements of PS 1 because for 49% of projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII include a cumulative impacts analysis (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

- xv. **Failure to Assure Itself that Paris Agreement National Determined Contributions (NDCs) and Any Regional, National and Global GHG Emissions Plans Were Taken Into Account:** Read as a whole, PS 1 provides that “[w]here the project involves specifically identified physical elements, aspects, and facilities that are likely to generate environmental and social impacts,” a GHG impacts analysis “will take into account the findings and conclusions of related and applicable plans, studies, or assessments prepared by relevant government authorities or other parties that are directly related to the project and its area of influence.” PS 1 at ¶ 11. At least 39% of projects appear to have failed to meet the requirements of PS 1 because for 39% of projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII take into account a country's National Determined Contributions (NDCs), global warming treaty or agreement goals, or any other applicable regional, national and global GHG emission plans because this information is not mentioned (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

#### Affected Communities Analysis

- xvi. **Failure to Assure Itself that Analysis was Conducted (90% of Projects) and Mitigation Provided (100% of Projects) for a Project's GHG Emissions' Contribution to Global Warming Impacts on Biodiversity or on Ecosystem Services upon Which Affected Communities' Livelihoods are Dependent as Required by Performance Standard 1:** Performance Standard 1 provides that “[w]here the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts,” indirect project impacts [will be identified] on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent.” PS 1 at ¶¶ 8, 7. Thus, Prior to project approval, Performance Standard 1 necessarily requires an analysis of a project's GHG emissions' contribution to global warming “impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent, as these are “indirect project impacts”. *Id.* In addition, like for other project impacts, PS 1 requires the adoption of a mitigation hierarchy to avoid as a first priority, and if avoidance is not feasible to minimize, these impacts to the furthest extent economically and technically feasible (see i. and iv. in this section above). Failure to conduct this analysis as to a project's GHG emissions impacts on Affected Communities obstructs Performance Standards and E&S Policy

safeguards to ensure a project does not cause harm to a community as it can prevent findings that trigger the client to engage in a process of Informed Consultation and Participation (ICP) with Affected Communities. E&S Policy at ¶¶ 30, 55; PS 1 at 6 (PS 1 objectives); PS 1 at ¶¶ 11-12, 15, 25-32, 36.

At least 90% of projects appear to have failed to meet the requirements of PS 1 because for 90% of projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII analyze a project's GHG emissions' contribution to global warming "impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent (see Exhibit 1). The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

In addition, 100% of projects appear to have failed to meet the requirements of PS 1 because for all projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII adopt mitigation for project's GHG emissions' contribution to global warming impacts on biodiversity or on ecosystem services upon which Affected Communities' livelihoods are dependent (see Exhibit 1). While 8% of projects acknowledged these impacts, and of these, 80% adopted mitigation measures for these impacts, none of these projects adopted (or analyzed) a mitigation hierarchy as required by Performance Standard 1. *Id.* The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be significantly worse. *Id.*

- xvii. **Failure to Assure Itself that the Client Identifies and Provides Redress to Individuals and Groups that may be Directly and Differentially or Disproportionately Affected by a Project's GHG Emissions' Contribution to Global Warming because of their Disadvantaged or Vulnerable Status – 97% of Projects.** PS 1 provides that "[w]here the project involves specifically identified physical elements, aspects, and facilities that are likely to generate impacts," as part of the process to identify GHG impacts, the client will:

identify individuals and groups that may be directly and differentially or disproportionately affected by the project because of their disadvantaged or vulnerable status. Where individuals or groups are identified as disadvantaged or vulnerable, the client will propose and implement differentiated measures so that adverse impacts do not fall disproportionately on them and they are not disadvantaged in sharing development benefits and opportunities.

PS 1 at ¶ 12. At least 97% of projects appear to have failed to meet the requirements of PS 1 because for 97% of projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII contain analysis as to whether individuals or groups may be directly and differentially or disproportionately affected by the project's GHG emissions' contribution to global warming because of their disadvantaged or vulnerable status (see Exhibit 1). Thus, also in violation of PS 1, none of these projects

provide redress that prevents (1) a project’s adverse impacts from falling disproportionately on individuals and groups that may be directly and differentially or disproportionately affected by climate change, and (2) these individuals and groups from not being disadvantaged in sharing development benefits and opportunities. The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be worse. *Id.*

**xviii. Failure to Assure Itself the Client Identifies Risks and Potential Impacts of the Project on Priority Ecosystem Services, Outside of Those Services on Which the Project is Directly Dependent for its Operations, that may be Exacerbated by Climate Change – 88% of Projects:** PS 4 provides that:

where appropriate and feasible, the client will identify those risks and potential impacts on priority ecosystem services that may be exacerbated by climate change. Adverse impacts should be avoided, and if these impacts are unavoidable, the client will implement mitigation measures in accordance with paragraphs 24 and 25 of Performance Standard 6.

PS 4 at ¶ 8. PS 4 also provides that when a project is “likely to adversely impact ecosystem services, as determined by the risks and impacts identification process, the client will conduct a systematic review to identify priority ecosystem services.” PS 4 at ¶ 24. Priority ecosystem services include “those services on which project operations are most likely to have an impact and, therefore, which result in adverse impacts to Affected Communities.” *Id.* PS 4 also instructs that (i) “when Affected Communities are likely to be impacted, they should participate in the determination of priority ecosystem services in accordance with the stakeholder engagement process as defined in [PS] 1,” and (ii) that:

With respect to impacts on priority ecosystem services of relevance to Affected Communities and where the client has direct management control or significant influence over such ecosystem services, adverse impacts should be avoided. If these impacts are unavoidable, the client will minimize them and implement mitigation measures that aim to maintain the value and functionality of priority services.

PS 4 at ¶¶ 24, 25. Because these requirements of PS 4 apply at the “risks and impact identification process,” this analysis must also be conducted as consistent with PS 1’s environmental and social impact assessment requirements prior to IFC approval of financing for a project.

At least 88% of projects appear to have failed to meet the requirements of PS 1 and 4 because for 88% of projects evaluated with ESIA documents available, neither these documents nor the project’s ESRS or SII contain analysis as to the risks and potential impacts of the project on priority ecosystem services of importance to Affected Communities that may be exacerbated by climate change (see Exhibit 1). In addition, at least 87% of projects appear to have failed to meet the requirements of PS 1 because for 87% of projects evaluated where these risks

and impacts were identified, neither the ESIA documents nor the project's ESRS or SII demonstrate adherence to PS 4's procedures and requirements pertaining to avoidance and redress of priority ecosystem services of importance to Affected Communities that may be exacerbated by climate change. *Id.* The information from ESRSs and SIIs for projects with only a ESRS and/or SII available indicate these trends could be worse. *Id.*

### C. The IFC's Additional Violations of its E&S Policy

- i. **The IFC's has ongoing and continuously violated the requirement in paragraph 28 of its E&S Policy to ensure that a project's non-compliance with the Performance Standard's GHG emissions analysis and mitigation requirements are addressed in its Environmental and Social Management System (ESMS) prior to financing:** To ensure the business activity meets the Performance Standards, prior to project financing, the IFC is required to make supplemental actions (Environmental and Social Action Plan or "E&S Action Plan") - to fill any gap between the business activity's environmental and social performance and the requirements of the Performance Standards and provisions of the World Bank Group Environmental, Health and Safety Guidelines (ESMS implementation gaps) - necessary conditions of IFC's investment. E&S Policy at ¶ 28, see also E&S Policy at ¶¶ 22, 24, 25. For 100% of projects, the IFC appears to not meet these E&S Policy requirement to close gaps in critical weaknesses in the client's ESMS before IFC's approval and commitment to financing, or as a condition of disbursement. This is because for all of the projects evaluated with ESIA documents available, neither these documents nor the project's ESRS or SII, demonstrate (i) each of these projects meet the Performance Standard's requirements for GHG emissions quantification, impact analysis, alternatives analysis, and mitigation (including in regards to development and adoption of a mitigation hierarchy), and (ii) the IFC required these ESMS implementation gaps to be addressed prior to financing approval (see Exhibit 1).
- ii. **The IFC Has Ongoing and Continuously Violated the Requirement in Paragraph 42 of its E&S Policy to Properly Categorize Projects According to the Severity of their Social and Environmental Risks and Impacts from GHG Emissions.** The E&S Policy defines Category A projects as projects "with potential significant adverse environmental or social risks and/or impacts that are diverse, irreversible or unprecedented." E&S Policy at ¶ 40. The E&S Policy defines Category B projects as projects "with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site specific, largely reversible and readily addressed through mitigation measures." E&S Policy at ¶ 40. "Where the use of proceeds of IFC financing and the associated environmental and social footprint of the business activity are known at the time of the decision to invest, as part of the review of environmental and social risks and impacts prior to IFC consideration for financing, the "IFC [is required to] determine the business activity's environmental and social category based on its potential environmental and social risks and/or impacts." E&S Policy at ¶¶ 42, 40. It is also required to publicly disclose a project's social and

environmental categorization prior to IFC consideration for financing. Access to Info Policy at ¶¶ 30(j), 31.

Based on current trajectories to meet the 1.5 degree C warming limitation objective needed to avoid the most catastrophic impacts of climate change, it is well accepted that a project that will emit net GHGs to the atmosphere after mitigation will impart an incremental irreversible adverse environmental and social impact.<sup>22</sup> From 2012 to the present, for 100% of the Category B projects it financed with net GHG emissions after mitigation, the IFC violated its E&S Policy by (i) failing to factor the project's net GHG emissions in the project's risk categorization and disclose these GHG emissions as part of the risk categorization; and (ii) mis-categorizing projects with estimated net GHG emissions after mitigation as Category B projects instead of Category B projects (see Exhibit 1). In addition, the IFC has routinely violated its E&S Policy for almost all Category A projects for failing to identify a project's net GHG emissions as part of its risk categorization. Curing these violations of its E&S Policy to account for and identify GHG emissions in its risk categorization for projects is essential to alert Affected Communities, the general public, and the IFC when attention to a project prior to financing approval is needed to ensure a project's GHG emissions are avoid and mitigated to the furthest extent feasible.

#### **D. The IFC's Additional Violations of its Access to Information Policy**

- i. From 2012 to the Present, the IFC has routinely violated and continues to violate paragraphs 31(a)(vi) and 8 of its Access to Information Policy for its failure to publicly provide GHG Environmental and Social Impact Assessment (“ESIA”) documents to the public 30-60 days before consideration by the IFC for financing that contain GHG emissions and mitigation analysis and figures.** Thirty to sixty days prior to IFC Board approval of an investment, the IFC is required to make environmental and social information [as part of the ESRS for each Category A & B project] publicly available as follows: “electronic copies or web links, where available, to any relevant ESIA documents prepared by or on behalf of the client.” Access to Info Policy at ¶¶ 31(a)(vi), 29, 34.<sup>23</sup> These relevant ESIA documents necessarily include all documents analyzing GHG emissions, impacts, alternatives, and mitigation, including technical supporting appendices, prepared by or on behalf of the client, including by the IFC. This is because the IFC has acknowledged the significant adverse effects of global warming caused by GHG emissions and

---

<sup>22</sup> See, United Nations Environment Programme (2022), *Emissions Gap Report 2022: The Closing Window — Climate crisis calls for rapid transformation of societies* (<https://www.unep.org/emissions-gap-report-2022>); See, Interim CEQ GHG NEPA Guidance (fn. 9, *ante*).

<sup>23</sup> The Access to Info Policy also suggests that for projects or investments with potential significant adverse environmental or social risks and/or impacts, disclosure and provision of the ESIA to the public should occur earlier in the environmental and social assessment process, even if the ESIA prepared by the client is in draft form before the IFC has completed, or in some cases even started, the review of its investment. Access to Info Policy at ¶ 36.



GHG emissions from the private sector,<sup>24</sup> and PS 1 requires that each project's environmental and social impact assessment includes this GHG emissions and mitigation analysis. PS 1 at ¶7; *see* section III.B., *ante*.

Despite these requirements, from 2012 to the present, the IFC has only provided links to ESIA documents on its Project Information & Data Portal website for approximately 23% of its Category A and B direct investments (see Exhibit 1 providing this figure for the 297 projects evaluated). From 2012 through the present, the IFC has thus routinely violated its Access to Information Policy for its failure to provide GHG ESIA documents to the public 30-60 days before consideration by the IFC for financing that contain GHG emissions and mitigation analysis and figures. This runs afoul of paragraph 31 of the Access to Info Policy and thwarts the Access to Info Policy's purpose to achieve "the transparency and accountability [that] are fundamental to fulfilling its development mandate." Access to Information Policy at ¶¶ 3, 31(a)(vi). 29, 34. Furthermore, this practice is contrary to paragraph 8 of the Access to Information Policy because the IFC is routinely not "mak[ing] available information concerning its activities that would enable its clients, partners and stakeholders (including Affected Communities), and other interested members of the public, to understand better, and to engage in informed discussion about, IFC's business activities, the development outcomes and other impacts of its activities." Access to Information Policy at ¶ 8.

Without disclosure and provision of the ESIA documents with GHG emissions and mitigation analysis, Affected Communities and members of the public will be unable to help ensure, and verify whether, the IFC is meeting its obligations to ensure the Performance Standard requirements for GHG emissions analysis and mitigation are met prior to IFC project financing. The IFC also loses a critical procedural information disclosure step it has adopted "as a means of managing environmental, social, and governance risks."<sup>25</sup> As recognized by the IFC, this opportunity for public review and input before project approval is accepted by the IFC as central to informed decision making. Access to Information Policy at ¶ 8, E&S Policy at ¶ 14; *see* Section III.B., *ante*. It is a necessary check to best ensure a project meets the Performance Standards' requirements and thus avoids or mitigates a project's GHG emissions as much as economically and technically feasible. *Id.* Thus, the IFC's regular failures to provide ESIA documents with GHG emissions and mitigation analysis to the public prior to project approval also

---

<sup>24</sup> E&S Policy at ¶¶10, 11; PS 3 at ¶ 1.

<sup>25</sup> Specifically, the E&S Policy provides that the "IFC seeks to provide accurate and timely information regarding its investment and advisory activities as well as more general institutional information in accordance with its Access to Information Policy. IFC also recognizes the importance of disclosure of information, both for itself and its clients, as a means of managing environmental, social, and governance risks." E&S Policy at ¶ 14.

conflicts with and impedes the IFC's "do no harm" development mission<sup>26</sup> and strategic priorities to combat climate change.<sup>27</sup>

**ii. From 2012 to the present, the IFC has routinely violated and continues to violate ¶ 31(a)(v) of its Access to Information Policy for its failure to publicly disclose a project's expected GHG emissions amounts when these amounts will exceed a total 25,000 tCO<sub>2</sub> throughout a project's life cycle.** For IFC direct investments (Cat. A, B, and C), the Access to Info Policy requires that prior to Board approval of a project, the IFC publicly discloses "expected GHG emissions of the project" "where [GHG emissions will be] greater than 25,000 MT CO<sub>2</sub> equivalent" in the Environmental and Social Review Summary (ESRS). IFC Access to Info Policy at ¶ 31 (a)(v). However, for 85% of projects evaluated, the IFC did not disclose an exact amount of the expected GHG emissions (Scope 1, 2, and 3 GHG emissions, including construction emissions) during a project's full life cycle (see Exhibit 1).<sup>28</sup> Rather, for these projects, the IFC only disclosed whether the projects would emit greater or less than 25,000 MT CO<sub>2</sub> equivalent *per year* (see Exhibit 1). Furthermore, for 21% of the 297 projects evaluated, despite the clear foreseeability that the vast majority of these projects will emit greater than 25,000 MT CO<sub>2</sub> equivalent over their lifecycle, the IFC failed to disclose even a partial amount of expected GHG emissions. *Id.* And for 100% of the 297 projects evaluated, despite the clear foreseeability that the vast majority of these projects will emit greater than 25,000 MT CO<sub>2</sub> equivalent over their lifecycle, the IFC failed to disclose all of these project's expected GHG emissions (see Exhibit 1). By routinely failing to adhere to its Access to Info Policy requirements for disclosure of a project's expected GHG emissions, the IFC is failing to reveal the full extent and sources of its project's climate change impacts.

**iii. The IFC has routinely violated and continues to violate ¶ 31(a)(iv) of its Access to Information Policy for its failure to publicly disclose supplemental**

---

<sup>26</sup> The E&S Policy provides that: "Central to IFC's development mission are its efforts to carry out investment and advisory activities with the intent to "do no harm" to people and the environment [and] to enhance the sustainability of private sector operations and the markets they work in...IFC is committed to ensuring that the costs of economic development do not fall disproportionately on those who are poor or vulnerable, that the environment is not degraded in the process, and that renewable natural resources are managed sustainably." E&S Policy at ¶ 9.

<sup>27</sup> Specifically, in regards to climate change, the E&S Policy provides that the: "IFC recognizes that climate change is a serious global challenge and that climate-related impacts may impede economic and social well-being and development efforts. Working with the private sector and other parties to address climate change is therefore a strategic priority for IFC. Given the importance of the private sector's role in the reduction of greenhouse gas (GHG) emissions, IFC will engage in innovative investments and advisory services to support climate-friendly solutions and opportunities for business...IFC support for low-carbon economic development is one dimension of a balanced approach to development...IFC pursues this objective through [...] the adoption of appropriate technologies, processes, and practices in the activities it supports." E&S Policy at ¶¶ 10, 11.

<sup>28</sup> A plain reading of this requirement indicates GHG mitigation reporting is distinct, and thus the total GHG emissions figures reported should exclude the GHG emissions reductions from measures that do not reduce the actual amount of GHG emissions from the project.

**actions PS 1 requires to be implemented to mitigate the GHG emissions risks and impacts of projects, including for projects that are expected to emit over 25,000 MT CO<sub>2</sub>-equivalent over their life cycle or on an annual basis, prior to approval of financing for a project.** For each Category A and B project, prior to approval of financing for a project, the IFC is required to disclose and make publicly available a summary of its review findings and recommendations in an Environmental and Social Review Summary (ESRS) that must include:

(iii) a description of the main environmental and social risks and impacts of the project;

(iv) key measures identified to mitigate those risks and impacts, specifying any supplemental actions that will need to be implemented to undertake the project in a manner consistent with the Performance Standards, or where required by IFC, Environmental and Social Action Plan;

Access to Info Policy at ¶31(a). In setting a minimum pre-financing disclosure threshold of 25,000 MT CO<sub>2</sub>-equivalent over a project's life cycle, and in requiring projects emitting over 25,000 MT CO<sub>2</sub>-equivalent on an annual basis to report their annual GHG emissions to the IFC, it is clear that for projects expected to exceed either of these thresholds, that the Access to Info Policy requires disclosure of the key measures identified to mitigate a project's GHG emissions risks and impacts prior to approval of financing for a project.<sup>29</sup> Access to Info Policy at ¶ 31(a)(iii)-(v); Performance Standard 3 at ¶ 8. As detailed in section (III)(B)(i) above, adoption of a mitigation hierarchy is amongst the most critical objectives attained from compliance with Performance Standard 1's requirements. Thus, the IFC's failure to publicly disclose a project's mitigation hierarchy in the ESRS, whether it has been achieved, or if it has not been achieved, and failure to specify any supplemental actions needed to achieve PS 1's mitigation hierarchy requirements, are violations of the Access to Info Policy. In violation of its Access to Info Policy, from 2012 to the present, IFC has systematically failed to disclose the mitigation hierarchy, or lack of mitigation hierarchy, addressing a project's GHG emissions for 100% of projects evaluated where the IFC disclosed either 25,000 MT CO<sub>2</sub>-equivalent would be emitted over the project's life cycle or over 25,000 MT CO<sub>2</sub>-equivalent would be emitted on an annual basis (see Exhibit 1). Likewise, the IFC has and continues to systematically violate its Access to Info Policy because none of the ESRS' for these projects specified any supplemental actions need to achieve the PS 1 mitigation hierarchy requirements to mitigate a project's GHG emissions. *Id.*

**iv. The IFC is not complying with paragraph 26 of its Access to Information Policy Because it Continues to Not Quantify and Report on the Carbon Footprint of its Portfolio 11 Years After Adoption of its Sustainability**

---

<sup>29</sup> As detailed in this Request, considering the cumulative impacts of incremental GHG emissions on global warming, net GHG emissions resulting from a project the IFC is considering for financing clearly qualifies as a main environmental and social risk and impact.

**Policies.** In 2012, the IFC adopted its Access to Info Policy that provides: “[i]n accordance with the Policy on Environmental and Social Sustainability, IFC will quantify and report on the carbon footprint of its portfolio in accordance with the emerging state of practice on GHG accounting and reporting.” Access to Info Policy at ¶ 26. In the 11 years since the IFC adopted its Access to Info Policy, and E&S Policy that indicates the requirement of annual reporting from Projects emitting over 25,000 tons CO<sub>2</sub>/year “will allow IFC to quantify, manage and report on the carbon footprint of its direct investment portfolio in accordance with the emerging state of practice on accounting and reporting,” not one year has the IFC reported or estimated the annual GHG emissions from its entire portfolio. *Id.*; E&S Policy at ¶ 11. And while the IFC has made a “corporate commitment to better understand the GHG “footprint” of the [its] portfolio [as] articulated in the Strategic Framework on Development and Climate Change (SFDCC),”<sup>30</sup> since 2008, the IFC has only stated its intention to work on quantifying the carbon footprint of its portfolio and has not done much else.

With the 1.5°C warming objective upon us, and in the 11 years since the IFC pledged to report the GHG emissions from its portfolio where the emerging state of practice has been for quite some time to quantify all GHG emissions (Scope 1, 2, and 3) from a business activity,<sup>31</sup> the IFC is clearly non-compliant with the requirement in its Access to Info Policy to report the carbon footprint of its investment portfolio. While the IFC has indicated difficulty in calculating the emissions from its Portfolio since 2008,<sup>32</sup> if the IFC abides by the requirements in its Sustainability Policies to ensure an adequate GHG emissions assessment and adoption of an adequate GHG mitigation hierarchy for each project prior to financing approval, and if it also adheres to the requirements of its E&S Policy to ensure annual monitoring of GHG emissions from all projects with GHG emissions of greater than 25,000 tons CO<sub>2</sub>/year, it will have all the information it needs to quantify and report on the carbon footprint of its portfolio. PS 3 at ¶ 8. This is because Scope 1, 2, and 3 operations and construction emissions would all be quantified prior to IFC board approval even for projects where the sum of estimated GHG emissions is under 25,000 tons CO<sub>2</sub>/year. And in addition, to help update and obtain more precise figures, for those “projects that are expected to or currently produce more than 25,000 tons of CO<sub>2</sub>-equivalent annually,” the client would be required to quantify and report those project’s Scope 1 and 2 emissions to the IFC annually. E&S Policy at ¶ 11; PS 3 at ¶ 8.

To achieve compliance with E&S Policy’s requirement to report on its carbon footprint of its direct investment portfolio and the Access to Information Policy’s transparency, accountability, and overall access to information requirements, the report detailing the carbon footprint of the IFC’s portfolio must be supported by

---

<sup>30</sup> See *Toward a Green, Clean, and Resilient World for All: A World Bank Group Environment Strategy 2012 – 2022* (2012) at 63; 2008 World Bank Group’s “Strategic Framework for Development and Climate Change at 11, 18.

<sup>31</sup> See fn. 9, *ante*.

<sup>32</sup> See fn. 30, *ante*.

publicly provided data. In order to accomplish this, prior to approval of project financing, the IFC must necessarily provide the detailed GHG emissions analysis (Scope 1, 2, 3 operation and construction operations) for each IFC project. This analysis includes revealing the project will not result in GHG emissions. In addition, prior to approval for financing for each project, the IFC must disclose if no GHG emissions analysis was conducted to alert the IFC board and management, affected communities, and public that a GHG analysis must be conducted.

#### **IV. Harms Resulting from the IFC’s Systematic Non-Compliance with its Sustainability Policies.**

In 2022, the IFC’s total investment commitments reached a record USD 32.8 billion to private companies and financial institutions in low- and middle-income countries.<sup>33</sup> With roughly 300 projects funded on average per year, many of which facially result in significant GHG emissions, the IFC’s incremental imprint on climate change and its detrimental impacts on the global environment, natural resources, and communities is consequential.

The IFC acknowledges the particularly severe harm from the impacts of climate change, and the role of financial institutions, including the IFC, in preventing this harm.<sup>34</sup> Indeed, as far back as 2012, IFC affirmed “that climate change is a serious global challenge and that climate-related impacts may impede economic and social well-being and development efforts. E&S Policy at ¶ 10. Working with the private sector and other parties to address climate change is therefore a strategic priority for IFC.” E&S Policy at ¶10.

The IFC’s failures to adhere to its climate change financing policies are resulting and will result in particularly severe harm to current and future generations, especially those whom are particularly vulnerable to the impacts of climate change. This is because without (i) adequate analysis of the full scope of a project’s GHG emissions, impacts from GHG emissions, GHG mitigation measures, and alternatives to avoid and minimize GHG emissions to the furthest extent feasible, and (ii) a commitment to GHG mitigation measures as required by the IFC Sustainability Policies before the IFC approves financing for a project, it becomes difficult if not impossible for the IFC to evaluate and ensure that a project can avoid net GHG emissions as first priority, and if avoidance is not feasible, implement technically and economically feasible measures to prevent net GHG emissions to the fullest extent possible.

The IFC Sustainability Policies acknowledge the vital role properly conducted environmental assessments with mitigation commitments at the pre-project financing stage play in preventing and reducing GHGs from imparting immediate and irreversible long-term harm on the global commons, all people, and vulnerable communities. Without such an assessment that adheres to the Performance Standard’s requirements, the particularly severe

---

<sup>33</sup> IFC Annual Report 2022, available at: <https://www.ifc.org/wps/wcm/connect/0666b9a3-93e4-4c9d-8de8-b1ac34455c02/IFC-AR22.pdf?MOD=AJPERES&CVID=oePW5dQ>.

<sup>34</sup> E&S Policy at ¶¶ 10-11; 2008 World Bank Group’s “Strategic Framework for Development and Climate Change.

harms resulting from avoidable contributions to climate change from IFC financed projects are certain to occur.

As poignantly stated in the October 11, 2017 Complaint concerning IFC investments in and financing to RCBC submitted by the Philippine Movement for Climate Justice:

In the wake of the global agreement at COP21 in Paris in 2015, the World Bank Group committed to supporting the international community to limit the increase in global average temperature to 1.5 degrees Celsius above pre-industrial levels in order to avoid the worst impacts of climate change.<sup>35</sup> The latest scientific research suggests that it is still possible to achieve this target, but the window is closing rapidly. Carbon emissions must decline sooner than what was proposed by the more than 180 countries that submitted national pledges for climate action in Paris.<sup>36</sup> In a few years, unless drastic changes in energy consumption and development are undertaken, 1.5 degrees will no longer be possible and the world will face the “severe, widespread and irreversible impacts” of climate change predicted by the UN’s Intergovernmental Panel on Climate Change (IPCC).<sup>37</sup>

The IFC’s systematic non-compliance with its Sustainability Policies pertaining to GHG emissions analysis and mitigation requirement for projects the IFC funds causes irreparable harm to many communities, and will continue to do so if no concrete action is taken by the IFC. These harms should and can be prevented before the IFC finances a project if the IFC follows its Sustainability Policies.

#### **V. Additional Information Requested to Ensure IFC Adherence to its Sustainability Policies**

To demonstrate IFC compliance with its Sustainability Policies pertaining to GHG emissions from the project’s it finances, the undersigned CSOs’ request the following information:

- A. Documentation that Demonstrates Adequate Analysis of GHG Emissions.** In addition to PS 1’s requirement for quantification of Scope 1, 2, and 3 GHG emissions, PS 1 requires adequately supported analysis to demonstrate proper quantification of these GHG figures. PS 1 at ¶ 7. PS 1, through mandating that GHG emissions are identified through good international industry practice, requires that an adequate analysis accompanies the provisions of Scope 1, 2, and 3 GHG figures to demonstrate these figures were calculated properly. We thus request that for every project in Exhibit 1, if not already available electronically in the IFC Project Information & Data Portal website, the IFC provides and discloses the full analysis

---

<sup>35</sup> See: <http://www.worldbank.org/en/news/feature/2015/12/12/paris-agreement-paves-way-for-world-bank-group-helping-countries-deliver-on-climate-commitments>

<sup>36</sup> Richard Millar, et al, “Emission budgets and pathways consistent with limiting warming to 1.5 degrees C,” *Nature Geoscience*, September 18, 2017, at: <http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo3031.html?foxtrotcallback=true>

<sup>37</sup> UNIPCC, *Climate Change 2014 Synthesis Report, Fifth Assessment Report, SPM 3.2, 3.4*, at: [http://ar5-syr.ipcc.ch/ipcc/ipcc/resources/pdf/IPCC\\_SynthesisReport.pdf](http://ar5-syr.ipcc.ch/ipcc/ipcc/resources/pdf/IPCC_SynthesisReport.pdf)

used for GHG emissions and GHG mitigation quantification the IFC relied upon before approving a project for financing. This information is not confidential in nature, and is not shielded from disclosure by the IFC's Sustainability Policies. Access to Info Policy at ¶¶ 7(b), 11(a), 11(i)(iv), 42. This ask for documentation follows up on Bank Climate Advocates' almost identical request received by the IFC electronically on February 7, 2023, and via post on February 10, 2023, that the IFC has yet to respond to.

- B. Documentation evidencing the IFC is ensuring and requiring annual quantification and reporting of its GHG emissions when a project is expected to emit over 25,000 tons CO<sub>2</sub>-equivalent per year.** PS 3 requires that “for projects that are expected to or currently produce more than 25,000 tonnes of CO<sub>2</sub>-equivalent annually, the client will [annually] quantify direct emissions from the facilities owned or controlled within the physical project boundary, as well as indirect emissions associated with the off-site production of energy used by the project.” PS 3 at ¶ 8. The E&S Policy mandates the “IFC [ ] require its clients to include GHG emissions in their regular reporting to IFC in accordance with th[is] [PS 3] threshold,” as the practice and tools for GHG accounting of this nature are now clearly mainstreamed and have been for quite some time. E&S Policy at ¶ 11; PS 3 at ¶ 8.

For projects where the ESRS, SII, or ESIA documents provide a project's emissions will be over 25,000 tons CO<sub>2</sub>-equivalent/year, only 66 out of the 145 evaluated projects' (approximately 46% of projects') ESRS, SII, or ESIA documents specified the project would continue to quantify and or report their GHG emissions annually to the IFC. However, because only the IFC and client have access to (a) the project contract between the IFC and client that would specify if this reporting is required and (b) files documenting whether these reports have been filed, this Request does not have sufficient basis to allege IFC non-compliance with Performance Standards for failure to require a project quantify and report GHG emissions to the IFC if the environmental and social impact assessment process reveals a project will emit over 25,000 tons CO<sub>2</sub>-equivalent per year.

Considering, that for only approximately 46% of projects evaluated where a project's emissions will be over 25,000 tons CO<sub>2</sub>-equivalent/year the IFC Project Information & Data Portal website discloses that projects will quantify and report GHG emissions to the IFC on an annual basis, this Requests asks IFC management to demonstrate: (i) that its contracts with clients require a project to quantify and report GHG emissions to the IFC if it is expected to or does emit over 25,000 tons CO<sub>2</sub>-equivalent per year, and (ii) that this quantification and reporting is occurring. Such a demonstration is critical to ensuring the IFC is adhering to its Sustainability Policies; that it has sufficient data to report annually on the carbon footprint of its portfolio; and to gage the accuracy of estimated emissions and efficacy of GHG efficiency and other mitigation measures.

- C. Documentation Evidencing the IFC is ensuring its contracts for project financing include sufficient provisions to ensure implementation of the Performance Standards' requirements pertaining to GHG emissions analysis**

**and mitigation.** This includes demonstrating that these contracts contain sufficient provisions that allow for IFC contract enforcement through various remedial measures (including the loss, withdrawal, and recovery of IFC financing and financial penalties) if the client does not adhere to the Performance Standards' requirements pertaining to GHG emission and mitigation. These sufficient provisions include enforceability terms to guard against client non-compliance that require the client to: (a) adopt and implement the GHG emissions mitigation hierarchy required by PS 1; (b) implement all GHG emission avoidance, minimization, offset, and other mitigation measures the client identified it will implement to satisfy its PS 1 requirements; (c) quantify project GHG emissions in line with PS 1's requirements and annually report GHG emissions in line with PS 3's requirements; (d) to take action to cure any deficiencies discovered pertaining to its adherence to the Performance Standards prior to and after IFC financing; (e) adhere to all PS 3 requirements pertaining to GHG emissions throughout the lifecycle of the IFC financed project; and (f) adhere to any specific conditions relating to GHG emissions analysis, mitigation, and reporting included in an action plan developed pursuant to the Performance Standards.

This request is appropriate and important because (a) only the IFC and client have access to the project contract; (b) Paragraph 24 of the E&S Policy requires that the project financing contract between the IFC and client contains provisions that require the client to "comply[ ] with the applicable requirements of the Performance Standards and specific conditions included in action plans, as well as relevant provisions for environmental and social reporting;" (c) such terms in the contract are necessary to ensure the IFC complies with paragraph 22 of its E&S Policy to "only finance investment activities that are expected to meet the requirements of the Performance Standards within a reasonable period of time;" (d) such terms in the contract are necessary to ensure the IFC, as consistent with paragraphs 22 and 24 of its E&S Policy can take remedial actions, including the loss and withdrawal of project financing, if the client fails to comply with the Performance Standards and its environmental and social commitments as expressed in the legal agreements and associated documents; (e) such terms in the contract are necessary to ensure the IFC, as consistent with paragraph 3 of the E&S Policy, assures itself that "[p]roposed investments that are determined to have moderate to high levels of environmental and/or social risk, or the potential for adverse environmental and/or social impacts will be carried out in accordance with the requirements of the Performance Standards;" and moreover (f) such contract terms are necessary to best and adequately ensure implementation of the GHG emissions analysis, mitigation measures, and reporting required by the Sustainability Policies. Furthermore, the IFC's non-adherence to numerous facets of its Sustainability Policies pertaining to GHG emissions analysis and mitigation detailed in Section III above evidences this demonstration is critical to ensuring the IFC's contracts with its clients are also compliant with its Sustainability Policies.

## **VI. Requested Redress**

To cure the IFC's failures to adhere to its Sustainability Policies pertaining to GHG



emissions analysis and mitigation requirements, the undersigned CSO request the following:

- (1) Retroactively for all active direct and financial intermediary (FI) investments, and going forward for all new direct and FI investments, the IFC should immediately and as soon as possible, take all necessary measures to assess, prevent (for new investments), and cure its failures to adhere to its Sustainability Policies as identified in Section III of this Request.<sup>38</sup> This includes the IFC taking immediate steps to avoid, mitigate, and remedy harms to communities caused by the IFC's lack of compliance with its Sustainability Policies' requirements applicable to GHG emissions from the Projects it has financed. For all active investments, if the profit model for each project or the finances of each entity implementing the project is not sufficient to implement GHG emissions measures to avoid or reduce the project's GHG emissions to the fullest extent economically and technically feasible that could have been achieved at the time of investment, the IFC should finance such measures;<sup>39</sup>
- (2) Include detailed procedures in its Paris Agreement Methodology and Performance Standard Update that further and best ensures, that before public project disclosure and project financing: (a) clients and IFC properly apply and ensure compliance with the Performance Standards, and that the IFC discloses sufficient information on its Project Information & Data Portal website for the public to ascertain this; and (b) clients apply good international industry practices in all facets of environmental and social assessment preparation pertaining to GHG emissions and mitigation as Performance Standard 1 requires.<sup>40</sup> These procedures should incorporate requisite use of a detailed checklist listing all of the Performance Standards' GHG emissions analysis and mitigation requirements (including those listed in section III of this

---

<sup>38</sup> As it pertains to IFC FI investments, the undersigned request (1) that the IFC implement the recommendations in the CAO RCBC Report; (2) in implementing the recommendation in the CAO RCBC Report, to ensure systems are in place prior to disbursement to verify that an FI client is implementing an ESMS to apply the Performance Standards, including in regards to implementation in accordance with the proper interpretation of the Performance Standards pertaining to GHG emissions impact analysis and mitigation as highlighted and set forth in this Request; and (3) in implementing the recommendation in the CAO RCBC Report, as part of the IFC's environmental and social review and financial assessment of the costs, benefits, and operational implications of implementing IFC's Sustainability Policy requirements, ensure that the costs of adhering to the GHG emissions impact analysis and mitigation requirements of the Performance Standards as highlighted and set forth in this Request, is assessed.

<sup>39</sup> As consistent with IFC's Performance Standards that account for the international law principles of sustainable development, common but differentiated responsibilities, equity, special circumstance, and harm prevention and precaution, the IFC should ensure each project if funds for its corporate clients achieve net zero emissions to the extent financially feasible. If the client demonstrates it is financially infeasible to achieve net zero GHG emissions, the IFC – as these international legal principles support - should finance such measures needed for a project to achieve net zero emissions, including, as a last resort, by purchasing carbon offsets as detailed in Section III.B. of this Request.

<sup>40</sup> See fn. 9, *ante*, providing the IFC considers NEPA's requirements for environmental assessments as good international industry practice; see also Exhibits 2 and 3 containing the NEPA guidelines for GHG environmental impact assessments.

Request) that IFC staff should verify its clients adhere to before public project disclosure and board approval of financing for a project;

- (3) Develop template sections of financing agreements and E&S Action Plans pertaining to GHG emissions for projects with estimated GHG emissions, which reflects the Performance Standards, and commits borrowers to compliance with, the Performance Standards' GHG requirements;
- (4) Engage a sufficient number of qualified staff and expert consultants to assure implementation of its Sustainability Policies' GHG emissions analysis and mitigation requirements across its portfolio and for new investments under consideration. And where necessary due to a client demonstrating financial or technical constraints, assist clients, whether via the IFC's own financial resources or a forgivable advance on any IFC loan, to adequately implement the Performance Standards' requirements pertaining to GHG emissions assessments and mitigation prior to project financing;
- (5) For each project, in the disclosure stage prior to IFC board financing approval, and also immediately for projects already approved, ensure public provision on its Project Information & Data Portal website of: (a) all GHG emission and mitigation environmental and social impact assessment documents and analysis prepared by or on behalf of the client, including technical appendices detailing calculations for GHG emissions and mitigation amounts; and (b) a checklist generated by the IFC that details all of Performance Standard 1's GHG emissions analysis and mitigation requirements (including those listed in section III of this Request), and whether the client has adhered to these requirements.

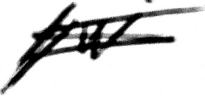
## **VII. Conclusion**

The IFC must take measures to expeditiously adhere to and implement the requirements of its Sustainability Policies as they relate to GHG quantification, impact assessment, alternatives analysis and mitigation for all current and future projects. As detailed in this Request, it is apparent the IFC has systematically failed to adhere to numerous of its critical Sustainability Policy's GHG impact assessment and mitigation requirements before project financing from 2012 to the present. As this Request demonstrates, these failures include obtaining enough information to support "the threshold test for IFC investment" that "the material available to IFC during the pre-investment review supported a conclusion that the client could operate in accordance with IFC's Performance Standards." E&S Policy at ¶ 22. As a result, IFC is exposed to the financing of significant carbon emissions through its investments without assurance that they are being adequately measured and mitigated. These failures are thus causing, and unless redressed as provided in this Request will continue to cause, severe harms to current and future generations and communities all over the world that are especially vulnerable to the adverse effects of climate change, including those communities in the IFC's investment regions.

We urge you to redress all systematic IFC non-compliance with its Sustainability Policies as expeditiously as possible and in line with the redress in this Request. We would appreciate an acknowledgement of this Request at your earliest convenience, and ask for a

full and formal written response by June 30, 2023 at the latest. All responses will be shared with the signatories of this letter. Please direct responses to the representatives from the CSOs co-signed to this Request and [jason@bankclimateadvocates.org](mailto:jason@bankclimateadvocates.org). As indicated in our cover letter, upon receipt we kindly request that you share this letter with all IFC Board Members and their staff, and all applicable IFC Management and Staff. We stand ready to further discuss these matters with you at your convenience.

Sincerely,



Jason Weiner  
Executive Director & Legal Director  
Bank Climate Advocates  
303 Sacramento Street, Floor 2  
San Francisco, CA 94111  
+1 (310) 439-8702  
[jason@bankclimateadvocates.org](mailto:jason@bankclimateadvocates.org)  
[www.bankclimateadvocates.org](http://www.bankclimateadvocates.org)

**Co-Signatory Civil Society Organizations:**

**Powershift Africa** - *Bhekumuzi Dean Bhebhe, Campaigns Lead*, [bbhebhe@powershiftafrica.org](mailto:bbhebhe@powershiftafrica.org)

**Indus Consortium** - *Fiza Naz Qureshi, Manager Program Implementation*,  
[fiza.queshi@indusconsortium.pk](mailto:fiza.queshi@indusconsortium.pk)

**Ecumenical Institute for Labor Education and Research (EILER)** - *Rochelle Porras, Executive Director*, [rochporras@eiler.ph](mailto:rochporras@eiler.ph)

**Sustentarse** - *Maia Seeger Pfeiffer, Directora Ejecutiva*, [mseeger@sustentarse.cl](mailto:mseeger@sustentarse.cl)

**Trend Asia** - *Andri Prasetyo, Research & Senior Program Manager*, [andri.prasetyo@trendasia.org](mailto:andri.prasetyo@trendasia.org)

**Wishtoyo Chumash Foundation** - *Mati Waiya, President & Executive Director, Chumash Ceremonial Elder*, [matiwaiya@wishtoyo.org](mailto:matiwaiya@wishtoyo.org)

**Accountability Counsel** - *Margaux Day, Policy Director*, [margaux@accountabilitycounsel.org](mailto:margaux@accountabilitycounsel.org)

**Recourse** - *Kate Geary, Co-Director*, [kate@re-course.org](mailto:kate@re-course.org)

**Oxfam** - *Christian V. Donaldson, Senior Policy Advisor*, [Christian.Donaldson@oxfam.org](mailto:Christian.Donaldson@oxfam.org)

**The Bretton Woods Project** - *Jon Sword, Environment Project Manager*,  
[jsward@brettonwoodsproject.org](mailto:jsward@brettonwoodsproject.org)

**Oil Change International** - *Bronwen Tucker, Global Public Finance Campaign Co-Manager*,  
[bronwen@priceofoil.org](mailto:bronwen@priceofoil.org)

**Enclosures:** Exhibits 1, 2, 3, and 4.

**cc:** IFC Directors

# **EXHIBIT 1**

**See document transmitted  
electronically with the file name:  
"Exhibit 1\_BCA GHG Data for IFC  
Projects\_2023.5.1.xlsx"**

# **EXHIBIT 2**

period, and successive reports shall be due annually on the same date thereafter. Without limitation, Peloton acknowledges and agrees that failure to make such timely and accurate reports as required by this Agreement and Order may constitute a violation of Section 19(a)(3) of the CPSA and may subject the Firm to enforcement under section 22 of the CPSA.

36. Notwithstanding and in addition to the above, Peloton shall promptly provide written documentation of any changes or modifications to its compliance program or internal controls and procedures, including the effective dates of the changes or modifications thereto. Peloton shall cooperate fully and truthfully with staff and shall make available all non-privileged information and materials and personnel deemed necessary by staff to evaluate Peloton's compliance with the terms of the Agreement.

37. The parties acknowledge and agree that the Commission may publicize the terms of the Agreement and the Order.

38. Peloton represents that the Agreement:

(i) is entered into freely and voluntarily, without any degree of duress or compulsion whatsoever;

(ii) has been duly authorized; and

(iii) constitutes the valid and binding obligation of Peloton, enforceable against Peloton in accordance with its terms. The individuals signing the Agreement on behalf of Peloton represent and warrant that they are duly authorized by Peloton to execute the Agreement.

39. The signatories represent that they are authorized to execute this Agreement.

40. The Agreement is governed by the laws of the United States.

41. The Agreement and the Order shall apply to, and be binding upon, Peloton and each of its parents, successors, transferees, and assigns; and a violation of the Agreement or Order may subject Peloton, and each of its parents, successors, transferees, and assigns, to appropriate legal action.

42. The Agreement, any attachments, and the Order constitute the complete agreement between the parties on the subject matter contained therein.

43. The Agreement may be used in interpreting the Order. Understandings, agreements, representations, or interpretations apart from those contained in the Agreement and the Order may not be used to vary or contradict their terms. For purposes of construction, the Agreement shall be deemed to have been drafted by both of the parties and shall not, therefore, be

construed against any party, for that reason, in any subsequent dispute.

44. The Agreement may not be waived, amended, modified, or otherwise altered, except as in accordance with the provisions of 16 CFR 1118.20(h). The Agreement may be executed in counterparts.

45. If any provision of the Agreement or the Order is held to be illegal, invalid, or unenforceable under present or future laws effective during the terms of the Agreement and the Order, such provision shall be fully severable. The balance of the Agreement and the Order shall remain in full force and effect, unless the Commission and Peloton agree in writing that severing the provision materially affects the purpose of the Agreement and the Order.

(Signatures on next page)

PELTON INTERACTIVE, INC.

Dated: 12/8/22

By: /s/Barry McCarthy  
Barry McCarthy, Peloton Interactive, Inc.,  
CEO & President

Dated: 12/9/2022

By: /s/Erin M. Bosman  
Erin M. Bosman, Morrison Foerster LLP,  
Counsel to Peloton Interactive, Inc.

U.S. CONSUMER PRODUCT SAFETY  
COMMISSION

Mary B. Murphy, Director  
Leah Ippolito, Supervisory Attorney  
Michael J. Rogal, Trial Attorney

Dated: 12/14/22

By: /s/Michael J. Rogal  
Michael J. Rogal, Trial Attorney, Division of  
Enforcement and Litigation, Office of  
Compliance and Field Operations

**United States of America Consumer  
Product Safety Commission**

*In the Matter of:* PELTON  
INTERACTIVE, INC.

CPSC Docket No.: 23–C0001

**Order**

Upon consideration of the Settlement Agreement entered into between Peloton Interactive, Inc. (“Peloton”), and the U.S. Consumer Product Safety Commission (“Commission” or “CPSC”), and the Commission having jurisdiction over the subject matter and over Peloton, and it appearing that the Settlement Agreement and the Order are in the public interest, the Settlement Agreement is incorporated by reference and it is:

Provisionally accepted and provisional Order issued on the 28th day of December, 2022.

By Order of the Commission.  
/s/Alberta Mills  
Alberta E. Mills,

Secretary, U.S. Consumer Product Safety  
Commission.

[FR Doc. 2023–00146 Filed 1–6–23; 8:45 am]

BILLING CODE 6355–01–P

**COUNCIL ON ENVIRONMENTAL  
QUALITY**

[CEQ–2022–0005]

RIN 0331–AA06

**National Environmental Policy Act  
Guidance on Consideration of  
Greenhouse Gas Emissions and  
Climate Change**

**AGENCY:** Council on Environmental  
Quality.

**ACTION:** Notice of interim guidance;  
request for comments.

**SUMMARY:** The Council on Environmental Quality (CEQ) is issuing this interim guidance to assist agencies in analyzing greenhouse gas (GHG) and climate change effects of their proposed actions under the National Environmental Policy Act (NEPA). CEQ is issuing this guidance as interim guidance so that agencies may make use of it immediately while CEQ seeks public comment on the guidance. CEQ intends to either revise the guidance in response to public comments or finalize the interim guidance.

**DATES:** This interim guidance is effective immediately. CEQ invites interested persons to submit comments on or before March 10, 2023.

**ADDRESSES:** You may submit comments, identified by docket number CEQ–2022–0005, by any of the following methods:

- *Federal eRulemaking Portal:*  
<https://www.regulations.gov>. Follow the instructions for submitting comments.

- *Fax:* 202–456–6546.

- *Mail:* Council on Environmental Quality, 730 Jackson Place NW, Washington, DC 20503.

All submissions received must include the agency name, “Council on Environmental Quality,” and the docket number, CEQ–2022–0005. All comments received will be posted without change to <https://www.regulations.gov>, including any personal information provided. Do not submit electronically any information you consider to be private, Confidential Business Information (CBI), or other information, the disclosure of which is restricted by statute.

**FOR FURTHER INFORMATION CONTACT:**  
Jomar Maldonado, Director for NEPA,  
202–395–5750 or  
[Jomar.MaldonadoVazquez@ceq.eop.gov](mailto:Jomar.MaldonadoVazquez@ceq.eop.gov).

**SUPPLEMENTARY INFORMATION:****I. Introduction**

The Council on Environmental Quality (CEQ) issues this guidance to assist Federal agencies in their consideration of the effects of greenhouse gas (GHG) emissions<sup>1</sup> and climate change when evaluating proposed major Federal actions in accordance with the National Environmental Policy Act (NEPA)<sup>2</sup> and the CEQ Regulations Implementing the Procedural Provisions of NEPA (CEQ Regulations).<sup>3</sup> This guidance will facilitate compliance with existing NEPA requirements, improving the efficiency and consistency of reviews of proposed Federal actions for agencies, decision makers, project proponents, and the public.<sup>4</sup> This guidance provides Federal agencies a common approach for assessing their proposed actions, while recognizing each agency's unique circumstances and authorities.

The United States faces a profound climate crisis and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory. Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA's purview.<sup>5</sup> Major Federal

<sup>1</sup> For purposes of this guidance, CEQ defines GHGs consistent with CEQ's *Federal Greenhouse Gas Accounting and Reporting Guidance* (Jan. 17, 2016), [https://www.sustainability.gov/pdfs/federal\\_ghg%20accounting\\_reporting-guidance.pdf](https://www.sustainability.gov/pdfs/federal_ghg%20accounting_reporting-guidance.pdf) (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride). Also, for purposes of this guidance, "emissions" includes release of stored GHGs as a result of land management activities affecting terrestrial GHG pools such as carbon stocks in forests and soils, as well as actions that affect the future changes in carbon stocks. To facilitate comparisons between emissions of the different GHGs, a common unit of measurement for GHGs is metric tons of CO<sub>2</sub> equivalent (mt CO<sub>2</sub>-e).

<sup>2</sup> 42 U.S.C. 4321 *et seq.*

<sup>3</sup> 40 CFR parts 1500–1508.

<sup>4</sup> This guidance is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances. This guidance does not change or substitute for any law, regulation, or other legally binding requirement, and is not legally enforceable. The use of non-mandatory language such as "guidance," "recommend," "may," "should," and "can," describes CEQ policies and recommendations. The use of mandatory terminology such as "must" and "required" describes controlling requirements under the terms of NEPA and the CEQ regulations, but this document does not affect legally binding requirements.

<sup>5</sup> NEPA recognizes "the profound impact of man's activity on the interrelations of all components of the natural environment . . ." 42 U.S.C. 4331(a). Among other things, it was enacted to promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humans. 42 U.S.C. 4321. See also 42 U.S.C. 4332(2)(F) (requiring all 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. Federal proposals may also be affected by climate change, so they should be designed in consideration of resilience and adaptation to a changing climate.<sup>6</sup> Climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources and effects. 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. Given the urgency of the climate crisis and NEPA's important role in providing critical information to decision makers and the public, 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. 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.<sup>7</sup>

As discussed in this guidance, when conducting climate change analyses in NEPA reviews, agencies should consider: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts. Analyzing reasonably foreseeable

agencies to "recognize the worldwide and long-range character of environmental problems").

<sup>6</sup> See 42 U.S.C. 4332(2)(A) (directing agencies to ensure the use of "the environmental design arts" in planning and decision making).

<sup>7</sup> See White House Fact Sheet, *President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target* (Apr. 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/>; see also Executive Order (E.O.) 14008, *Tackling the Climate Crisis at Home and Abroad*, 86 FR 7619 (Jan. 25, 2021), <https://www.federalregister.gov/d/2021-02177>; E.O. 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, 86 FR 70935 (Dec. 13, 2021), <https://www.federalregister.gov/d/2021-27114>.

climate effects in NEPA reviews<sup>8</sup> helps ensure that decisions are based on the best available science and account for the urgency of the climate crisis. Climate change analysis also enables agencies to evaluate reasonable alternatives and mitigation measures that could avoid or reduce potential climate change-related effects and help address mounting climate resilience and adaptation challenges.

Accurate and clear climate change analysis:

- Helps decision makers, stakeholders, and the public to identify and assess reasonable courses of action that will reduce GHG emissions and climate change effects;
- Enables agencies to make informed decisions to help meet applicable Federal, State, Tribal, regional, and local climate action goals;<sup>9</sup>
- Promotes climate change resilience and adaptation and prioritizes the national need to ensure climate-resilient infrastructure and operations, including by considering the reasonably foreseeable effects of climate change on infrastructure investments and the resources needed to protect such investments over their lifetime;<sup>10</sup>
- Protects national security by helping to identify and reduce climate change-related threats including potential resource conflicts, stresses to military operations and installations, and the potential for abrupt stressors;<sup>11</sup>
- Enables agencies to better understand and address the effects of climate change on vulnerable communities, thereby responding to environmental justice concerns and promoting resilience and adaptation;

<sup>8</sup> The term "NEPA review" as used in this guidance includes the analysis, process, and documentation required under NEPA. While this document focuses on reviews conducted pursuant to NEPA, agencies should analyze GHG emissions and climate-resilient design issues early in the planning and development of proposed actions and projects under their substantive authorities.

<sup>9</sup> 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 (UNFCCC), U.S. Nationally Determined Contribution (Apr. 20, 2021), <https://unfccc.int/NDCREG>.

<sup>10</sup> Resilience is a priority for Federal agency actions. See, e.g., E.O. 14057, *supra* note 7; see also E.O. 14008, *supra* note 7.

<sup>11</sup> See, e.g., Nat'l Intel. Council, *Implications for U.S. National Security of Anticipated Climate Change* (Sept. 21, 2016), NIC WP 2016-01, [https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/Implications\\_for\\_US\\_National\\_Security\\_of\\_Anticipated\\_Climate\\_Change.pdf](https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/Implications_for_US_National_Security_of_Anticipated_Climate_Change.pdf); see also Dep't of Def., Directive 4715.21, *Climate Change Adaptation and Resilience* (Jan. 14, 2016), <https://dod.defense.gov/Portals/1/Documents/pubs/471521p.pdf>.

- Supports the international leadership of the United States on climate issues;<sup>12</sup> and
- Enables agencies to better assess courses of action that will provide pollution reduction co-benefits and long-term cost savings and reduce litigation risk to Federal actions—including projects carried out pursuant to the Bipartisan Infrastructure Law<sup>13</sup> and the Inflation Reduction Act.<sup>14</sup>

This interim<sup>15</sup> GHG guidance, effective upon publication, builds upon and updates CEQ's 2016 *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* ("2016 GHG Guidance"), highlighting best practices for analysis grounded in science and agency experience.<sup>16</sup> CEQ is issuing this guidance to provide for greater clarity and more consistency in how agencies address climate change in NEPA reviews. This guidance applies longstanding NEPA principles to the analysis of climate change effects, which are a well-recognized category of effects on the human environment requiring consideration under NEPA. In fact, Federal agencies have been analyzing climate change impacts and GHG emissions in NEPA documents for many years. CEQ intends the guidance to assist agencies in publicly disclosing and considering the reasonably foreseeable effects of their proposed actions. CEQ encourages agencies to integrate the climate and other environmental considerations described in this guidance early in their planning processes. CEQ will review any agency proposals for revised NEPA procedures,

<sup>12</sup> See 42 U.S.C. 4332(2)(F) (requiring all Federal agencies to "recognize the worldwide and long-range character of environmental problems").

<sup>13</sup> Infrastructure Investment and Jobs Act, Public Law 117–58, 135 Stat. 429.

<sup>14</sup> Public Law 117–169, 136 Stat. 1818.

<sup>15</sup> CEQ is issuing this guidance as interim guidance so that agencies may make use of it immediately while CEQ seeks public comment on the guidance. CEQ may revise the guidance in response to public comments or finalize the interim guidance at a later date.

<sup>16</sup> 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*, 81 FR 51866 (Aug. 8, 2016), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa\\_final\\_ghg\\_guidance.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf). On April 5, 2017, CEQ withdrew the final 2016 guidance, as directed by E.O. 13783. 82 FR 16576 (Apr. 5, 2017). On June 26, 2019, CEQ issued draft GHG guidance. 84 FR 30097 (June 26, 2019). CEQ rescinded this draft guidance on February 19, 2021, pursuant to E.O. 13990. 86 FR 10252 (Feb. 19, 2021). In addition, on April 20, 2022, CEQ issued a Final Rule for its "Phase 1" NEPA rulemaking. 87 FR 23453. CEQ will be proceeding with updates to the NEPA regulations as set forth in the 2022 Regulatory Agenda.

including any revision of existing categorical exclusions, in light of this guidance.<sup>17</sup>

## II. Summary of Key Content

This guidance explains how agencies should apply NEPA principles and existing best practices to their climate change analyses by:

- Recommending that agencies leverage early planning processes to integrate GHG emissions and climate change considerations into the identification of proposed actions, reasonable alternatives (as well as the no-action alternative), and potential mitigation and resilience measures;
- Recommending that agencies quantify a proposed action's projected GHG emissions or reductions for the expected lifetime of the action, considering available data and GHG quantification tools that are suitable for the proposed action;
- Recommending that agencies use projected GHG emissions associated with proposed actions and their reasonable alternatives to help assess potential climate change effects;
- 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;
- Discussing methods to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions;
- Guiding agencies in considering reasonable alternatives and mitigation measures, as well as addressing short- and long-term climate change effects;
- Advising agencies to use the best available information and science when assessing the potential future state of the affected environment in NEPA analyses and providing up to date examples of existing sources of scientific information;
- Recommending agencies use the information developed during the NEPA review to consider reasonable alternatives that would make the actions

<sup>17</sup> See 40 CFR 1507.3. Agencies should review their policies and implementing procedures and revise them as necessary to ensure compliance with NEPA. Agency NEPA implementing procedures can be, but are not required to be, in the form of regulation. Section 1507.3 encourages agencies to publish explanatory guidance, and agencies also should consider whether any updates to explanatory guidance are necessary in light of this guidance.

and affected communities more resilient to the effects of a changing climate;

- Outlining unique considerations for agencies analyzing biogenic carbon dioxide sources and carbon stocks<sup>18</sup> associated with land and resource management actions under NEPA;

- Advising agencies that the "rule of reason" inherent in NEPA and the CEQ Regulations should guide agencies in determining, based on their expertise and experience, how to consider an environmental effect and prepare an analysis based on the available information; and

- Reminding agencies to incorporate environmental justice considerations into their analyses of climate-related effects, consistent with Executive Orders 12898 and 14008.

## III. Background

Consistent with NEPA, climate change analysis is a critical component of environmental reviews and integral to Federal agencies managing and addressing climate change.<sup>19</sup> Recognizing the increasing urgency of the climate crisis and advances in climate science and GHG analysis techniques, CEQ has clarified and updated its 2016 GHG guidance on particular components including basic updates to reflect developments in climate science, methods to provide context for the impacts associated with GHG emissions, analysis of indirect effects, programmatic approaches, and environmental justice considerations. This guidance is applicable to all Federal actions subject to NEPA, with a focus on those for which an environmental assessment or environmental impact statement is prepared.<sup>20</sup> This guidance does not—and cannot—expand the range of Federal agency actions that are subject to NEPA.<sup>21</sup>

<sup>18</sup> See *infra* section IV(I).

<sup>19</sup> This updated guidance is also consistent with E.O.s 13990, 14008, and 14057, which set forth commitments to address climate change; direct that Federal infrastructure investment reduce climate pollution; and that Federal permitting decisions consider the effects of GHG emissions and climate change. See E.O. 13990, 86 FR 7037 (Jan. 25, 2021); E.O. 14008, *supra* note 7; E.O. 14057, *supra* note 7.

<sup>20</sup> Notwithstanding this focus, where appropriate, agencies also should apply this guidance to consider climate impacts and GHG emissions in establishing new categorical exclusions (CEs) and extraordinary circumstances in their agency NEPA procedures. See 40 CFR 1507.3(e)(2)(ii); CEQ, *Final Guidance for Federal Departments and Agencies on Establishing, Applying, and Revising Categorical Exclusions Under the National Environmental Policy Act*, 75 FR 75628 (Dec. 6, 2010).

<sup>21</sup> See 40 CFR 1508.1(q).



## A. NEPA

NEPA is designed to promote consideration of potential effects on the human environment<sup>22</sup> that would result from proposed Federal agency actions, and to provide the public and decision makers with useful information regarding reasonable alternatives<sup>23</sup> and mitigation measures to improve the environmental outcomes of Federal agency actions. NEPA encourages early planning, ensures that the environmental effects of proposed actions are considered before decisions are made, and informs the public of significant environmental effects of proposed Federal agency actions, promoting transparency and accountability.<sup>24</sup>

Agencies implement NEPA through one of three levels of analysis: a categorical exclusion (CE); an environmental assessment (EA); or an environmental impact statement (EIS). Agencies have discretion in how they tailor their individual NEPA reviews in consideration of this guidance, consistent with the CEQ Regulations and their respective implementing procedures and policies.<sup>25</sup> NEPA reviews should identify measures to avoid, minimize, or mitigate adverse effects of Federal agency actions.<sup>26</sup> Better analysis and informed decisions are the ultimate goal of the NEPA process.<sup>27</sup> Inherent in NEPA and the CEQ Regulations is a “rule of reason” that allows agencies to determine, based on their expertise and experience, how to consider an environmental effect and prepare an analysis based on the available information. The usefulness of that information to the decision-making process and the public, and the extent of the anticipated environmental consequences, are important factors to consider when applying that “rule of reason.”

## B. Climate Change

Climate change is a defining national and global environmental challenge of this time, threatening broad and potentially catastrophic impacts to the human environment. It is well established that rising global

atmospheric GHG concentrations are substantially affecting the Earth's climate, and that the dramatic observed increases in GHG concentrations since 1750 are unequivocally caused by human activities including fossil fuel combustion.<sup>28</sup> CEQ's first Annual Report in 1970 discussed the various ways that human-driven actions were understood to potentially alter global temperatures and weather patterns.<sup>29</sup> At that time, the mean level of atmospheric carbon dioxide (CO<sub>2</sub>) had been measured as increasing to 325 parts per million (ppm) from a pre-Industrial average of 280 ppm.<sup>30</sup> Since 1970, the

<sup>28</sup> See, e.g., Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2021: The Physical Science Basis* (“The Physical Science Basis”), *Summary for Policymakers*, SPM-5 (Aug. 7, 2021), <https://www.ipcc.ch/report/ar6/wg1/chapter/summary-for-policymakers/> (“Observed increases in well-mixed greenhouse gas (GHG) concentrations since around 1750 are unequivocally caused by human activities”); see also id., *Technical Summary*, TS-45, <https://www.ipcc.ch/report/ar6/wg1/chapter/technical-summary/>; United States Global Change Research Program (“USGCRP”), *Fourth National Climate Assessment* (“Fourth National Climate Assessment”), *Volume II: Impacts, Risks, and Adaptation in the United States*, 76 (2018), <https://nca2018.globalchange.gov/> (“Many lines of evidence demonstrate that human activities, especially emissions of greenhouse gases from fossil fuel combustion, deforestation, and land-use change, are primarily responsible for the climate changes observed in the industrial era, especially over the last six decades.”); IPCC, *Climate Change 2014 Synthesis Report*, 46 (2014), [https://www.ipcc.ch/site/assets/uploads/2018/05/SYR\\_AR5\\_FINAL\\_full\\_wcover.pdf](https://www.ipcc.ch/site/assets/uploads/2018/05/SYR_AR5_FINAL_full_wcover.pdf) (“Emissions of CO<sub>2</sub> from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010 (high confidence).”). These conclusions are built upon a robust scientific record that has been created with substantial contributions from the USGCRP, which informs the United States’ response to global climate change through coordinated Federal programs of research, education, communication, and decision support. See section 103, Public Law 101–606, 104 Stat. 3096. For additional information on the USGCRP, visit <http://www.globalchange.gov>. The USGCRP, formerly the Climate Change Science Program, coordinates and integrates the activities of 13 Federal agencies that conduct research on changes in the global environment and their implications for society. The USGCRP began as a Presidential initiative in 1989 and was codified in the Global Change Research Act of 1990 (Pub. L. 101–606). USGCRP-participating agencies are the Departments of Agriculture, Commerce, Defense, Energy, the Interior, Health and Human Services, State, and Transportation; the U.S. Agency for International Development, the Environmental Protection Agency, NASA, the National Science Foundation, and the Smithsonian Institution.

<sup>29</sup> See CEQ, *Environmental Quality: The First Annual Report*, 93 (Aug. 1970), [https://ceq.doe.gov/ceq-reports/annual\\_environmental\\_quality\\_reports.html](https://ceq.doe.gov/ceq-reports/annual_environmental_quality_reports.html).

<sup>30</sup> See USGCRP, *Climate Change Impacts in the United States: The Third National Climate Assessment, Appendix 3: Climate Science Supplement*, 739 (J.M. Melillo et al. eds., 2014) (“Third National Climate Assessment”), U.S. Env’t Protection Agency (EPA), EPA 430–R–15–004, *Inventory of U.S. Greenhouse Gas Emissions and*

global average concentration of atmospheric CO<sub>2</sub> has increased to 414.21 ppm as of 2021, setting a new record high.<sup>31</sup> Methane is a potent GHG; over a 100-year period, the emissions of a ton of methane contribute 28 to 36 times as much to global warming as a ton of carbon dioxide. Over a 20-year timeframe, methane is about 84 times as potent as carbon dioxide.<sup>32</sup> Concentrations of methane (CH<sub>4</sub>), have more than doubled from pre-Industrial levels.<sup>33</sup> Methane concentrations continue to grow rapidly.<sup>34</sup> Concentrations of other GHGs have similarly continued to grow, including nitrous oxide (N<sub>2</sub>O) and hydrofluorocarbons (HFC).<sup>35</sup> Since the publication of CEQ's first Annual Report, human activities have caused the carbon dioxide content of the atmosphere of our planet to increase to

*Sinks, 1990–2013* (Apr. 2015), <https://www.epa.gov/sites/default/files/2015-12/documents/us-ghg-inventory-2015-main-text.pdf>; see also D.L. Hartmann et al., *Observations: Atmosphere and Surface, in Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (T.F. Stocker et al. eds., Cambridge Univ. Press 2013), [https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter02\\_FINAL.pdf](https://archive.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter02_FINAL.pdf).

<sup>31</sup> Nat'l Oceanic and Atmospheric Admin. (NOAA), *Climate Change: Atmospheric Carbon Dioxide* (June 23, 2022), <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>.

<sup>32</sup> Although there are different ways to weight methane compared to carbon dioxide, the U.S. nationally determined contribution (NDC) under the Paris Agreement uses the 100-year GWP from the IPCC's Fifth Assessment Report. See IPCC, *Climate Change 2014 Synthesis Report*, *supra* note 28, at 5. To avoid potential ambiguity, CEQ encourages agencies to use the 100-year GWP when disclosing the GHG emissions impact from an action in their NEPA documents.

<sup>33</sup> See EPA, Proposed Rule on Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review, 86 FR 63110, 63114 (Nov. 15, 2021), <https://www.federalregister.gov/d/2021-24202>; see also Climate and Clean Air Coalition and United Nations Environment Programme (UNEP), *Global Methane Assessment*, 18 (2021), <https://www.ccacoalition.org/en/resources/global-methane-assessment-full-report>; USGCRP, Fourth National Climate Assessment, *supra* note 28, Volume I, 82. Methane emissions are responsible for about 20 percent of climate forcing globally. See California Air Resources Board, *Short-Lived Climate Pollutant Reduction Strategy*, 7 (Mar. 2017), [https://ww2.arb.ca.gov/sites/default/files/2020-07/final\\_slcp\\_strategy.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-07/final_slcp_strategy.pdf).

<sup>34</sup> See, e.g., NOAA, *Increase in atmospheric methane set another record during 2021* (Apr. 7, 2022), <https://www.noaa.gov/news-release/increase-in-atmospheric-methane-set-another-record-during-2021>.

<sup>35</sup> See USGCRP, Fourth National Climate Assessment, *supra* note 28, Volume I, 81 (Figure 2.5).

<sup>22</sup> 42 U.S.C. 4331(a) (“[R]ecognizing the profound impact of [human] activity on the interrelations of all components of the natural environment . . .”).

<sup>23</sup> 40 CFR 1501.9(e)(2) (“Alternatives, which include the no action alternative; other reasonable courses of action; and mitigation measures (not in the proposed action).”).

<sup>24</sup> See 42 U.S.C. 4332 and 40 CFR 1501.2.

<sup>25</sup> See 40 CFR 1502.23 (methodology and scientific accuracy).

<sup>26</sup> 40 CFR 1505.2(a)(3).

<sup>27</sup> 40 CFR 1500.1(a) (“NEPA’s purpose is . . . to provide for informed decision making and foster excellent action.”).

its highest level in at least 800,000 years.<sup>36</sup>

Rising GHG levels are causing corresponding increases in average global temperatures and in the frequency and severity of natural disasters including storms, flooding, and wildfires.<sup>37</sup> Even if the United States and the world meet ambitious decarbonization targets, those trends will continue for many years, adversely affecting critical components of the human environment, including water availability, ocean acidity, sea-level rise, ecosystem functions, biodiversity, energy production, energy transmission and distribution, agriculture and food security, air quality, and human health.<sup>38</sup>

Based primarily on the scientific assessments of the U.S. Global Change Research Program (USGCRP), the National Research Council, and the Intergovernmental Panel on Climate Change (IPCC), in 2009 the Environmental Protection Agency (EPA) issued a finding that declared that the changes in our climate caused by elevated concentrations of GHGs in the atmosphere are reasonably anticipated to endanger the public health and welfare of current and future generations.<sup>39</sup> Since then, EPA has

<sup>36</sup> See Nat'l Aeronautics and Space Admin. (NASA) Earth Observatory, *The Carbon Cycle* (June 16, 2011), <http://earthobservatory.nasa.gov/Features/CarbonCycle/>; Univ. of Cal. Riverside, NASA, and Riverside Unified School District, *Down to Earth Climate Change*, <http://globalclimate.ucr.edu/resources.html>; USGCRP, Fourth National Climate Assessment, *supra* note 28, Volume II, 1454.

<sup>37</sup> See IPCC, *Climate Change 2022: Impacts, Adaptation, and Vulnerability* ("Climate Change 2022"), *Summary for Policymakers*, 8 (H.-O. Pörtner et al. eds., 2022), <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>; USGCRP, Fourth National Climate Assessment, *supra* note 28, Climate Science Special Report, Chapter 7, 207, [https://science.2017.globalchange.gov/downloads/CSSR\\_Ch7\\_Precipitation.pdf](https://science.2017.globalchange.gov/downloads/CSSR_Ch7_Precipitation.pdf); NOAA, *Climate Change Increased Chances of Record Rains in Louisiana by at Least 40 Percent* (Sept. 7, 2016), <https://www.noaa.gov/media-release/climate-change-increased-chances-of-record-rains-in-louisiana-by-at-least-40-percent>.

<sup>38</sup> See USGCRP, Fourth National Climate Assessment, *supra* note 28; IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate*, (H.-O. Pörtner et al., eds., 2019), <https://www.ipcc.ch/srocc/>; IPCC, *Special Report on Climate Change and Land*, (P.R. Shukla et al., eds., 2019), <https://www.ipcc.ch/srcl/>; see also USGCRP, <http://www.globalchange.gov>; 40 CFR 1508.1(g)(4) ("effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health" effects); USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* (2016), <https://health2016.globalchange.gov/>.

<sup>39</sup> See generally EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*; Final Rule, 74 FR 66496 (Dec. 15, 2009) (noting, for example,

acknowledged more recent scientific assessments that highlight the urgency of addressing the rising concentration of GHGs in the atmosphere<sup>40</sup> and has found that certain communities, including communities of color, low-income communities, Tribal Nations and Indigenous communities, are especially vulnerable to climate-related effects.<sup>41</sup> Climate change also is likely to increase a community's vulnerability to other environmental impacts, further exacerbating environmental justice concerns. The effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, increased drought, greater sea-level rise, an increase in the intensity and frequency of extreme weather events, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.<sup>42</sup> The

"[t]he evidence concerning how human-induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels," *id.* at 66497–98).

<sup>40</sup> See EPA, Final Rule for Phased-out of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act, 86 FR 55124 (Oct. 5, 2021), <https://www.federalregister.gov/d/2021-21030>.

<sup>41</sup> See EPA, Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units, 80 FR 64661, 64647 (Oct. 23, 2015), <https://www.federalregister.gov/d/2015-22842> ("[c]ertain groups, including children, the elderly, and the poor, are most vulnerable to climate-related effects." Recent studies also find that certain communities, including low-income communities and some communities of color . . . are disproportionately affected by certain climate change related impacts—including heat waves, degraded air quality, and extreme weather events—which are associated with increased deaths, illnesses, and economic challenges. Studies also find that climate change poses particular threats to the health, well-being, and ways of life of indigenous peoples in the U.S.); see also EPA, EPA 430-R-21-003, *Climate Change and Social Vulnerability in the United States: A Focus on Six Impacts* ("Six Impacts") (Sept. 2021), [https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability\\_september-2021\\_508.pdf](https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf).

<sup>42</sup> See 80 FR 64647, *supra* note 41; see also USGCRP, Fourth National Climate Assessment, *supra* note 28, Volume II, Chapters 2–12 (Sectors) and Chapters 18–27 (Regions); Thomas R. Knutson et al., *Global Projections of Intense Tropical Cyclone Activity for the Late Twenty-First Century from Dynamical Downscaling of CMIP5/RCP4.5 Scenarios*, 7221 (Sep. 15, 2015), <https://journals.ametsoc.org/view/journals/clim/28/18/1501-15029.1.xml>; Ashley E. Payne et al., *Responses and Impacts of Atmospheric Rivers to Climate Change*, 143, 154 (Mar. 9, 2020), <https://www.nature.com/articles/s43017-020-0030-5>; IPCC, *Climate Change 2022*, *supra* note 37; IPCC, *Special Report on Climate Change and Land*, *supra* note 38, at 270–72; U.S. Nat'l Park Service (NPS), *Wildlife*

IPCC Assessment Report reinforces these findings by providing scientific evidence of the impacts of climate change driven by human-induced GHG emissions, on our ecosystems, infrastructure, human health, and socioeconomic makeup.<sup>43</sup> Moreover, the effects of climate change are likely to fall disproportionately on vulnerable communities, including communities of color, low-income communities and Tribal Nations and Indigenous communities with environmental justice concerns.<sup>44</sup>

#### IV. Quantifying, Disclosing, and Contextualizing Climate Impacts, and Addressing the Potential Climate Change Effects of Proposed Federal Actions

Consistent with section 102(2)(C) of NEPA, Federal agencies must disclose and consider the reasonably foreseeable effects of their proposed actions including the extent to which a proposed action and its reasonable alternatives (including the no action alternative) would result in reasonably foreseeable GHG emissions that contribute to climate change. Federal agencies also should consider the ways in which a changing climate may impact the proposed action and its reasonable alternatives, and change the action's environmental effects over the lifetime of those effects.

This guidance is intended to assist agencies in disclosing and considering the effects of GHG emissions and climate change. This guidance does not establish any particular quantity of GHG emissions as "significantly" affecting the quality of the human environment. However, quantifying a proposed action's reasonably foreseeable GHG emissions whenever possible, and placing those emissions in appropriate context are important components of analyzing a proposed action's reasonably foreseeable climate change effects.

This section of the guidance identifies and explains the following steps agencies should take when analyzing a proposed action's climate change effects under NEPA:

(1) Quantify the reasonably foreseeable GHG emissions (including direct and indirect emissions) of a proposed action, the no action alternative, and any reasonable alternatives as discussed in Section IV(A) below.

*and Climate Change* (last updated Dec. 8, 2021), <https://www.nps.gov/articles/000/wildlife-climateimpact.htm>.

<sup>43</sup> See IPCC, *Climate Change 2022*, *supra* note 37, *Summary for Policymakers*.

<sup>44</sup> See, e.g., EPA, *Six Impacts*, *supra* note 41.

(2) Disclose and provide context for the GHG emissions and climate impacts associated with a proposed action and alternatives, including by, as relevant, monetizing climate damages using estimates of the SC-GHG, placing emissions in the context of relevant climate action goals and commitments, and providing common equivalents, as described below in Section IV(B).

(3) Analyze reasonable alternatives, including those that would reduce GHG emissions relative to baseline conditions, and identify available mitigation measures to avoid, minimize, or compensate for climate effects.

#### A. Quantifying a Proposed Action's GHG Emissions

To ensure that Federal agencies consider the incremental contribution of their actions to climate change, agencies should quantify the reasonably foreseeable direct and indirect GHG emissions of their proposed actions and reasonable alternatives (as well as the no-action alternative) and provide additional context to describe the effects associated with those projected emissions in NEPA analysis.<sup>45</sup>

Climate change results from an increase in atmospheric GHG concentrations from the incremental addition of GHG emissions from a vast multitude of individual sources.<sup>46</sup> The totality of climate change impacts is not attributable to any single action, but is exacerbated by a series of actions including actions taken pursuant to decisions of the Federal Government. Therefore, it is crucial for the Federal Government to analyze and consider the potential climate change effects of its proposed actions.<sup>47</sup>

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. 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.

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. This approach will also ensure the professional and scientific integrity of the NEPA review.<sup>48</sup>

As part of the NEPA documents they prepare, agencies should quantify the reasonably foreseeable gross GHG emissions increases and gross GHG emission reductions<sup>49</sup> for the proposed action, no action alternative, and any reasonable alternatives over their projected lifetime, using reasonably available information and data.<sup>50</sup> Agencies generally should quantify gross emissions increases or reductions (including both direct and indirect emissions) individually by GHG, as well as aggregated in terms of total CO<sub>2</sub>

equivalence<sup>51</sup> by factoring in each pollutant's global warming potential (GWP), using the best available science and data.<sup>52</sup> Agencies also should quantify proposed actions' total net GHG emissions or reductions<sup>53</sup> (both by pollutant and by total CO<sub>2</sub>-equivalent emissions) relative to baseline conditions.<sup>54</sup> To facilitate readability, agencies should include an overview of this information in the summary sections of EISs and, when relevant, in the summary section of EAs. Agencies also may use visual tools, such as charts and figures, to help readers more easily comprehend emissions data and compare emissions across alternatives.

Where feasible, agencies should also present annual GHG emission increases or reductions. This is particularly important where a proposed action presents both reasonably foreseeable GHG emission increases and GHG emission reductions. The agency generally should present annual GHG emissions increases or reductions, as well as net GHG emissions over the projected lifetime of the action, consistent with existing best practices.<sup>55</sup> Agencies should be guided by a rule of reason and the concept of proportionality in undertaking this analysis, particularly for proposed actions with net beneficial climate effects, as described below.

Quantification and assessment tools are widely available and are already in broad use in the Federal Government and private sector, by state and local governments, and globally. CEQ maintains a GHG Accounting Tools website listing many such tools.<sup>56</sup> These tools are designed to assist agencies, institutions, organizations, and companies that have different levels of

<sup>45</sup> This is typically expressed in metric tons of CO<sub>2</sub> equivalent, or mt CO<sub>2</sub>-e.

<sup>46</sup> As discussed above, methane is a potent GHG. See *supra* note 32.

<sup>47</sup> Net emissions can be calculated by totaling gross emissions (all reasonably foreseeable direct and indirect GHG emissions from the proposed action) and subtracting any gross emissions reductions from the proposed action, such as renewable energy generation that will displace more carbon intensive energy sources or the addition of carbon sinks. The resulting net value may be either a net increase in total GHG emissions or a net decrease in emissions. In rare circumstances, agencies should consider whether a significant delay between increased emissions and decreased emissions could undermine the value of a net emissions calculation as a metric of climate impact.

<sup>48</sup> See *infra* section IV(D).

<sup>49</sup> For example, certain types of actions may involve construction emissions in their first year or two, followed by operational emissions increases in a few years prior to achieving net emissions reductions in later years.

<sup>50</sup> See CEQ, *GHG Tools and Resources*, <https://ceq.doe.gov/guidance/ghg-tools-and-resources.html>.

<sup>45</sup> See 40 CFR 1502.16.

<sup>46</sup> Some sources emit GHGs in quantities that are orders of magnitude greater than others. See EPA, *Greenhouse Gas Reporting Program, 2021 Reported Data*, Figure 1: Direct GHG Emissions Reported by Sector (2021), <https://www.epa.gov/ghgreporting/ghgrp-reported-data> (showing amounts of GHG emissions by sector).

<sup>47</sup> In addition to NEPA's requirement to describe the environmental impacts of the proposed action and any adverse environmental effects that cannot be avoided should the proposal be implemented, 42 U.S.C. 4332(2)(C), NEPA also articulates a policy to use all practicable means and measures "to foster and promote the general welfare, to create and maintain conditions under which [humans] and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans," including by "attain[ing] the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences." 42 U.S.C. 4331(a)–(b).

<sup>48</sup> See 40 CFR 1502.23 (requiring agencies to ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

<sup>49</sup> Note that agencies should be guided by a rule of reason and the concept of proportionality in undertaking this analysis, particularly for proposed actions with net beneficial climate effects, as described in Section IV(A).

<sup>50</sup> See, e.g., *Sierra Club v. Fed. Energy Regul. Comm'n*, 867 F.3d 1357, 1374 (D.C. Cir. 2017); *San Juan Citizens Alliance v. Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227, 1241–44 (D.N.M. 2018); see generally *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973) ("Reasonable forecasting and speculation is thus implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'").

technical sophistication, data availability, and GHG source profiles. Agencies should use tools that reflect the best available science and data. These tools can provide GHG emissions estimates, including emissions from fossil fuel combustion and carbon sequestration<sup>57</sup> for many of the sources and sinks potentially affected by proposed resource management actions.<sup>58</sup> When considering which tools to employ, it is important to consider the proposed action's temporal scale and the availability of input data.<sup>59</sup> Furthermore, agencies should seek to obtain the information needed to quantify GHG emissions, including by requesting or requiring information held by project applicants or by conducting modeling when relevant.

In the rare instance when an agency determines that tools, methodologies, or data inputs are not reasonably available to quantify GHG emissions associated with a specific action, the agency should explain why such an analysis cannot be done, and should seek to present a reasonable estimated range of quantitative emissions for the proposed action and alternatives. Where tools are available for some aspects of the analysis but not others, agencies should use all reasonably available tools and describe any relevant limitations. Agencies are encouraged to identify and communicate any data or tool gaps that they encounter to CEQ.

If an agency determines that it cannot provide even a reasonable range of potential GHG emissions, the agency should provide a qualitative analysis and its rationale for determining that a quantitative analysis is not possible. A qualitative analysis may include sector-specific descriptions of the GHG emissions from the category of Federal agency action that is the subject of the NEPA analysis, but should seek to provide additional context for potential resulting emissions.

Agencies should be guided by the rule of reason, as well as their expertise and experience, in conducting analysis commensurate with the quantity of projected GHG emissions and using GHG quantification tools suitable for the

proposed action.<sup>60</sup> The rule of reason and the concept of proportionality caution against providing an in-depth analysis of emissions regardless of the insignificance of the quantity of GHG emissions that the proposed action would cause. For example, some proposed actions may involve net GHG emission reductions or no net GHG increase, such as certain infrastructure or renewable energy projects. For such actions, agencies should generally quantify projected GHG emission reductions, but may apply the rule of reason when determining the appropriate depth of analysis such that precision regarding emission reduction benefits does not come at the expense of efficient and accessible analysis. Absent exceptional circumstances, the relative minor and short-term GHG emissions associated with construction of certain renewable energy projects, such as utility-scale solar and offshore wind, should not warrant a detailed analysis of lifetime GHG emissions. As a second example, actions with only small GHG emissions may be able to rely on less detailed emissions estimates.

#### *B. Disclosing and Providing Context for a Proposed Action's GHG Emissions and Climate Effects*

In addition to quantifying emissions as described in Section IV(A), agencies should disclose and provide context for GHG emissions and climate effects to help decision makers and the public understand proposed actions' potential GHG emissions and climate change effects. To disclose effects and provide additional context for proposed actions' emissions once GHG emissions have been estimated, agencies should use the following best practices, as relevant:

(1) In most circumstances, once agencies have quantified GHG emissions, they should apply the best available estimates of the SC-GHG<sup>61</sup> to

<sup>60</sup> See 40 CFR 1502.2(b) (environmental impact statements shall discuss impacts in proportion to their significance); 40 CFR 1502.15 (data and analyses in a statement shall be commensurate with the importance of the impact).

<sup>61</sup> The SC-GHG estimates provide an aggregated monetary measure (in U.S. dollars) of the future stream of damages associated with an incremental metric ton of emissions and associated physical damages (e.g., temperature increase, sea-level rise, infrastructure damage, human health effects) in a particular year. The "Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990" released by the Interagency Working Group on Social Cost of Greenhouse Gases (IWG SC-GHG) in February 2021 presents interim estimates of the social cost of carbon, methane, and nitrous oxide, which are the same as those developed by the IWG in 2013 and 2016 (updated to 2020 dollars). See IWG SC-GHG, U.S. Gov't, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive*

the incremental metric tons of each individual type of GHG emissions<sup>62</sup> expected from a proposed action and its alternatives.<sup>63</sup> SC-GHG estimates allow monetization (presented in U.S. dollars) of the climate change effects from the marginal or incremental emission of GHG emissions, including carbon dioxide, methane, and nitrous oxide.<sup>64</sup> These 3 GHGs represent more than 97 percent of U.S. GHG emissions.<sup>65</sup> The SC-GHG provides an appropriate and valuable metric that gives decision makers and the public useful information and context about a proposed action's climate effects even if no other costs or benefits are monetized, because metric tons of GHGs can be difficult to understand and assess the significance of in the abstract.<sup>66</sup> The SC-GHG translates metric tons of emissions into the familiar unit of dollars, allows for comparisons to other monetized values, and estimates the damages associated with GHG emissions over time and associated with different GHG pollutants.<sup>67</sup> The SC-GHG also can

Order 13990 (Feb. 2021), [https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument\\_SocialCostofCarbonMethaneNitrousOxide.pdf](https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf). The Technical Support Document notes that estimates of the SC-GHG have been used in NEPA analysis.

<sup>62</sup> Note that applying the specific social cost of each individual GHG to the quantifications of that GHG is more accurate than transforming the gases into CO<sub>2</sub>-equivalents and then multiplying the CO<sub>2</sub>-equivalents by the social cost of CO<sub>2</sub>. See IWG SC-GHG, U.S. Gov't, *Addendum to Technical Support Document on Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide*, 2 (Aug. 2016), [https://www.epa.gov/sites/default/files/2016-12/documents/addendum\\_to\\_sc-ghg\\_tsd\\_august\\_2016.pdf](https://www.epa.gov/sites/default/files/2016-12/documents/addendum_to_sc-ghg_tsd_august_2016.pdf).

<sup>63</sup> See IWG SC-GHG, *Technical Support Document*, supra note 61. Agencies should typically apply the best available estimates of the SC-GHG to the incremental metric tons of GHG emissions expected from a proposed action and its alternatives. In uncommon circumstances, an agency may choose not to do so if doing so would be confusing, there are no available estimates for the GHG at issue, or, consistent with the concept of proportionality, an agency does not produce a quantitative estimate of GHG emissions because the emissions at issue are *de minimis*.

<sup>64</sup> Estimates of SC-HFCs have been developed and are available for use in NEPA analysis. See, e.g., EPA, *Regulatory Impact Analysis for Phasing Down Production and Consumption of Hydrofluorocarbons (HFCs)* (June 2022), <https://www.epa.gov/system/files/documents/2022-07/RIA%20for%20Phasing%20Down%20Production%20and%20Consumption%20of%20Hydrofluorocarbons%20%28HFCs%29.pdf>.

<sup>65</sup> EPA, EPA 430-R-22-003, *Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990–2020* (Apr. 2022), <https://www.epa.gov/system/files/documents/2022-04/us-ghg-inventory-2022-main-text.pdf>.

<sup>66</sup> As described in section VI(F), NEPA does not require a cost-benefit analysis in which all monetized benefits and costs are directly compared.

<sup>67</sup> For example, if alternatives or mitigation strategies would result in varying emissions or

<sup>57</sup> Carbon sequestration is the long-term carbon storage in plants, soils, geologic formations, and oceans.

<sup>58</sup> For example, the U.S. Department of Agriculture's (USDA's) Forest Inventory and Analysis tool can be used to assess the carbon sequestration of existing forestry activities along with the reduction in carbon sequestration (emissions) of project-level activities. See USDA, *Forest Inventory Data & Tools (FIA)*, <https://www.fs.usda.gov/research/products/dataandtools/forestinventorydata>.

<sup>59</sup> See 40 CFR 1502.21.

assist agencies and the public in assessing the significance of climate impacts. This is a simple and straightforward calculation that should not require additional time or resources.

Certain circumstances may make monetization using the SC-GHG particularly useful, such as if a NEPA review monetizes other costs and benefits for the proposed action (see Section VI(F)); if the alternatives differ in GHG emissions over time or in the type of GHGs emitted; or if the significance of climate change effects is difficult to assess or not apparent to the public without monetization. SC-GHG estimates can help describe the net social costs of increasing GHG emissions as well as the net social benefits of reducing such emissions. Given NEPA's mandates to consider worldwide and long-range environmental problems,<sup>68</sup> it is most appropriate for agencies to focus on SC-GHG estimates that capture global climate damages and, consistent with the best available science, reflect a timespan covering the vast majority of effects and discount future effects at rates that consider future generations. It is often also worth affirming that SC-GHG estimates, including those available at the publication of this guidance, may be conservative underestimates because various damage categories (like ocean acidification) are not currently included.

(2) Where helpful to provide context, such as for proposed actions with relatively large GHG emissions or reductions or that will expand or perpetuate reliance on GHG-emitting energy sources, agencies should explain how the proposed action and alternatives would help meet or detract from achieving relevant climate action goals and commitments, including Federal goals, international agreements, state or regional goals, Tribal goals, agency-specific goals, or others as appropriate.<sup>69</sup> However, as explained

reductions of carbon dioxide, methane, and nitrous oxide over time, presenting emissions estimates in metric tons of each gas, or in metric tons of CO<sub>2</sub>e, alone cannot fully illustrate the differences in the temporal pathways of these pollutants' impacts on society. The SC-GHG estimates can capture these differences when estimating the damages from the emission of each specific pollutant in a common unit of measurement, *i.e.*, the U.S. Dollar.

<sup>68</sup> See, *e.g.*, NEPA's direction that agencies shall consider the "worldwide and long-range character of environmental problems." 42 U.S.C. 4332(2)(F).

<sup>69</sup> For example, the U.S. Department of the Interior's Bureau of Land Management (BLM) has discussed how agency actions in California, especially joint projects with the State, may or may not facilitate California reaching its GHG emission reduction goals, including goals under the State's Assembly Bill 32 (Global Warming Solutions Act) and related legislation. See, *e.g.*, BLM, Desert

above, 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. Such comparisons and fractions are not an appropriate method for characterizing the extent of a proposed action's and its alternatives' contributions to climate change. Agencies also should discuss whether and to what extent the proposal's reasonably foreseeable GHG emissions are consistent with GHG reduction goals, such as those reflected in the U.S. nationally determined contribution under the Paris Agreement. Federal planning documents that illustrate multi-decade pathways to achieve policy may also provide useful information, such as the *Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050*.<sup>70</sup> Similarly, agencies' own climate goals may provide relevant context. Evaluating a proposed action's and its alternatives' consistency with such goals and commitments can help illuminate the policy context, the importance of considering alternatives and mitigation, and tradeoffs of the decision and help agencies evaluate the significance of a proposed action's GHG emissions and climate change effects. This type of comparison provides a different kind of disclosure and context than that provided by application of SC-GHG estimates as described above, demonstrating the potential utility of multiple contextualization methods.

(3) Where relevant, agencies should summarize and cite to available scientific literature to help explain the real-world effects—including those that will be experienced locally in relation to the proposed action—associated with an increase in GHG emissions that contribute to climate change, such as sea-level rise, temperature changes, ocean acidity, and more frequent and severe wildfires and drought, and

Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement, Vol. I, section I.3.3.2, 12 (Oct. 2015), [https://eplanning.blm.gov/public\\_projects/lup/66459/20012403/250016887/I.3\\_Planning\\_Process.pdf](https://eplanning.blm.gov/public_projects/lup/66459/20012403/250016887/I.3_Planning_Process.pdf); see also 40 CFR 1506.2(d) (directing agencies to discuss any inconsistency of a proposed action with an approved State, Tribal, or local plan or law); BLM, Environmental Assessment for Oberon Renewable Energy Project, 33–34 (Aug. 2021), [https://eplanning.blm.gov/public\\_projects/2001226/200478716/20043975/250050165/Environmental%20Assessment%20Main%20Text.pdf](https://eplanning.blm.gov/public_projects/2001226/200478716/20043975/250050165/Environmental%20Assessment%20Main%20Text.pdf).

<sup>70</sup> U.S. Dep't of State (DOS) & U.S. Exec. Off. of the President (EOP), *The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050* (Nov. 2021), <https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf>.

human health effects (including to underserved populations).<sup>71</sup> Agencies should use the best available information, including scenarios and climate modeling information that are most relevant to a proposed action.<sup>72</sup>

(4) Agencies also can provide accessible comparisons or equivalents to help the public and decision makers understand GHG emissions in more familiar terms. Techniques may include placing a proposed action's GHG emissions in more familiar metrics such as household emissions per year, annual average emissions from a certain number of cars on the road, or gallons of gasoline burned.<sup>73</sup> Such comparisons may be a useful supplement and can, for example, be presented along with monetized damage estimates using SC-GHG values. Agencies should use disclosure and contextualization methods that best fit their proposed actions and alternatives.

### C. Reasonable Alternatives

Considering reasonable alternatives, including alternatives that avoid or mitigate GHG emissions, is fundamental to the NEPA process and accords with Sections 102(2)(C) and 102(2)(E) of NEPA, which independently require the consideration of alternatives in environmental documents.<sup>74</sup> NEPA calls upon agencies to use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects on the human environment.<sup>75</sup>

Consideration of alternatives provides an agency decision maker the information needed to examine other possible approaches to a particular proposed action (including the no action alternative) that could alter environmental effects or the balance of factors considered in making the decision. Agencies make better informed decisions by comparing relevant GHG emissions, GHG emission reductions, and carbon sequestration potential across reasonable alternatives, assessing trade-offs with other environmental values, and evaluating

<sup>71</sup> For example, see the scientific studies referenced in section III(B).

<sup>72</sup> In addition, newer tools or modelling may enable agencies in some cases to provide information on localized or "downscaled" climate effects in addition to global effects. See, *e.g.*, Romany M. Webb et al., *Evaluating Climate Risk in NEPA Reviews: Current Practices and Recommendations for Reform*, 29, <https://blogs.edf.org/climate411/files/2022/02/Evaluating-Climate-Risk-in-NEPA-Reviews-Full-Report.pdf>.

<sup>73</sup> See EPA's equivalency calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

<sup>74</sup> See 42 U.S.C. 4332(2)(C) and (2)(E).

<sup>75</sup> See 42 U.S.C. 4332(2)(C)(iii); 40 CFR 1502.1, 1502.14.

the risks from or resilience to climate change inherent in a proposed action and its design.

Agencies must consider a range of reasonable alternatives, as well as reasonable mitigation measures if not already included in the proposed action or alternatives, consistent with the level of NEPA review (e.g., EA or EIS) and the purpose and need for the proposed action.<sup>76</sup> Agencies should leverage the early phases of their existing planning processes to help identify potential alternatives to address an action's anticipated environmental effects. When analyzing alternatives, agencies should compare the anticipated levels of GHG emissions from each alternative—including the no action alternative—and mitigation to provide information to the public and enable the decision maker to make an informed choice. To help provide clarity, agencies should consider presenting charts, tables, or figures, as appropriate, to compare GHG emissions and climate effects across alternatives.

Neither NEPA, the CEQ Regulations, or this guidance require the decision maker to select the alternative with the lowest net GHG emissions or climate costs or the greatest net climate benefits. However, and in line with the urgency of the climate crisis, agencies should use the information provided through the NEPA process to help inform decisions that align with climate change commitments and goals. For instance, agencies should evaluate reasonable alternatives that may have lower GHG emissions, which could include technically and economically feasible clean energy alternatives to proposed fossil fuel-related projects, and consider mitigation measures to reduce GHG emissions to the greatest extent possible.

Where relevant—such as for proposed actions that will generate substantial GHG emissions—agencies should identify the alternative with the lowest net GHG emissions or the greatest net climate benefits among the alternatives they assess. And, as described throughout this guidance, they should use the NEPA process to make informed decisions grounded in science that are transparent with respect to how Federal actions will help meet climate change goals and commitments, or alternately, detract from them.

#### D. Baseline for Considering Environmental Effects

A NEPA review must identify the area affected by a proposed action (i.e., the

affected environment).<sup>77</sup> Identification of the affected environment includes identifying and describing reasonably foreseeable environmental trends, including climate change effects. The NEPA review also must identify the current and projected future state of the affected environment without the proposed action (i.e., the no action alternative), which serves as the baseline for considering the effects of the proposed action and its reasonable alternatives.<sup>78</sup> For an estimate of GHG emissions from the proposed action to have meaningful context, an accurate estimate of GHG emissions without the proposed action should be included in a NEPA review. The temporal bounds for the analysis are determined by the projected initiation of the action and the expected life of the proposed action and its effects.<sup>79</sup> It is noteworthy that the impacts of GHGs can be very long-lasting.<sup>80</sup>

#### E. Direct and Indirect Effects

NEPA requires agencies to consider the reasonably foreseeable direct and indirect effects of their proposed actions and reasonable alternatives (as well as the no-action alternative).<sup>81</sup> The term “direct effects” refers to reasonably foreseeable effects that are caused by the action and occur at the same time and place.<sup>82</sup> The term “indirect effects” refers to effects that are caused by the action and are later in time or farther removed in distance, but are still

reasonably foreseeable.<sup>83</sup> Indirect effects generally include reasonably foreseeable emissions related to a proposed action that are upstream or downstream of the activity resulting from the proposed action.<sup>84</sup> For example, where the proposed action involves fossil fuel extraction, direct emissions typically include GHGs emitted during the process of exploring for and extracting the fossil fuel. The reasonably foreseeable indirect effects of such an action likely would include effects associated with the processing, refining, transporting, and end-use of the fossil fuel being extracted, including combustion of the resource to produce energy. Indirect emissions<sup>85</sup> are often reasonably foreseeable since quantifiable connections frequently exist between a proposed activity that involves use or conveyance of a commodity or resource, and changes relating to the production or consumption of that resource.<sup>86</sup>

As discussed in Section IV(A), agencies generally should quantify all reasonably foreseeable emissions associated with a proposed action and reasonable alternatives (as well as the no-action alternative). Quantification should include the reasonably foreseeable direct and indirect GHG emissions of their proposed actions. Agencies also should disclose the information and any assumptions used in the analysis and explain any uncertainty.<sup>87</sup> In assessing a proposed action's, and reasonable alternatives', reasonably foreseeable direct and indirect GHG emissions, the agency should use the best available information.<sup>88</sup> As with any NEPA review, the rule of reason should guide the agency's analysis and the level of

<sup>77</sup> See 40 CFR 1502.15 (providing that environmental impact statements shall succinctly describe the environmental impacts on the area(s) to be affected or created by the alternatives under consideration).

<sup>78</sup> See, e.g., CEQ, Memorandum to Agencies: Forty Most Asked Questions Concerning CEQ's NEPA Regulations, Question 3, “No-Action Alternative” (1986) (“This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives”).

<sup>79</sup> CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* (1997), [https://ceq.doe.gov/publications/cumulative\\_effects.html](https://ceq.doe.gov/publications/cumulative_effects.html). Agencies also should consider proposed actions pursuant to E.O. 13653, *Preparing the United States for the Impacts of Climate Change*, 78 FR 66817 (Nov. 6, 2013), which considers how capital investments will be affected by a changing climate over time.

<sup>80</sup> Elevated concentrations of carbon dioxide will persist in the atmosphere for hundreds or thousands of years, so the earth will continue to warm in the coming decades. The warmer it gets, the greater the risk for more severe changes to the climate and the earth's system. EPA, *Impacts of Climate Change*, <https://www.epa.gov/climatechange-science/impacts-climate-change> (last updated Aug. 19, 2022); EPA, *Understanding Global Warming Potentials*, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials> (last updated May 5, 2022).

<sup>81</sup> 42 U.S.C. 4332(2)(C)(i); 40 CFR 1508.1(g).

<sup>82</sup> 40 CFR 1508.1(g)(1).

<sup>83</sup> 40 CFR 1508.1(g)(2); see also *Birckhead v. Fed. Energy Regul. Comm'n*, 925 F.3d 510, 516 (D.C. Cir. 2019).

<sup>84</sup> These indirect emissions are sometimes referred to as “upstream” or “downstream emissions,” described in relation to where in the causal chain they fall relative to the proposed action.

<sup>85</sup> As used in this guidance, “indirect emissions” refers to emissions that are indirect effects of the proposed action.

<sup>86</sup> For example, natural gas pipeline infrastructure creates the economic conditions for additional natural gas production and consumption, including both domestically and internationally, which produce indirect (both upstream and downstream) GHG emissions that contribute to climate change.

<sup>87</sup> See 40 CFR 1502.21.

<sup>88</sup> For example, agencies may consider consulting information available from the U.S. Energy Information Administration, the International Energy Agency, the Federal Energy Management Program, or the Department of Energy. See, e.g., U.S. Energy Info. Admin., *Annual Energy Outlook 2022* (Mar. 3, 2022), <https://www.eia.gov/outlooks/aeo/>; International Energy Agency (IEA), *Net Zero by 2050*, (May 2021), <https://www.iea.org/reports/net-zero-by-2050>.

<sup>76</sup> See 42 U.S.C. 4332(2)(C), 4332(2)(E), and 40 CFR 1502.14(e), 1501.5(c)(2). The purpose and need for action usually reflects both the extent of the agency's statutory authority and its policies.

effort can be proportionate to the scale of the net GHG effects and whether net effects are positive or negative, with actions resulting in very few or an overall reduction in GHG emissions generally requiring less detailed analysis than actions with large emissions.<sup>89</sup>

Agencies should seek to obtain the information needed to quantify emissions, including by requesting or requiring information held by other entities (such as project applicants), because such information is generally essential to reasoned decision making.<sup>90</sup> Where information regarding direct or indirect emissions is not available, agencies should make best efforts to develop a range of potential emissions.<sup>91</sup> Agencies can provide an upper bound for effects analysis by treating the resource provided or enabled by the actions they take as new or additional. In the example of fossil fuel extraction or transportation, this is sometimes referred to as a “full burn” assumption, as the agency can provide an upper bound estimate of GHG emissions by assuming that all of the available resources will be produced and combusted to create energy.<sup>92</sup>

Some proposed actions, such as those increasing the supply of certain energy resources like oil, natural gas, or renewable energy generation, may result in changes to the resulting energy mix as energy resources substitute for one another on the domestic or global energy market.<sup>93</sup> Different energy

resources emit different amounts of GHGs and other air pollutants.<sup>94</sup> For proposed actions involving such resource substitution considerations, where relevant, CEQ encourages agencies to conduct substitution analysis to provide more information on how a proposed action and its alternatives are projected to affect the resulting resource or energy mix, including resulting GHG emissions.<sup>95</sup> Substitution analysis generally is relevant to actions related to the extraction, transportation, refining, combustion, or distribution of fossil fuels, for example. Agencies should not simply assume that if the federal action does not take place, another action will perfectly substitute for it and generate identical emissions, such that the action’s net emissions relative to the baseline are zero.<sup>96</sup> Such an assumption of perfect substitution typically contradicts basic economic principles of supply and demand.<sup>97</sup> Instead, where relevant, agencies can use available models to help conduct substitution analysis.<sup>98</sup> Agencies should disclose any assumptions and inputs used in substitution analysis and use models that accurately account for reasonable and available energy substitute resources, including renewable energy. Further, the analysis generally should be complemented with evaluation that compares the proposed action’s and reasonable alternatives’ energy use

sources. A force that drives up the cost of coal could thus drive down coal consumption.”); *see also* Jayni Hein and Natalie Jacewicz, *Implementing NEPA in the Age of Climate Change*, 10 Mich. J. Envtl L. 1, 40–43 (2020) (describing energy substitution analysis and how agencies can conduct it for NEPA analysis).

<sup>94</sup> *See* Hein & Jacewicz, *supra* note 93, at 42 (citing B.D. Hong & E.R. Slatick, U.S. Energy Info. Admin., *Carbon Dioxide Emission Factors for Coal*, [https://www.eia.gov/coal/production/quarterly/co2\\_article/co2.html](https://www.eia.gov/coal/production/quarterly/co2_article/co2.html)).

<sup>95</sup> *See, e.g.*, Peter Howard, Inst. for Pol’y Integrity, N.Y.U. Sch. of L., *The Bureau of Land Management’s Modeling Choice for the Federal Coal Programmatic Review* (June 2016), [https://policyintegrity.org/files/publications/BLM\\_Model\\_Choice.pdf](https://policyintegrity.org/files/publications/BLM_Model_Choice.pdf) (describing multiple power sector models available to Federal agencies for use in NEPA analysis); *see also* *WildEarth Guardians*, 870 F.3d at 1235 (holding that an agency’s “blanket assertion that coal would be substituted from other sources, unsupported by hard data, does not provide ‘information sufficient to permit a reasoned choice’ between the preferred alternative and no action alternative.”).

<sup>96</sup> Hein & Jacewicz, *supra* note 93, at 43–44 (describing the fallacy of perfect substitution); *id.* at 51–52 (describing litigation concerning the Wright Area coal leases).

<sup>97</sup> *See, e.g.*, *WildEarth Guardians*, 870 F.3d at 1235–37.

<sup>98</sup> Available models include the Bureau of Ocean Energy Management’s Revised Market Simulation Model, the U.S. Energy Information Administration’s National Energy Modeling System, and ICF International’s Integrated Planning Model.

against scenarios or energy use trends that are consistent with achieving science-based GHG reduction goals, such as those pursued in the *Long-Term Strategy of the United States*.<sup>99</sup>

In addition to addressing an action’s direct and indirect effects, NEPA requires agencies to address the effects of “connected” actions.<sup>100</sup> When evaluating a proposed Federal action, agencies should account for other closely related actions that should be discussed in the same EIS or EA. Actions are connected if they: (i) automatically trigger other actions that may require environmental impact statements; (ii) cannot or will not proceed unless other actions are taken previously or simultaneously; or (iii) are interdependent parts of a larger action and depend on the larger action for their justification.<sup>101</sup> For example, NEPA reviews for proposed resource extraction and development projects typically should address the reasonably foreseeable effects of other closely related agency actions that authorize separate phases or aspects of development. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.

#### F. Cumulative Effects

In addition to analyzing a proposed action’s direct and indirect effects, NEPA and CEQ’s regulations require an agency to also consider the proposed action’s cumulative effects.<sup>102</sup> Cumulative effects are effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.<sup>103</sup> In evaluating a proposed action’s cumulative climate change effects, an

<sup>99</sup> DOS & EOP, *supra* note 70; *see also* Hein & Jacewicz, *supra* note 93, at 48 (stating, “[a] far more rational approach would be to model at least two policy scenarios: one taking the ‘constant demand’ approach, and the other based on fossil fuel consumption consistent with meeting the 1.5 or 2 degrees Celsius warming targets laid out in the Paris Accord.”).

<sup>100</sup> Note that the concepts of “connected actions” and “indirect effects” bear some similarities but are analytically distinct. “Connected actions” are actions related to a proposed action that an agency must consider in the same environmental impact statement. *See* 40 CFR 1501.9(e)(1). “Indirect effects” are not actions in themselves, but rather reasonably foreseeable effects that are caused by the proposed action.

<sup>101</sup> 40 CFR 1501.9(e)(1).

<sup>102</sup> *See* 40 CFR 1502.16, 1508.1(g)(3).

<sup>103</sup> 40 CFR 1508.1(g)(3).

<sup>89</sup> For example, as noted in section (IV)(A)(1), for proposed actions that involve net GHG emission reductions (such as renewable energy projects), agencies should attempt to quantify net GHG emission reductions, but may apply the rule of reason when determining the appropriate depth of analysis such that precision regarding emission reduction benefits does not come at the expense of efficient and accessible analysis.

<sup>90</sup> *See* 40 CFR 1502.21(b); *see also* *Birkhead*, 925 F.3d at 520; *Barnes v. U.S. Dep’t of Transp.*, 655 F.3d 1124 (9th Cir. 2011). Agencies also may consider amendments to their regulations, where appropriate, to ensure they are able to gather from applicants the information needed to analyze the climate change effects of proposed actions.

<sup>91</sup> *See, e.g.*, Jayni Hein, Jason Schwartz, and Avi Zevin, *Pipeline Approvals and Greenhouse Gas Emissions*, 29–30 (Apr. 2019), discussing availability of tools for quantifying substitution effects and noting the need for further modeling tool development.

<sup>92</sup> A full burn assumption is consistent with analyses prepared by some agencies. *See* BLM, Environmental Assessment, DOI-BLM-CO-S010-2011-0074-EA, 81 (2017), [https://eplanning.blm.gov/public\\_projects/nepa/70895/127910/155610/King\\_II\\_Lease\\_Mod\\_Final\\_EA\\_2017-1012.pdf](https://eplanning.blm.gov/public_projects/nepa/70895/127910/155610/King_II_Lease_Mod_Final_EA_2017-1012.pdf) (stating that the agency “assume[d] that the remaining portion of the maximum year coal to be shipped . . . is eventually combusted.”).

<sup>93</sup> *See, e.g.*, *WildEarth Guardians v. BLM.*, 870 F.3d 1222, 1235 (10th Cir. 2017) (“[W]hen coal carries a higher price, for whatever reason that may be, the nation burns less coal in favor of other

agency should consider the proposed action in the context of the emissions from past, present, and reasonably foreseeable actions. When assessing cumulative effects, agencies should also consider whether certain communities experience disproportionate cumulative effects, thereby raising environmental justice concerns.<sup>104</sup>

All types of GHG emissions contribute to real-world physical changes. Given that climate change is the result of the increased global accumulation of GHGs climate effects analysis is inherently cumulative in nature. Thus, the analysis and public disclosure of cumulative effects can be accomplished by quantifying GHG emissions and providing context for understanding their effects as discussed above, including by monetizing climate damages using estimates of the SC–GHG, placing those damages in the context of relevant climate action goals and commitments, and summarizing and citing to available scientific literature to help explain real world effects.

#### G. Short- and Long-Term Effects

When considering effects, agencies should take into account both the short- and long-term adverse and beneficial effects using a temporal scope that is grounded in the concept of reasonable foreseeability. Some proposed actions and reasonable alternatives will require consideration of effects from different stages of the action to ensure the direct effects and reasonably foreseeable indirect effects are appropriately assessed; for example, the effects of construction are different from the effects of the operations and maintenance of a facility.

The effects analysis should cover the action's reasonably foreseeable lifetime, including anticipated GHG emissions associated with construction, operations, and decommissioning. Agencies should identify an appropriate lifetime for the proposed action using available indicators and guided by the concept of reasonable foreseeability.

Identifying an appropriate lifetime for the action also will inform assessment of long-term emissions benefits of proposed actions and reasonable alternatives. For example, development of a new wind energy project may result in short-term construction GHG emissions but overall long-term GHG benefits. Agencies should describe both short- and long-term effects in comparison to the no action alternative in NEPA reviews and clearly explain the net effect of their actions even if

precision regarding the timing of short- and long-term effects is not possible.

#### H. Mitigation

Identifying and analyzing potential mitigation measures is an important component of the NEPA process.<sup>105</sup> Evaluating potential mitigation measures generally involves first determining whether impacts from a proposed action or alternatives can be avoided, then considering whether adverse impacts can be minimized, then, when impacts are unavoidable, rectifying them and, if appropriate, requiring compensation for residual impacts.<sup>106</sup> Mitigation plays a particularly important role in how agencies should assess the potential climate change effects of proposed actions and reasonable alternatives. Agencies should consider mitigation measures that will avoid or reduce GHG emissions. Given the urgency of the climate crisis, CEQ encourages agencies to mitigate GHG emissions to the greatest extent possible.

Agencies should consider mitigation, particularly avoidance and minimization, as early as possible in the development of their actions, including during scoping, public engagement, and alternatives analysis. As part of early and meaningful public engagement, agencies should solicit public input on potential mitigation measures, including from communities that the proposed action and reasonable alternatives may affect. In their NEPA documents, agencies should discuss any mitigation measures considered and whether they included those measures in the preferred alternative. Where potential mitigation measures are not adopted, agencies should explain why as early as practicable in the NEPA process.

Agencies should consider available mitigation measures that avoid, minimize, or compensate for GHG emissions and climate change effects when those measures are reasonable and consistent with achieving the purpose and need for the proposed action. Such mitigation measures could include enhanced energy efficiency, renewable energy generation and energy storage,

lower-GHG-emitting technology, reduced embodied carbon in construction materials, carbon capture and sequestration, sustainable land management practices, and capturing GHG emissions such as methane.

Federal agencies also should evaluate the quality of that mitigation by ensuring it meets appropriate performance standards.<sup>107</sup> Appropriate performance standards help ensure that GHG mitigation is additional, verifiable, durable, enforceable, and will be implemented.<sup>108</sup> NEPA does not limit consideration of mitigation to actions involving significant effects. However, mitigation can be particularly effective in helping agencies reduce or avoid significant effects.<sup>109</sup> Agencies can discuss the scope of their mitigation authority to support any mitigation commitments relied upon in NEPA analysis, including mitigation supporting a finding of no significant impact.<sup>110</sup> In addition, consistent with existing agency best practice, an agency's decision on a proposed action should identify the mitigation measures that the agency commits to take, recommends, or requires others to take.<sup>111</sup>

The CEQ Regulations and guidance also recognize the value of monitoring to ensure that mitigation is carried out as provided in a record of decision or finding of no significant impact.<sup>112</sup> Monitoring intensity and duration

<sup>107</sup> See CEQ, Memorandum to Heads of Federal Agencies, Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact ("Appropriate Use of Mitigation and FONSI Memo"), 8–9, 76 FR 3843 (Jan. 21, 2011), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

<sup>108</sup> See *id.*; see also U.S. Army Corps of Engineers and EPA, Final Rule, Compensatory Mitigation for Losses of Aquatic Resources, 73 FR 19593 (Apr. 10, 2008) (discussing verifiable and enforceable performance standards for mitigation).

<sup>109</sup> See 40 CFR 1501.6(c).

<sup>110</sup> See *id.* (The finding of no significant impact shall state the authority for any mitigation that the agency has adopted and any applicable monitoring or enforcement provisions. If the agency finds no significant impacts based on mitigation, the mitigated finding of no significant impact shall state any enforceable mitigation requirements or commitments that will be undertaken to avoid significant impacts.); see also CEQ, Appropriate Use of Mitigation and FONSI Memo, *supra* note 107, at 7 ("Mitigation commitments needed to lower the level of impacts so that they are not significant should be clearly described in the mitigated FONSI document and in any other relevant decision documents related to the proposed action.")

<sup>111</sup> See CEQ, Appropriate Use of Mitigation and FONSI Memo, *supra* note 107, at 13–14.

<sup>112</sup> See 40 CFR 1505.2(a)(3), 1505.3; see also CEQ, Appropriate Use of Mitigation and FONSI Memo, *supra* note 107.

<sup>105</sup> See 42 U.S.C. 4332(2)(C) (requiring consideration of mitigation measures in impact statements by requiring the consideration of "any adverse environmental effects which cannot be avoided").

<sup>106</sup> See 40 CFR 1508.1(s), 1501.9(e)(2) (alternatives include mitigation measures not included in the proposed action); see generally 10 CFR 900.3 (2019) (identifying "mitigation hierarchy" as "first seeking to avoid, then minimize impacts, then, when necessary, compensate for residual impacts"); U.S. Fish and Wildlife Service (FWS) Mitigation Policy (Nov. 21, 2016), <https://www.federalregister.gov/d/2016-27751>.

<sup>104</sup> See *infra* section VI(E).



should be aligned with the mitigation action taken.

Finally, while this subsection primarily addresses mitigating a proposed action's GHG emissions, agencies also should consider environmental design features, alternatives, and mitigation measures to address the effects of climate change on the proposed action, including to enhance resilience and adaptation. See Section IV(D).

### *I. Special Considerations for Biological GHG Sources and Sinks*

Many GHG emissions come from combusting fossil fuels and releasing substances into the atmosphere.<sup>113</sup> In addition to these sources, some GHG emissions are related to the natural carbon cycle,<sup>114</sup> or result from the combustion, harvest, decomposition, or other processing of biologically based materials.<sup>115</sup> These types of emissions are referred to as "biogenic."<sup>116</sup> Biogenic GHG emissions from land management actions—such as prescribed burning, timber stand improvements, fuel load reductions, and scheduled harvesting—involve GHG emissions and carbon sequestration that operate within the global carbon and

<sup>113</sup> Burning fossil fuels (such as oil, coal, and natural gas), wood, and other forms of carbon releases stored carbon into the atmosphere, where it becomes a GHG. GHGs are gases in the atmosphere that absorb and release heat. Dep't of Energy, Off. of Science, *DOE Explains...the Carbon Cycle*, <https://www.energy.gov/science/doe-explains-the-carbon-cycle>.

<sup>114</sup> The carbon cycle is the process that moves carbon between plants, animals, and microbes; minerals in the earth; and the atmosphere. Most carbon on Earth is stored in rocks and sediments. The rest is in the ocean, atmosphere, and in living organisms. Scientists use the term "carbon sinks" to refer to places where carbon is stored away from the atmosphere. *Id.*

<sup>115</sup> Fossil fuels are not considered biologically based materials. See, e.g., EPA, *Framework for Assessing Biogenic CO<sub>2</sub> Emissions from Stationary Sources*, 5 (Nov. 2014), <https://www.epa.gov/sites/default/files/2016-08/documents/framework-for-assessing-biogenic-co2-emissions.pdf> ("In contrast to the relatively short timescale of the biological carbon cycle, carbon in fossil fuel reservoirs, such as coal seams and oil and gas deposits, was removed from the atmosphere by plants over millions of years but was not returned to the atmosphere through the natural processes described above. Instead, because of geologic processes, the carbon that accumulated in these deposits has been isolated from the active biological cycling of carbon to and from the atmosphere. Without human intervention, carbon in fossil fuel reservoirs could remain isolated from the biogeochemical cycling of carbon long into the future.")

<sup>116</sup> EPA, *Carbon Dioxide Emissions Associated with Bioenergy and Other Biogenic Sources*, [https://19january2017snapshot.epa.gov/climatechange/carbon-dioxide-emissions-associated-bioenergy-and-other-biogenic-sources\\_.html](https://19january2017snapshot.epa.gov/climatechange/carbon-dioxide-emissions-associated-bioenergy-and-other-biogenic-sources_.html); see also Merriam-Webster Dictionary, *Biogenic* (Online Ed., last updated Oct. 21, 2022), <https://www.merriam-webster.com/dictionary/biogenic> (defining "biogenic" as "produced by living organisms").

nitrogen cycle, which may be affected by those actions. Similarly, some water management practices have GHG emission consequences that may require unique consideration (e.g., reservoir management practices can reduce methane releases, wetlands management practices can enhance carbon sequestration, and water conservation can improve energy efficiency).

In the land and resource management context, how a proposed action and reasonable alternatives (as well as the no-action alternative) affects a net carbon sink or source will depend on multiple factors such as the local or regional climate and environment, the distribution of carbon across carbon pools in the action area, ongoing activities and trends, and the role of natural disturbances in the relevant area.

In NEPA reviews, for actions involving potential changes to biological GHG sources and sinks, agencies should include a comparison of net GHG emissions and carbon stock<sup>117</sup> changes that are anticipated to occur, with and without implementation of the proposed action and reasonable alternatives. The analysis should consider the estimated GHG emissions (from biogenic and fossil-fuel sources), carbon sequestration potential, and the net change in relevant carbon stocks in light of the proposed actions and timeframes under consideration, and explain the basis for the analysis.

Some actions that involve ecosystem restoration<sup>118</sup> can generate short-term biogenic emissions while resulting in overall long-term net reductions of atmospheric GHG concentrations through increases in carbon stocks or reduced risks of future emissions. One example is certain vegetation management practices that affect the risk of wildfire, insect and disease outbreak, or other disturbance. Some resource management activities, such as a prescribed burn or certain non-commercial thinning of forests or grasslands conducted to reduce wildfire risk or insect infestations, might result in short-term GHG emissions or loss of stored carbon but greater long-term ecosystem health, including an overall net increase in carbon sequestration and storage. However, other types of land-

<sup>117</sup> See, e.g., 10 CFR 300.2 ("Carbon stocks mean the quantity of carbon stored in biological and physical systems including: trees, products of harvested trees, agricultural crops, plants, wood and paper products and other terrestrial biosphere sinks, soils, oceans, and sedimentary and geological sinks.")

<sup>118</sup> For example, Federal agencies sometimes consider actions that would benefit ecosystems by restoring degraded lands or restoring shoreline.

use changes, such as permanent deforestation, can adversely alter ecosystem long-term carbon dynamics, resulting in net emissions. Agencies can use relevant tools to analyze the anticipated long-term GHG emissions implications from proposed ecosystem restoration actions.

Federal land and resource management agencies should consider developing and maintaining agency-specific principles and guidance for considering biological carbon in management and planning decisions.<sup>119</sup> Such guidance can help address the importance of considering biogenic carbon fluxes and storage within the context of other management objectives and ecosystem service goals, and integrating carbon considerations as part of a balanced and comprehensive program of sustainable management, climate change mitigation, and climate change adaptation.

### **V. Considering the Effects of Climate Change on a Proposed Action**

According to the USGCRP and others, GHGs already in the atmosphere will continue altering the climate system into the future, even with current or future emissions control efforts.<sup>120</sup> To illustrate how climate change may impact proposed actions and alternatives and to consider climate resilience, NEPA reviews should consider the ongoing impacts of climate change and the foreseeable state of the environment, especially when evaluating project design, siting, and reasonable alternatives. In addition, climate change resilience<sup>121</sup> and adaptation<sup>122</sup> are important

<sup>119</sup> See, e.g., USDA Forest Service, *Considering Forest and Grassland Carbon in Land Management* (2017), <https://www.fs.usda.gov/research/treearch/54316>; see also U.S. Dep't of the Interior, Order No. 3399, *Department-Wide Approach to the Climate Crisis and Restoring Transparency and Integrity to the Decision-Making Process* (Apr. 16, 2021), [https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3399-508\\_0.pdf](https://www.doi.gov/sites/doi.gov/files/elips/documents/so-3399-508_0.pdf).

<sup>120</sup> See USGCRP, Fourth National Climate Assessment, *supra* note 28, Chapter 2, *Our Changing Climate*, <https://nca2018.globalchange.gov/chapter/2/>.

<sup>121</sup> Resilience refers to the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from disruption. U.S. Dep't of Commerce Nat'l Inst. of Standards and Tech. (NIST), SP 800-160 Vol. 2, Rev. 1, 76, [https://csrc.nist.gov/glossary/term/resilience#:~:text=with%20mission%20needs,.Source\(s\)%3A,naturally%20occurring%20threats%20or%20incidents.](https://csrc.nist.gov/glossary/term/resilience#:~:text=with%20mission%20needs,.Source(s)%3A,naturally%20occurring%20threats%20or%20incidents.)

<sup>122</sup> Adaptation refers to actions taken at the individual, local, regional, and national levels to reduce risks from even today's changed climate conditions and to prepare for impacts from additional changes projected for the future. USGCRP, Fourth National Climate Assessment, *supra* note 28, Chapter 28, *Reducing Risks Through*

considerations for agencies contemplating and planning actions.<sup>123</sup>

#### A. Affected Environment

Agencies should identify the affected environment to provide a basis for comparing the current and future state of the environment as affected by the proposed action or its reasonable alternatives.<sup>124</sup> As discussed in Section IV(D), the current and projected future state of the environment without the proposed action (*i.e.*, the no action alternative) represents the reasonably foreseeable affected environment. In considering the effects of climate change on a proposed action, the agency should describe the affected environment for the proposed action based on the best available climate change reports,<sup>125</sup> which often project at least two possible future emissions scenarios.<sup>126</sup> The temporal bounds for the description of the affected environment are determined by the projected initiation of implementation and the expected life of the proposed action and its effects.<sup>127</sup>

#### B. Effects

The analysis of climate change effects should focus on those aspects of the human environment that are impacted by the agency's potential action (*i.e.*, the proposed action or its alternatives) and climate change. The analysis also should consider how climate change can make a resource, ecosystem, human community, or structure more vulnerable to many types of effects and lessen its resilience to other environmental effects. This increase in vulnerability can exacerbate the environmental effects of potential actions, including environmental justice impacts. For example, a proposed action or its alternatives may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to a water body that is

already warming due to increasing atmospheric temperatures. Such considerations are squarely within the scope of NEPA and can inform decisions on siting, whether to proceed with and how to design potential actions and reasonable alternatives, and to eliminate or mitigate effects exacerbated by climate change. They also can inform possible adaptation measures to address the effects of climate change, ultimately enabling the selection of smarter, more resilient actions.

#### C. Using Available Assessments and Scenarios To Assess Present and Future Impacts

In accordance with NEPA's rule of reason and standards for obtaining information regarding reasonably foreseeable effects on the human environment, agencies may summarize and incorporate by reference relevant scientific literature concerning the physical effects of climate change.<sup>128</sup> For example, agencies may summarize and incorporate by reference the relevant chapters of the most recent national climate assessments or reports from the USGCRP and the IPCC.<sup>129</sup> Particularly relevant to some proposed actions and reasonable alternatives are the most current reports on climate change effects on water resources, ecosystems, vulnerable communities, agriculture and forestry, health, coastlines, and ocean and arctic regions in the United States.<sup>130</sup>

Agencies should remain aware of the evolving body of scientific information as more refined estimates of the effects of climate change, both globally and at a localized level, become available.<sup>131</sup> Agencies should use the most up-to-date scientific projections available, identify any methodologies and sources used, and where relevant, disclose any relevant limitations of studies, climate models, or projections they rely on.<sup>132</sup>

In addition to considering climate change effects at the relevant global and national levels, agencies should identify and use information on future projected

GHG emissions scenarios to evaluate potential future impacts (such as flooding, high winds, extreme heat, and other climate change-related impacts) and what those impacts will mean for the physical and other relevant conditions in the affected area. Such information should help inform development of the proposed action and alternatives, including by ensuring that proposed actions and alternatives consider appropriate resilience measures, environmental justice issues, and existing State, Tribal, or local adaptation plans. When relying on a single study or projection, agencies should consider any relevant limitations and discuss them.<sup>133</sup>

#### D. Resilience and Adaptation

As discussed in Section III(B), climate change presents risks to a wide array of potential actions across a range of sectors. Agencies should consider climate change effects on the environment and on proposed actions in assessing vulnerabilities and resilience to the effects of climate change such as increasing sea level, drought, high intensity precipitation events, increased fire risk, or ecological change.

Consistent with NEPA, environmental reviews should provide relevant information that agencies can use to consider siting issues, the initial project design and consistency with existing State, Tribal, and local adaptation plans, as well as reasonable alternatives with preferable overall environmental outcomes and improved resilience to climate effects.<sup>134</sup> Climate resilience and adaptation may be particularly relevant to the description of a proposed action, the alternatives analysis, and the description of environmental consequences. For instance, agencies should consider increased risks associated with development in floodplains, avoiding such development wherever there is a practicable alternative, as required by Executive Orders 11988 and 13690.<sup>135</sup> Agencies also should consider the likelihood of increased temperatures and more frequent or severe storm events over the lifetime of the proposed action, and reasonable alternatives (as well as the

*Adaptation Actions*, <https://nca2018.globalchange.gov/chapter/28/>.

<sup>123</sup> See E.O. 14008, *supra* note 7 and E.O. 14057, *supra* note 7.

<sup>124</sup> See 40 CFR 1502.15 (providing that environmental impact statements shall succinctly describe the environmental impacts on the area(s) to be affected or created by the alternatives under consideration). Note, however, that GHG emissions have effects that are global in scale.

<sup>125</sup> See, e.g., USGCRP, Fourth National Climate Assessment, *supra* note 28 (regional impacts chapters).

<sup>126</sup> See, e.g., *id.* (considering a low future global emissions scenario and a high emissions scenario).

<sup>127</sup> CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act*, *supra* note 79. Agencies also should consider their work under relevant executive orders. See E.O. 13990, *supra* note 16; E.O. 14008, *supra* note 7; E.O. 14057, *supra* note 7. Note that the effects of GHG emissions by their nature can be very long-lasting.

<sup>128</sup> See 40 CFR 1501.12 (material may be incorporated by reference if it is reasonably available for inspection by potentially interested persons during public review and comment).

<sup>129</sup> See USGCRP, Fourth National Climate Assessment, *supra* note 28; IPCC, *The Physical Science Basis*, *supra* note 28.

<sup>130</sup> See USGCRP, Fourth National Climate Assessment, *supra* note 28. Agencies should consider the latest final assessments and reports as they are updated.

<sup>131</sup> See, e.g., *id.*

<sup>132</sup> See 40 CFR 1502.23. Agencies can consult [www.data.gov/climate/portals](http://www.data.gov/climate/portals) for model data archives, visualization tools, and downscaling results.

<sup>133</sup> *Id.*

<sup>134</sup> See 40 CFR 1502.16(a)(5), 1506.2(d).

<sup>135</sup> See E.O. 11988, *Floodplain Management*, 42 FR 26951 (May 24, 1977), <http://www.archives.gov/federal-register/codification/executive-order/11988.html>; E.O. 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*, 80 FR 6425 (Jan. 30, 2015), <https://www.federalregister.gov/d/2015-02379> (reinstated by E.O. 14030, *Climate-Related Financial Risk*, 86 FR 27967 (May 20, 2021), <https://www.federalregister.gov/d/2021-11168>).

no-action alternative).<sup>136</sup> For example, an agency considering a proposed development of transportation infrastructure on a coastal barrier island should consider climate change effects on the environment and, as applicable, consequences of rebuilding where sea level rise and more intense storms will shorten the projected life of the project and change its effects on the environment.<sup>137</sup>

Agencies should integrate the NEPA review process with the agency's planning, siting, and design efforts at the earliest possible time that would allow for a meaningful analysis.<sup>138</sup> Agencies may incorporate information developed during early planning processes that precede a NEPA review into the NEPA review. Decades of NEPA practice have shown that integrating environmental considerations with the planning processes provides useful information that program and project planners can consider in designing the proposed action, alternatives, and potential mitigation measures.

Agencies also may consider co-benefits of the proposed action, alternatives, and potential mitigation measures for human health, economic

and social stability, ecosystem services, or other benefits that increase climate change preparedness or resilience. Individual agency adaptation plans and interagency adaptation strategies, such as agency Climate Adaptation Plans, the National Fish, Wildlife and Plants Climate Adaptation Strategy, and the National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate, provide other good examples of the type of relevant and useful information that agencies can consider.<sup>139</sup>

Considering the effects of climate change on a proposed action, and reasonable alternatives (as well as the no-action alternative), also helps to develop potential mitigation measures to reduce climate risks and promote resilience and adaptation. Where the analysis identifies climate-related risks to a proposed action or to the area affected by the proposed action, the agency should consider possible resilience and adaptation measures—including measures consistent with State, Tribal, or local adaptation plans—that could be employed to manage those effects. For example, where one or more climate effects could impair the operation of the proposed action, the agency should identify possible adaptation measures to enhance the action's climate resilience. The agency should indicate whether the proposed action includes measures to adapt to climate change and, if so, describe those measures and the climate projections that informed them. The agency also should consider whether any potential measures undertaken to address a proposed action's climate risk could result in any undesirable or unintended consequences.<sup>140</sup>

In addition, agencies should consider their ongoing efforts to incorporate environmental justice principles into their programs, policies, actions, and activities, including the environmental justice strategies required by Executive Orders 12898 and 14008, and consider whether the effects of climate change in association with the effects of the proposed action may result in disproportionately high and adverse effects on communities with environmental justice concerns, which often include communities of color, low-income communities, and Tribal Nations and Indigenous communities, in the area affected by the proposed action.<sup>141</sup> Federal agencies should identify any communities with environmental justice concerns, including communities of color, low-income communities, and Tribal Nations and Indigenous communities, impacted by the proposed action, and consider how impacts from the proposed action could potentially amplify climate change-related hazards such as storm surge, heat waves, drought, flooding, and sea level change.<sup>142</sup> Moreover, Executive Order 13985 calls for an all-of-government approach to advancing equity for underserved populations, including rural communities and persons with disabilities. Agencies should meaningfully engage with affected communities regarding their proposed actions and consider the effects of climate change on vulnerable communities in designing the action or selection of alternatives, including alternatives that can reduce disproportionate effects on such communities. For example, chemical facilities located near the coastline could have increased risk of spills or leaks due to sea level rise or increased storm surges, putting local communities and environmental resources at greater

<sup>136</sup> See, e.g., E.O. 14030, *supra* note 135.

<sup>137</sup> See U.S. Dep't of Transp., FHWA–HEP–15–007, *Assessing Transportation Vulnerability to Climate Change Synthesis of Lessons Learned and Methods Applied, Gulf Coast Study, Phase 2* (Oct. 2014), [http://www.fhwa.dot.gov/environment/climate\\_change/adaptation/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study/phase2\\_task6/fhwahep15007.pdf](http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/gulf_coast_study/phase2_task6/fhwahep15007.pdf) (focusing on the Mobile, Alabama region); U.S. Climate Change Science Program, *Impacts of Climate Change and Variability on Transportation Systems and Infrastructure, Gulf Coast Study, Phase I* (Mar. 2008), <https://downloads.globalchange.gov/sap/sap4-7/sap4-7-final-all.pdf> (focusing on a regional scale in the central Gulf Coast). Information about the Gulf Coast Study is available at [https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study/index.cfm](https://www.fhwa.dot.gov/environment/sustainability/resilience/ongoing_and_current_research/gulf_coast_study/index.cfm); see also Third National Climate Assessment, *supra* note 30, Chapter 28, *Adaptation*, 675, <http://nca2014.globalchange.gov/report/response-strategies/adaptation#intro-section-2> (noting that Federal agencies in particular can facilitate climate adaptation by “ensuring the establishment of [F]ederal policies that allow for ‘flexible’ adaptation efforts and take steps to avoid unintended consequences”).

<sup>138</sup> See 42 U.S.C. 4332 (“agencies of the Federal Government shall . . . utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making”); 40 CFR 1501.2 (“Agencies should integrate the NEPA process with other planning and authorization processes at the earliest reasonable time. . . .”); see also CEQ, Memorandum for Heads of Federal Departments and Agencies, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act* (“Efficient Environmental Reviews”), 77 FR 14473 (Mar. 12, 2012), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Improving\\_NEPA\\_Efficiencies\\_06Mar2012.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Improving_NEPA_Efficiencies_06Mar2012.pdf).

<sup>139</sup> See <https://www.sustainability.gov/progress.html> for agency sustainability plans and agency adaptation plans; see also U.S. Climate Resilience Tool Kit, *National Fish, Wildlife, and Plants Climate Adaptation Strategy*, <https://toolkit.climate.gov/tool/national-fish-wildlife-and-plants-climate-adaptation-strategy>; Interagency Climate Adaptation Task Force, *National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate* (Oct. 2011), [http://www.epa.gov/sites/default/files/2016-12/documents/2011\\_national\\_action\\_plan\\_1.pdf](http://www.epa.gov/sites/default/files/2016-12/documents/2011_national_action_plan_1.pdf); and CEQ, Off. of the Federal Chief Sustainability Officer, *Climate Resilient Infrastructure and Operations*, <https://www.sustainability.gov/adaptation/>.

<sup>140</sup> See, e.g., Jane Ebinger & Walter Vergara, World Bank, *Climate Impacts on Energy Systems: Key Issues for Energy Sector Adaptation*, 89–90 (2011), <https://openknowledge.worldbank.org/bitstream/handle/10986/2271/600510PUB0ID181impacts09780821386972.pdf?sequence=1&isAllowed=y> (describing the potential for adaptation-related decision errors including “maladaptation,” in which actions are taken that constrain the ability of other decision makers to manage the impacts of climate change).

<sup>141</sup> See *infra* Section VI(E); E.O. 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, 59 FR 7629 (Feb. 16, 1994), <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>, as amended by E.O. 14008, *supra* note 7, section 219 (“Agencies shall make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts.”); CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act* (Dec. 1997), <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>.

<sup>142</sup> See, e.g., Federal Interagency Working Group on Environmental Justice & NEPA Committee, *Promising Practices for EJ Methodologies in NEPA Reviews* (Mar. 2016), [https://www.epa.gov/sites/default/files/2016-08/documents/nepa\\_promising\\_practices\\_document\\_2016.pdf](https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf).

risk. Increased resilience could minimize such potential future effects. Finally, considering climate change preparedness and resilience can help ensure that agencies evaluate the potential for generating additional GHGs if a project has to be replaced, repaired, or modified, and minimize the risk of expending additional time and funds in the future.

## VI. Traditional NEPA Tools and Practices

### A. Scoping and Framing the NEPA Review

Scoping helps agencies integrate decision making, avoid duplication, and focus NEPA reviews.<sup>143</sup> In scoping, the agency determines the issues that the NEPA review will address and identifies the effects related to the proposed action that the analysis will consider.<sup>144</sup> An agency can use the scoping process to help it determine whether analysis is relevant and, if so, the extent of analysis appropriate for a proposed action.<sup>145</sup> When scoping for the climate change issues associated with the proposed action, and reasonable alternatives (as well as the no-action alternative), the nature, location, timeframe, and type of the proposed action and the extent of its effects will help determine the degree to which to consider climate projections, including whether climate change considerations warrant emphasis, detailed analysis, and disclosure.<sup>146</sup>

Consistent with this guidance, agencies may develop their own agency-specific practices and guidance for framing NEPA reviews. Grounded in the principles of proportionality and the rule of reason, such practices and guidance can help an agency determine the extent to which it should explore climate change effects in its decision-

making processes and will assist in the analysis of the no action and proposed alternatives and mitigation.<sup>147</sup> The agency should explain such a framing process and its application to the proposed action to the decision makers and the public during the NEPA review and in the EA or EIS document.

### B. Incorporation by Reference

Agencies should consider using incorporation by reference in considering GHG emissions or where an agency is considering the implications of climate change for the proposed action and its environmental effects. The NEPA review for a specific action can incorporate by reference earlier programmatic studies or information such as management plans, inventories, assessments, and research, as well as any relevant programmatic or other NEPA reviews.<sup>148</sup> Agencies should identify situations where prior studies or NEPA analyses are likely to cover emissions or adaptation issues, in whole or in part, and incorporate them by reference in NEPA documents (including tiered NEPA documents) where appropriate. Agencies should confirm that prior studies or programmatic documents were conducted within a reasonable timeframe of the proposed action under consideration such that underlying assumptions are still applicable. Incorporation by reference may be helpful when larger scale analyses have considered climate change effects and GHG emissions, and calculating GHG emissions for a specific action would provide only limited information beyond the information already collected and considered in the larger scale analyses.

Agencies should use the scoping process to consider whether they should incorporate by reference GHG analyses from other programmatic studies, action specific NEPA reviews, or programmatic NEPA reviews to avoid duplication of effort. Furthermore, agencies should engage other agencies and stakeholders with knowledge of related actions to participate in the scoping process to identify relevant GHG and adaptation

analyses from other actions or programmatic NEPA documents. In addition, agencies are encouraged to use searchable databases, websites, GIS tools, and other technology to share NEPA reviews with relevant agencies, stakeholders, and the public.

### C. Programmatic or Broad-Based Studies and NEPA Reviews

In the context of long-range energy, transportation, resource management, or similar programs or strategies, an agency may decide that it would be useful and efficient to provide an aggregate analysis of GHG emissions or climate change effects in a programmatic analysis and then incorporate it by reference into future NEPA reviews. These broad analyses may occur through programmatic NEPA documents, or they may occur through other processes by which agencies conduct analyses or studies at the national or other broad scale level (e.g., landscape, regional, or watershed) to assess the status of one or more resources or to determine trends in changing environmental conditions.<sup>149</sup> In appropriate circumstances, agencies may rely on programmatic analyses to make project-level NEPA reviews more efficient by evaluating and analyzing effects at an earlier stage and at a broader level than project-specific actions. Agencies also can use programmatic analysis to analyze emissions from related activities in a given region or sector, or to serve as benchmark against which agencies can measure site-specific actions.<sup>150</sup>

A tiered, analytical decision-making approach using a programmatic NEPA review is used for many types of Federal actions and can be particularly relevant to addressing proposed land, aquatic, and other resource management plans. Under such an approach, an agency conducts a broad-scale programmatic NEPA analysis for decisions such as establishing or revising the USDA Forest Service land management plans, Bureau of Land Management resource

<sup>143</sup> See 40 CFR 1501.9 (“Agencies shall use an early and open process to determine the scope of issues for analysis in an environmental impact statement, including identifying the significant issues and eliminating from further study non-significant issues.”); see also CEQ, *Efficient Environmental Reviews*, *supra* note 139 (the CEQ Regulations explicitly require scoping for preparing an EIS; however, agencies also can take advantage of scoping whenever preparing an EA).

<sup>144</sup> See 40 CFR 1500.4(d), 1500.4(i), 1501.9(a) and (e).

<sup>145</sup> See 40 CFR 1501.9 (The agency preparing the NEPA analysis must use the scoping process to, among other things, determine the scope and identify the significant issues to be analyzed in depth); CEQ, *Memorandum for General Counsels, NEPA Liaisons, and Participants in Scoping* (Apr. 30, 1981), [https://www.energy.gov/sites/default/files/nepapub/nepa\\_documents/RedDont/G-CEQ-scopingguidance.pdf](https://www.energy.gov/sites/default/files/nepapub/nepa_documents/RedDont/G-CEQ-scopingguidance.pdf).

<sup>146</sup> As noted *infra* in section VI(E), to address environmental justice concerns, agencies should use the scoping process to identify potentially affected communities and provide early notice of opportunities for public engagement.

<sup>147</sup> See, e.g., U.S. Forest Service, *The Science of Decisionmaking: Applications for Sustainable Forest and Grassland Management in the National Forest System* (2013), <https://www.fs.usda.gov/research/treesearch/44326>; U.S. Forest Service, *The Comparative Risk Assessment Framework and Tools* (2010), <https://www.fs.usda.gov/treesearch/pubs/34561>; Julien Martin, et al., *Structured decision making as a conceptual framework to identify thresholds for conservation and management*, 19 *Ecological Applications* 1079–90 (2009), <https://pubs.er.usgs.gov/publication/70036878>.

<sup>148</sup> See 40 CFR 1502.4(b), 1501.12.

<sup>149</sup> Programmatic studies may be distinct from programmatic NEPA reviews in which the programmatic action itself is subject to NEPA requirements. See CEQ, *Memorandum for Heads of Federal Departments and Agencies, Effective Use of Programmatic NEPA Reviews*, section I(A), 9 (Dec. 18, 2014), [https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective\\_Use\\_of\\_Programmatic\\_NEPA\\_Reviews\\_Final\\_Dec2014\\_searchable.pdf](https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec2014_searchable.pdf) (discussing non-NEPA types of programmatic analyses such as data collection, assessments, and research, which previous NEPA guidance described as joint inventories or planning studies).

<sup>150</sup> For instance, where a planning level programmatic review of GHG emissions indicates that a collection of individual actions will collectively reduce GHG emissions, the NEPA analyses for the individual actions can demonstrate that the action is consistent with the emission reductions examined in the programmatic review.

management plans, or Natural Resources Conservation Service conservation programs. Subsequent NEPA analyses for proposed site-specific decisions—such as proposed actions that are consistent with land, aquatic, and other resource management plans—may be tiered from the broader programmatic analysis, drawing upon its basic framework analysis to avoid repeating analytical efforts for each tiered decision. Examples of project- or site-specific actions that may benefit from being able to tier to a programmatic NEPA review include: siting and constructing transmission lines; siting and constructing wind, solar or geothermal projects; conducting wildfire risk reduction activities such as prescribed burns or hazardous fuels reduction; approving grazing leases; granting rights-of-way; and approving site-specific resilience or climate adaptation actions.

A programmatic NEPA review also may serve as an efficient mechanism in which to assess Federal agency efforts to adopt broad-scale sustainable practices for energy efficiency, GHG emissions avoidance and emissions reduction measures, petroleum product use reduction, and renewable energy use, as well as other sustainability practices.<sup>151</sup> While broad department- or agency-wide goals may be of a far larger scale than a particular program, policy, or proposed action, an analysis that informs how a particular action affects that broader goal can be of value.

#### D. Using Available Information

Agencies should make decisions using current scientific information and methodologies. CEQ does not necessarily expect agencies to fund and conduct original climate change research to support their NEPA analyses or for agencies to require project proponents to do so. Agencies should exercise their discretion to select and use the tools, methodologies, and scientific and research information that are of high quality and available to assess relevant effects, alternatives, and mitigation.<sup>152</sup>

#### E. Environmental Justice Considerations

Numerous studies have found that environmental hazards (including those driven by climate change) are more prevalent in and pose particular risks to areas where people of color and low-

income populations represent a higher fraction of the population compared with the general population.<sup>153</sup> The NEPA process calls for identifying potential environmental justice-related issues and meaningfully engaging with communities that proposed actions and reasonable alternatives (as well as the no-action alternative) may affect.

Agencies should be aware of the ongoing efforts to address the effects of climate change on human health and vulnerable communities.<sup>154</sup> Certain groups, including children, the elderly, communities with environmental justice concerns, which often include communities of color, low-income communities, Tribal Nations and Indigenous communities, and underserved communities are more vulnerable to climate-related health effects and may face barriers to engaging on issues that disproportionately affect them. CEQ recommends that agencies regularly engage environmental justice experts and leverage the expertise of the White House Environmental Justice Interagency Council<sup>155</sup> to identify approaches to avoid or minimize adverse effects on communities of color and low-income communities.<sup>156</sup>

When assessing environmental justice considerations in NEPA analyses, agencies should use the scoping process to identify potentially affected communities and provide early notice of opportunities for public engagement. This is important for all members of the public and stakeholders, but especially for communities of color and low-income communities, including those who have suffered disproportionate public health or environmental harms and those who are at increased risk for climate change-related harms. Agencies should engage such communities early

in the scoping and project planning process to understand any unique climate-related risks and concerns. Agencies also should use the NEPA process to identify and analyze reasonably foreseeable effects, reasonable alternatives, and measures to avoid or minimize any such effects.

#### F. Monetizing Costs and Benefits

NEPA does not require a cost-benefit analysis where all monetized benefits and costs are directly compared. In a NEPA review, the weighing of the merits and drawbacks of the various alternatives need not be displayed using a monetary cost-benefit analysis and should not be when there are important qualitative considerations.<sup>157</sup> Using the SC-GHG to provide an estimate of the cost to society from GHG emissions—or otherwise monetizing discrete costs or benefits of a proposed Federal action—does not necessitate conducting a benefit-cost analysis in NEPA documents. As described in Section IV(B), the SC-GHG estimates are useful information disclosure metrics that can help decision makers and the public understand and contextualize GHG emissions and climate damages. Agencies can use the SC-GHG to provide information on climate impacts even if other costs and benefits cannot be quantified or monetized.

If an agency determines that a monetary cost-benefit analysis is appropriate and relevant to the choice among different alternatives the agency is considering, the agency may include the analysis in or append it to the NEPA document, or incorporate it by reference<sup>158</sup> as an aid in evaluating the environmental consequences. For example, a rulemaking could have useful information for the NEPA review in an associated regulatory impact analysis, which the agency could incorporate by reference in a NEPA document.<sup>159</sup>

When using a monetary cost-benefit analysis, just as with tools to quantify emissions, an agency should disclose the assumptions, alternative inputs, and

<sup>153</sup> See, e.g., USGCRP, Fourth National Climate Assessment, *supra* note 28, Volume II, 342 and 1077–78; USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* (Apr. 2016), <https://health2016.globalchange.gov/downloads>; EPA, *Six Impacts*, *supra* note 41, at 8 (Figure ES.2), [https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability\\_september-2021\\_508.pdf](https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf).

<sup>154</sup> USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*, *supra* note 153.

<sup>155</sup> For more information on the White House Environmental Justice Interagency Council, see <https://www.energy.gov/lm/white-house-environmental-justice-interagency-council-resources>.

<sup>156</sup> President's Memorandum for the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (Feb. 11, 1994), [https://www.epa.gov/sites/production/files/2015-02/documents/clinton\\_memo\\_12898.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/clinton_memo_12898.pdf); CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act* (Dec. 10, 1997), <https://ceq.doe.gov/docs/ceq-regulations-and-guidance/regs/ej/justice.pdf>.

<sup>157</sup> See 40 CFR 1502.22.

<sup>158</sup> See 40 CFR 1501.12 (material may be cited if it is reasonably available for inspection by potentially interested persons within the time allowed for public review and comment).

<sup>159</sup> For example, the regulatory impact analysis was used as a source of information and aligned with the NEPA review for Corporate Average Fuel Economy (CAFE) standards. See Nat'l Highway Traffic Safety Admin., *Corporate Average Fuel Economy Standards, Passenger Cars and Light Trucks, Model Years 2017–2025, Final Environmental Impact Statement*, Docket No. NHTSA–2011–0056, section 5.3.2 (July 2012), <https://www.nhtsa.gov/corporate-average-fuel-economy/environmental-impact-statement-cafe-standards-2017-2025>.

<sup>151</sup> See E.O. 14057, *supra* note 7 (establishing government-wide and agency GHG reduction goals and targets).

<sup>152</sup> See 40 CFR 1502.23 (requiring agencies to ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

levels of uncertainty associated with such analysis. Finally, if an agency chooses to monetize some but not all effects of an action, the agency providing this additional information should explain its rationale for doing so.<sup>160</sup>

## VII. Conclusions and Effective Date

Agencies should use this guidance to inform the NEPA review for all new proposed actions. Agencies should exercise judgment when considering whether to apply this guidance to the extent practicable to an on-going NEPA process. CEQ does not expect agencies to apply this guidance to concluded NEPA reviews and actions for which a final EIS or EA has been issued. Agencies should consider applying this guidance to actions in the EIS or EA preparation stage if this would inform the consideration of alternatives or help address comments raised through the public comment process.

Dated: January 4, 2023.

**Brenda Mallory,**  
Chair.

[FR Doc. 2023-00158 Filed 1-6-23; 8:45 am]

BILLING CODE 3325-F3-P

## DEPARTMENT OF EDUCATION

[Docket No.: ED-2022-SCC-0112]

### Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Federal Direct Loan Program Regulations for Forbearance and Loan Rehabilitation

**AGENCY:** Federal Student Aid (FSA), Department of Education (ED).

**ACTION:** Notice.

**SUMMARY:** In accordance with the Paperwork Reduction Act (PRA) of 1995, the Department is proposing an extension without change of a currently approved information collection request (ICR).

**DATES:** Interested persons are invited to submit comments on or before February 8, 2023.

**ADDRESSES:** Written comments and recommendations for proposed information collection requests should

be submitted within 30 days of publication of this notice. Click on this link [www.reginfo.gov/public/do/PRAMain](http://www.reginfo.gov/public/do/PRAMain) to access the site. Find this information collection request (ICR) by selecting "Department of Education" under "Currently Under Review," then check the "Only Show ICR for Public Comment" checkbox. *Reginfo.gov* provides two links to view documents related to this information collection request. Information collection forms and instructions may be found by clicking on the "View Information Collection (IC) List" link. Supporting statements and other supporting documentation may be found by clicking on the "View Supporting Statement and Other Documents" link.

**FOR FURTHER INFORMATION CONTACT:** For specific questions related to collection activities, please contact Beth Grebeldinger, 202-377-4018.

**SUPPLEMENTARY INFORMATION:** The Department is especially interested in public comment addressing the following issues: (1) is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

*Title of Collection:* Federal Direct Loan Program Regulations for Forbearance and Loan Rehabilitation.

*OMB Control Number:* 1845-0119.

*Type of Review:* An extension without change of a currently approved ICR.

*Respondents/Affected Public:* Individuals and households.

*Total Estimated Number of Annual Responses:* 129,027.

*Total Estimated Number of Annual Burden Hours:* 35,094.

*Abstract:* This information collection for the Direct Loan (DL) Program regulations is related to regulations for forbearance in § 685.205 and reasonable and affordable loan rehabilitation in § 685.211. The Department of Education is requesting an extension without change of the current burden calculated for this information collection. Due to the COVID-19 pandemic and loan payment pause, there is not sufficient information to estimate burden changes. These regulations provide additional flexibilities for DL borrowers and permit oral requests for forbearance, as well as

allow a borrower to object to the initially established reasonable and affordable loan repayment amount. In addition, if a borrower incurs changes to his or her financial circumstances, the borrower can provide supporting documentation to change the amount of the reasonable and affordable loan monthly repayment amount. There has been no change to the regulatory language.

Dated: January 4, 2023.

**Juliana Pearson,**

*PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer, Office of Planning, Evaluation and Policy Development.*

[FR Doc. 2023-00160 Filed 1-6-23; 8:45 am]

BILLING CODE 4000-01-P

## ELECTION ASSISTANCE COMMISSION

### Sunshine Act Meetings

**AGENCY:** U.S. Election Assistance Commission.

**ACTION:** Sunshine Act notice; notice of public meeting agenda.

**SUMMARY:** Public Meeting: U.S. Election Assistance Commission Technical Guidelines Development Committee Annual Meeting.

**DATES:** Thursday, January 26, 2023, 1:00-4:30 p.m. ET.

**ADDRESSES:** The virtual meeting is open to the public and will be livestreamed on the U.S. Election Assistance Commission YouTube Channel: <https://www.youtube.com/channel/UCpN6i0g2rIF4ITWhwvBwwZw>.

**FOR FURTHER INFORMATION CONTACT:** Kristen Muthig, Telephone: (202) 897-9285, Email: [kmuthig@eac.gov](mailto:kmuthig@eac.gov).

**SUPPLEMENTARY INFORMATION:**

*Purpose:* In accordance with the Government in the Sunshine Act (Sunshine Act), Public Law 94-409, as amended (5 U.S.C. 552b), the U.S. Election Assistance Commission (EAC) will conduct the virtual annual meeting of the EAC Technical Guidelines Development Committee (TGDC) to discuss regular business of the board.

*Agenda:* The EAC and TGDC members will hold a virtual meeting to discuss program updates for EAC Testing and Certification and the National Institute of Standards and Technology (NIST) Voting Program. The meeting will also include the status of the Voluntary Electronic Pollbook Pilot Program, the annual review of proposed changes to the Voluntary Voting System Guidelines (VVSG), as well as public feedback from the October 2022 Path to

<sup>160</sup> For example, the information may be responsive to public comments or useful to the decision maker in further distinguishing between alternatives and mitigation measures. In all cases, the agency should ensure that its consideration of the information and other factors relevant to its decision is consistent with applicable statutory or other authorities, including requirements for the use of cost-benefit analysis.

# **EXHIBIT 3**



EXECUTIVE OFFICE OF THE PRESIDENT  
COUNCIL ON ENVIRONMENTAL QUALITY  
WASHINGTON, D.C. 20503

August 1, 2016

MEMORANDUM FOR HEADS OF FEDERAL DEPARTMENTS AND AGENCIES

FROM:

CHRISTINA GOLDFUSS  
COUNCIL ON ENVIRONMENTAL QUALITY

SUBJECT:

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

I. INTRODUCTION

The Council on Environmental Quality (CEQ) issues this guidance to assist Federal agencies in their consideration of the effects of greenhouse gas (GHG) emissions<sup>1</sup> and climate change when evaluating proposed Federal actions in accordance with the National Environmental Policy Act (NEPA) and the CEQ Regulations Implementing the Procedural Provisions of NEPA (CEQ Regulations).<sup>2</sup> This guidance will facilitate compliance with existing NEPA requirements, thereby improving the efficiency and consistency of reviews of proposed Federal actions for agencies, decision makers, project proponents, and the public.<sup>3</sup> The guidance provides Federal agencies a common

---

<sup>1</sup> For purposes of this guidance, CEQ defines GHGs in accordance with Section 19(m) of Exec. Order No. 13693, Planning for Federal Sustainability in the Next Decade, 80 Fed. Reg. 15869, 15882 (Mar. 25, 2015) (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride). Also for purposes of this guidance, "emissions" includes release of stored GHGs as a result of land management activities affecting terrestrial GHG pools such as, but not limited to, carbon stocks in forests and soils, as well as actions that affect the future changes in carbon stocks. The common unit of measurement for GHGs is metric tons of CO<sub>2</sub> equivalent (mt CO<sub>2</sub>-e).

<sup>2</sup> See 42 U.S.C. 4321 et seq.; 40 CFR Parts 1500–1508.

<sup>3</sup> This guidance is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances. This guidance does not change or substitute for any law, regulation, or other legally binding



approach for assessing their proposed actions, while recognizing each agency's unique circumstances and authorities.<sup>4</sup>

Climate change is a fundamental environmental issue, and its effects fall squarely within NEPA's purview.<sup>5</sup> Climate change is a particularly complex challenge given its global nature and the inherent interrelationships among its sources, causation, mechanisms of action, and impacts. Analyzing a proposed action's GHG emissions and the effects of climate change relevant to a proposed action—particularly how climate change may change an action's environmental effects—can provide useful information to decision makers and the public.

CEQ is issuing the guidance to provide for greater clarity and more consistency in how agencies address climate change in the environmental impact assessment process. This guidance uses longstanding NEPA principles because such an analysis should be similar to the analysis of other environmental impacts under NEPA. The guidance is intended to assist agencies in disclosing and considering the reasonably foreseeable effects of proposed actions that are relevant to their decision-making processes. It confirms that agencies should provide the public and decision makers with explanations of the basis for agency determinations.

---

requirement, and is not legally enforceable. The use of non-mandatory language such as “guidance,” “recommend,” “may,” “should,” and “can,” is intended to describe CEQ policies and recommendations. The use of mandatory terminology such as “must” and “required” is intended to describe controlling requirements under the terms of NEPA and the CEQ regulations, but this document does not affect legally binding requirements.

<sup>4</sup> This guidance also addresses recommendations offered by a number of stakeholders. See President's State, Local, and Tribal Leaders Task Force on Climate Preparedness and Resilience, *Recommendations to the President* (November 2014), p. 20 (recommendation 2.7), available at [www.whitehouse.gov/sites/default/files/docs/task\\_force\\_report\\_0.pdf](http://www.whitehouse.gov/sites/default/files/docs/task_force_report_0.pdf); U.S. Government Accountability Office, *Future Federal Adaptation Efforts Could Better Support Local Infrastructure Decision Makers*, (Apr. 2013), available at <http://www.gao.gov/assets/660/653741.pdf>. Public comments on drafts of this guidance document are available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/comments>.

<sup>5</sup> NEPA recognizes “the profound impact of man's activity on the interrelations of all components of the natural environment.” (42 U.S.C. 4331(a)). It was enacted to, *inter alia*, “promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man.” (42 U.S.C. 4321).

Focused and effective consideration of climate change in NEPA reviews<sup>6</sup> will allow agencies to improve the quality of their decisions. Identifying important interactions between a changing climate and the environmental impacts from a proposed action can help Federal agencies and other decision makers identify practicable opportunities to reduce GHG emissions, improve environmental outcomes, and contribute to safeguarding communities and their infrastructure against the effects of extreme weather events and other climate-related impacts.

Agencies implement NEPA through one of three levels of NEPA analysis: a Categorical Exclusion (CE); an Environmental Assessment (EA); or an Environmental Impact Statement (EIS). This guidance is intended to help Federal agencies ensure their analysis of potential GHG emissions and effects of climate change in an EA or EIS is commensurate with the extent of the effects of the proposed action.<sup>7</sup> Agencies have discretion in how they tailor their individual NEPA reviews to accommodate the approach outlined in this guidance, consistent with the CEQ Regulations and their respective implementing procedures and policies.<sup>8</sup> CEQ does not expect that implementation of this guidance will require agencies to develop new NEPA implementing procedures. However, CEQ recommends that agencies review their NEPA procedures and propose any updates they deem necessary or appropriate to facilitate their consideration of GHG emissions and climate change.<sup>9</sup> CEQ will review agency

---

<sup>6</sup> The term “NEPA review” is used to include the analysis, process, and documentation required under NEPA. While this document focuses on NEPA reviews, agencies are encouraged to analyze GHG emissions and climate-resilient design issues early in the planning and development of proposed actions and projects under their substantive authorities.

<sup>7</sup> See 40 CFR 1502.2(b) (Impacts shall be discussed in proportion to their significance); 40 CFR 1502.15 (Data and analyses in a statement shall be commensurate with the importance of the impact...).

<sup>8</sup> See 40 CFR 1502.24 (Methodology and scientific accuracy).

<sup>9</sup> See 40 CFR 1507.3. Agency NEPA implementing procedures can be, but are not required to be, in the form of regulation. Section 1507.3 encourages agencies to publish explanatory guidance, and agencies also should consider whether any updates to explanatory guidance are necessary. Agencies should review their policies and implementing procedures and revise them as necessary to ensure full compliance with NEPA.

proposals for revising their NEPA procedures, including any revision of CEs, in light of this guidance.

As discussed in this guidance, when addressing climate change agencies should consider: (1) The potential effects of a proposed action on climate change as indicated by assessing GHG emissions (e.g., to include, where applicable, carbon sequestration);<sup>10</sup> and, (2) The effects of climate change on a proposed action and its environmental impacts.

This guidance explains the application of NEPA principles and practices to the analysis of GHG emissions and climate change, and

- Recommends that agencies quantify a proposed agency action’s projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action;
- Recommends that agencies use projected GHG emissions (to include, where applicable, carbon sequestration implications associated with the proposed agency action) as a proxy for assessing potential climate change effects when preparing a NEPA analysis for a proposed agency action;
- Recommends that where agencies do not quantify a proposed agency action’s projected GHG emissions because tools, methodologies, or data inputs are not reasonably available to support calculations for a quantitative analysis, agencies include a qualitative analysis in the NEPA document and explain the basis for determining that quantification is not reasonably available;

---

<sup>10</sup> Carbon sequestration is the long-term carbon storage in plants, soils, geologic formations, and oceans.

- Discusses methods to appropriately analyze reasonably foreseeable direct, indirect, and cumulative GHG emissions and climate effects;
- Guides the consideration of reasonable alternatives and recommends agencies consider the short- and long-term effects and benefits in the alternatives and mitigation analysis;
- Advises agencies to use available information when assessing the potential future state of the affected environment in a NEPA analysis, instead of undertaking new research, and provides examples of existing sources of scientific information;
- Counsels agencies to use the information developed during the NEPA review to consider alternatives that would make the actions and affected communities more resilient to the effects of a changing climate;
- Outlines special considerations for agencies analyzing biogenic carbon dioxide sources and carbon stocks associated with land and resource management actions under NEPA;
- Recommends that agencies select the appropriate level of NEPA review to assess the broad-scale effects of GHG emissions and climate change, either to inform programmatic (e.g., landscape-scale) decisions, or at both the programmatic and tiered project- or site-specific level, and to set forth a reasoned explanation for the agency's approach; and
- Counsels agencies that the "rule of reason" inherent in NEPA and the CEQ Regulations allows agencies to determine, based on their expertise and

experience, how to consider an environmental effect and prepare an analysis based on the available information.

## II. BACKGROUND

### A. NEPA

NEPA is designed to promote consideration of potential effects on the human environment<sup>11</sup> that would result from proposed Federal agency actions, and to provide the public and decision makers with useful information regarding reasonable alternatives<sup>12</sup> and mitigation measures to improve the environmental outcomes of Federal agency actions. NEPA ensures that the environmental effects of proposed actions are taken into account before decisions are made and informs the public of significant environmental effects of proposed Federal agency actions, promoting transparency and accountability concerning Federal actions that may significantly affect the quality of the human environment. NEPA reviews should identify measures to avoid, minimize, or mitigate adverse effects of Federal agency actions. Better analysis and decisions are the ultimate goal of the NEPA process.<sup>13</sup>

Inherent in NEPA and the CEQ Regulations is a “rule of reason” that allows agencies to determine, based on their expertise and experience, how to consider an environmental effect and prepare an analysis based on the available information. The usefulness of that information to the decision-making process and the public, and the

---

<sup>11</sup> 40 CFR 1508.14 (“‘Human environment’ shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment.”).

<sup>12</sup> 40 CFR 1508.25(b) (“Alternatives, which include: (1) No action alternative. (2) Other reasonable courses of actions. (3) Mitigation measures (not in the proposed action).”).

<sup>13</sup> 40 CFR 1500.1(c) (“Ultimately, of course, it is not better documents but better decisions that count. NEPA’s purpose is not to generate paperwork—even excellent paperwork—but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.”).

extent of the anticipated environmental consequences are important factors to consider when applying that “rule of reason.”

## B. Climate Change

Climate change science continues to expand and refine our understanding of the impacts of anthropogenic GHG emissions. CEQ’s first Annual Report in 1970 referenced climate change, indicating that “[m]an may be changing his weather.”<sup>14</sup> At that time, the mean level of atmospheric carbon dioxide (CO<sub>2</sub>) had been measured as increasing to 325 parts per million (ppm) from an average of 280 ppm pre-Industrial levels.<sup>15</sup> Since 1970, the concentration of atmospheric carbon dioxide has increased to approximately 400 ppm (2015 globally averaged value).<sup>16</sup> Since the publication of CEQ’s first Annual Report, it has been determined that human activities have caused the carbon dioxide content of the atmosphere of our planet to increase to its highest level in at least 800,000 years.<sup>17</sup>

It is now well established that rising global atmospheric GHG emission concentrations are significantly affecting the Earth’s climate. These conclusions are built upon a scientific record that has been created with substantial contributions from the

---

<sup>14</sup> See CEQ, *Environmental Quality – The First Annual Report*, p. 93 (August 1970); available at [https://ceq.doe.gov/ceq\\_reports/annual\\_environmental\\_quality\\_reports.html](https://ceq.doe.gov/ceq_reports/annual_environmental_quality_reports.html).

<sup>15</sup> See USGCRP, *Climate Change Impacts in the United States – The Third National Climate Assessment* (Jerry M. Melillo, Terese (T.C.) Richmond, & Gary W. Yohe eds., 2014) [hereinafter “Third National Climate Assessment”], *Appendix 3 Climate Science Supplement*, p. 739; EPA, April 2015: *Inventory of U.S. Greenhouse Emissions and Sinks 1990-2013*, available at <https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2015-Main-Text.pdf>. See also Hartmann, D.L., A.M.G. Klein Tank, M. Rusticucci, et al., 2013 *Observations Atmosphere and Surface*. In *Climate Change 2013 The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Stocker, T.F., D. Qin, G.-K., et al. (eds)]. Cambridge University Press: Cambridge, United Kingdom and New York, NY, USA. Available at [http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5\\_Chapter02\\_Final.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Chapter02_Final.pdf).

<sup>16</sup> See Ed Dlugokencky & Pieter Tans, National Oceanic and Atmospheric Administration/Earth System Research Laboratory, <http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html>.

<sup>17</sup> See <http://earthobservatory.nasa.gov/Features/CarbonCycle>; University of California Riverside, National Aeronautics and Space Administration (NASA), and Riverside Unified School District, *Down to Earth Climate Change*, <http://globalclimate.ucr.edu/resources.html>; USGCRP, *Third National Climate Assessment, Appendix 3 Climate Science Supplement*, p. 736 (“Although climate changes in the past have been caused by natural factors, human activities are now the dominant agents of change. Human activities are affecting climate through increasing atmospheric levels of heat-trapping gases and other substances, including particles.”).

United States Global Change Research Program (USGCRP), which informs the United States’ response to global climate change through coordinated Federal programs of research, education, communication, and decision support.<sup>18</sup> Studies have projected the effects of increasing GHGs on many resources normally discussed in the NEPA process, including water availability, ocean acidity, sea-level rise, ecosystem functions, energy production, agriculture and food security, air quality and human health.<sup>19</sup>

Based primarily on the scientific assessments of the USGCRP, the National Research Council, and the Intergovernmental Panel on Climate Change, in 2009 the Environmental Protection Agency (EPA) issued a finding that the changes in our climate caused by elevated concentrations of greenhouse gases in the atmosphere are reasonably anticipated to endanger the public health and public welfare of current and future generations.<sup>20</sup> In 2015, EPA acknowledged more recent scientific assessments that “highlight the urgency of addressing the rising concentration of CO<sub>2</sub> in the atmosphere,” finding that certain groups are especially vulnerable to climate-related effects.<sup>21</sup> Broadly

---

<sup>18</sup> See Global Change Research Act of 1990, Pub. L. 101–606, Sec. 103 (November 16, 1990). For additional information on the United States Global Change Research Program [hereinafter “USGCRP”], visit <http://www.globalchange.gov>. The USGCRP, formerly the Climate Change Science Program, coordinates and integrates the activities of 13 Federal agencies that conduct research on changes in the global environment and their implications for society. The USGCRP began as a Presidential initiative in 1989 and was codified in the Global Change Research Act of 1990 (Public Law 101–606). USGCRP-participating agencies are the Departments of Agriculture, Commerce, Defense, Energy, Interior, Health and Human Services, State, and Transportation; the U.S. Agency for International Development, the Environmental Protection Agency, NASA, the National Science Foundation, and the Smithsonian Institution.

<sup>19</sup> See USGCRP, *Third National Climate Assessment*, available at [http://nca2014.globalchange.gov/system/files\\_force/downloads/low/NCA3\\_Climate\\_Change\\_Impacts\\_in\\_the\\_United%20States\\_Low\\_Res.pdf?download=1](http://nca2014.globalchange.gov/system/files_force/downloads/low/NCA3_Climate_Change_Impacts_in_the_United%20States_Low_Res.pdf?download=1); IPCC, *Climate Change 2014 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (R.K. Pachauri, & L.A. Meyer eds., 2014), available at [https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR\\_AR5\\_FINAL\\_full.pdf](https://www.ipcc.ch/pdf/assessment-report/ar5/syr/SYR_AR5_FINAL_full.pdf); see also <http://www.globalchange.gov>; 40 CFR 1508.8 (effects include ecological, aesthetic, historic, cultural, economic, social, and health effects); USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment*, available at <https://health2016.globalchange.gov/>.

<sup>20</sup> See generally *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, 74 Fed. Reg. 66496 (Dec. 15, 2009). (For example, at 66497–98: “[t]he evidence concerning how human-induced climate change may alter extreme weather events also clearly supports a finding of endangerment, given the serious adverse impacts that can result from such events and the increase in risk, even if small, of the occurrence and intensity of events such as hurricanes and floods. Additionally, public health is expected to be adversely affected by an increase in the severity of coastal storm events due to rising sea levels”).

<sup>21</sup> See EPA, *Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64661, 64677 (Oct. 23, 2015) (“Certain groups, including children, the elderly, and the poor, are most vulnerable to climate-related effects. Recent studies also find that certain communities, including low-income communities and some communities of color ... are disproportionately affected by certain climate change related impacts—including heat waves, degraded air quality, and

stated, the effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, more heavy downpours and flooding, increased drought, greater sea-level rise, more intense storms, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems.<sup>22</sup>

### III. CONSIDERING THE EFFECTS OF GHG EMISSIONS AND CLIMATE CHANGE

This guidance is applicable to all Federal actions subject to NEPA, including site-specific actions, certain funding of site-specific projects, rulemaking actions, permitting decisions, and land and resource management decisions.<sup>23</sup> This guidance does not – and cannot – expand the range of Federal agency actions that are subject to NEPA.

Consistent with NEPA, Federal agencies should consider the extent to which a proposed action and its reasonable alternatives would contribute to climate change, through GHG emissions, and take into account the ways in which a changing climate may impact the proposed action and any alternative actions, change the action’s environmental effects over the lifetime of those effects, and alter the overall environmental implications of such actions.

This guidance is intended to assist agencies in disclosing and considering the effects of GHG emissions and climate change along with the other reasonably foreseeable environmental effects of their proposed actions. This guidance does not establish any

---

extreme weather events—which are associated with increased deaths, illnesses, and economic challenges. Studies also find that climate change poses particular threats to the health, well-being, and ways of life of indigenous peoples in the U.S.”).

<sup>22</sup> See <http://www.globalchange.gov/climate-change/impacts-society> and Third National Climate Assessment, Chapters 3-15 (Sectors) and Chapters 16-25 (Regions), available at <http://nca2014.globalchange.gov/downloads>.

<sup>23</sup> See 40 CFR 1508.18.



particular quantity of GHG emissions as “significantly” affecting the quality of the human environment or give greater consideration to the effects of GHG emissions and climate change over other effects on the human environment.

A. GHG Emissions as a Proxy for the Climate Change Impacts of a Proposed Action

In light of the global scope of the impacts of GHG emissions, and the incremental contribution of each single action to global concentrations, CEQ recommends agencies use the projected GHG emissions associated with proposed actions as a proxy for assessing proposed actions’ potential effects on climate change in NEPA analysis.<sup>24</sup> This approach, together with providing a qualitative summary discussion of the impacts of GHG emissions based on authoritative reports such as the USGCRP’s National Climate Assessments and the Impacts of Climate Change on Human Health in the United States, a Scientific Assessment of the USGCRP, allows an agency to present the environmental and public health impacts 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, and to ensure the professional and scientific integrity of the NEPA review.<sup>25</sup>

Climate change results from the incremental addition of GHG emissions from millions of individual sources,<sup>26</sup> which collectively have a large impact on a global scale.

---

<sup>24</sup> See 40 CFR 1502.16, 1508.9.

<sup>25</sup> See 40 CFR 1500.1, 1502.24 (requiring agencies to use high quality information and ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

<sup>26</sup> Some sources emit GHGs in quantities that are orders of magnitude greater than others. See EPA, *Greenhouse Gas Reporting Program 2014 Reported Data*, Figure 2: Direct GHG Emissions Reported by Sector (2014), available at <https://www.epa.gov/ghgreporting/ghgrp-2014-reported-data> (amounts of GHG emissions by sector); *Final Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources Electric Utility Generating Units*, 80 Fed. Reg. 64661, 64663, 64689 (Oct. 23, 2015) (regulation of GHG emissions from fossil fuel-fired electricity generating power plants); *Oil and Natural Gas Sector Emission Standards for New, Reconstructed, and Modified Sources*, 81 Fed. Reg. 34824, 35830 (June 3, 2016) (regulation of GHG emissions from oil and gas sector).

CEQ recognizes that the totality of climate change impacts is not attributable to any single action, but are exacerbated by a series of actions including actions taken pursuant to decisions of the Federal Government. Therefore, a statement that emissions from a proposed Federal action represent only a small fraction of global emissions is essentially a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether or to what extent to consider climate change impacts under NEPA. Moreover, these comparisons are also not an appropriate method for characterizing the potential impacts associated with a proposed action and its alternatives and mitigations 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 impact. When considering GHG emissions and their significance, agencies should use appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios. Agencies should not limit themselves to calculating a proposed action's emissions as a percentage of sector, nationwide, or global emissions in deciding whether or to what extent to consider climate change impacts under NEPA.

#### 1. GHG Emissions Quantification and Relevant Tools

This guidance recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions. Agencies should be guided by the principle that the extent of the analysis should be commensurate with the quantity of projected GHG emissions and take into account available data and GHG quantification tools that

are suitable for and commensurate with the proposed agency action.<sup>27</sup> The rule of reason and the concept of proportionality caution against providing an in-depth analysis of emissions regardless of the insignificance of the quantity of GHG emissions that would be caused by the proposed agency action.

Quantification tools are widely available, and are already in broad use in the Federal and private sectors, by state and local governments, and globally.<sup>28</sup> Such quantification tools and methodologies have been developed to assist institutions, organizations, agencies, and companies with different levels of technical sophistication, data availability, and GHG source profiles. When data inputs are reasonably available to support calculations, agencies should conduct GHG analysis and disclose quantitative estimates of GHG emissions in their NEPA reviews. These tools can provide estimates of GHG emissions, including emissions from fossil fuel combustion and estimates of GHG emissions and carbon sequestration for many of the sources and sinks potentially affected by proposed resource management actions.<sup>29</sup> When considering which tool(s) to employ, it is important to consider the proposed action's temporal scale, and the availability of input data.<sup>30</sup> Examples of the kinds of methodologies agencies might consider using are presented in CEQ's 2012 Guidance for Accounting and Reporting GHG Emissions for a wide variety of activities associated with Federal agency operations.<sup>31</sup> When an agency determines that quantifying GHG emissions would not be

---

<sup>27</sup> See 40 CFR 1500.1(b) ("Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail."); 40 CFR 1502.2(b) (Impacts shall be discussed in proportion to their significance); 40 CFR 1502.15 (Data and analyses in a statement shall be commensurate with the importance of the impact...).

<sup>28</sup> See [https://ceq.doe.gov/current\\_developments/GHG-accounting-tools.html](https://ceq.doe.gov/current_developments/GHG-accounting-tools.html).

<sup>29</sup> For example, USDA's COMET-Farm tool can be used to assess the carbon sequestration of existing agricultural activities along with the reduction in carbon sequestration (emissions) of project-level activities, <http://cometfarm.nrel.colostate.edu/>. Examples of other tools are available at [https://ceq.doe.gov/current\\_developments/GHG-accounting-tools.html](https://ceq.doe.gov/current_developments/GHG-accounting-tools.html).

<sup>30</sup> See 40 CFR 1502.22.

<sup>31</sup> See

[https://www.whitehouse.gov/sites/default/files/microsites/ceq/revised\\_federal\\_greenhouse\\_gas\\_accounting\\_and\\_reporting\\_guidance\\_](https://www.whitehouse.gov/sites/default/files/microsites/ceq/revised_federal_greenhouse_gas_accounting_and_reporting_guidance_)

warranted because tools, methodologies, or data inputs are not reasonably available, the agency should provide a qualitative analysis and its rationale for determining that the quantitative analysis is not warranted. A qualitative analysis can rely on sector-specific descriptions of the GHG emissions of the category of Federal agency action that is the subject of the NEPA analysis.

When updating their NEPA procedures<sup>32</sup> and guidance, agencies should coordinate with CEQ to identify 1) the actions that normally warrant quantification of their GHG emissions, and consideration of the relative GHG emissions associated with alternative actions and 2) agency actions that normally do not warrant such quantification because tools, methodologies, or data inputs are not reasonably available. The determination of the potential significance of a proposed action remains subject to agency practice for the consideration of context and intensity, as set forth in the CEQ Regulations.<sup>33</sup>

## 2. The Scope of the Proposed Action

In order to assess effects, agencies should take account of the proposed action – including “connected” actions<sup>34</sup> – subject to reasonable limits based on feasibility and practicality. Activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for a proposed agency action or as a consequence of a proposed agency action, should be accounted for in the NEPA analysis.

---

060412.pdf. Federal agencies’ Strategic Sustainability Performance Plans reflecting their annual GHG inventories and reports under Executive Order 13514 are available at <https://www.performance.gov/node/3406/view?view=public#supporting-info>.

<sup>32</sup> See 40 CFR 1507.3.

<sup>33</sup> 40 CFR 1508.27 (“‘Significantly’ as used in NEPA requires considerations of both context and intensity: (a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. . . . (b) Intensity. This refers to the severity of impact.”).

<sup>34</sup> 40 CFR 1508.25(a) (Actions are connected if they: (i) Automatically trigger other actions which may require environmental impact statements; (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously, or; (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.).

For example, NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation. Depending on the relationship between any of the phases, as well as the authority under which they may be carried out, agencies should use the analytical scope that best informs their decision making.

The agency should focus on significant potential effects and conduct an analysis that is proportionate to the environmental consequences of the proposed action.<sup>35</sup> Agencies can rely on basic NEPA principles to determine and explain the reasonable parameters of their analyses in order to disclose the reasonably foreseeable effects that may result from their proposed actions.<sup>36</sup>

### 3. Alternatives

Considering alternatives, including alternatives that mitigate GHG emissions, is fundamental to the NEPA process and accords with NEPA Sections 102(2)(C) and 102(2)(E).<sup>37</sup> The CEQ regulations emphasize that the alternatives analysis is the heart of the EIS under NEPA Section 102(2)(C).<sup>38</sup> NEPA Section 102(2)(E) provides an independent requirement for the consideration of alternatives in environmental documents.<sup>39</sup> NEPA calls upon agencies to use the NEPA process to “identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.”<sup>40</sup> The requirement to

---

<sup>35</sup> See 40 CFR 1501.7(a)(3), 1502.2(b), and 1502.15.

<sup>36</sup> See 40 CFR 1502.16.

<sup>37</sup> 42 U.S.C. 4332(2)(C), 4332(2)(E); 40 CFR 1502.14, 1508.9(b).

<sup>38</sup> 40 CFR 1502.14.

<sup>39</sup> See 40 CFR 1500.2, 1508.9(b).

<sup>40</sup> 40 CFR 1500.2(e).

consider alternatives ensures that agencies account for approaches with no, or less, adverse environmental effects for a particular resource.

Consideration of alternatives also provides each agency decision maker the information needed to examine other possible approaches to a particular proposed action (including the no action alternative) that could alter the environmental impact or the balance of factors considered in making the decision. Agency decisions are aided when there are reasonable alternatives that allow for comparing GHG emissions and carbon sequestration potential, trade-offs with other environmental values, and the risk from – and resilience to – climate change inherent in a proposed action and its design.

Agencies must consider a range of reasonable alternatives consistent with the level of NEPA review (e.g., EA or EIS) and the purpose and need for the proposed action, as well as reasonable mitigation measures if not already included in the proposed action or alternatives.<sup>41</sup> Accordingly, a comparison of these alternatives based on GHG emissions and any potential mitigation measures can be useful to advance a reasoned choice among alternatives and mitigation actions. When conducting the analysis, an agency should compare the anticipated levels of GHG emissions from each alternative – including the no-action alternative – and mitigation actions to provide information to the public and enable the decision maker to make an informed choice.

Agencies should consider reasonable alternatives and mitigation measures to reduce action-related GHG emissions or increase carbon sequestration in the same fashion as they consider alternatives and mitigation measures for any other environmental effects. NEPA, the CEQ Regulations, and this guidance do not require the decision

---

<sup>41</sup> See 42 U.S.C. 4332(2)(C), 4332(2)(E), and 40 CFR 1502.14(f), 1508.9(b). The purpose and need for action usually reflects both the extent of the agency's statutory authority and its policies.

maker to select the alternative with the lowest net level of emissions. Rather, they allow for the careful consideration of emissions and mitigation measures along with all the other factors considered in making a final decision.

#### 4. Direct and Indirect Effects

If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action.<sup>42</sup> Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties.

To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy.<sup>43</sup> In the absence of such analyses, agencies should use other available information. When such analyses or information for quantification is unavailable, or the complexity of comparing emissions from various sources would make quantification overly speculative, then the agency should quantify emissions to the extent that this information is available and explain the extent to which quantified emissions information is unavailable while providing a qualitative analysis of those emissions. As

---

<sup>42</sup> For example, where the proposed action involves fossil fuel extraction, direct emissions typically include GHGs emitted during the process of exploring for or extracting the fossil fuel. The indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease sale of coal for energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal.

<sup>43</sup> For a current example, see Office of Fossil Energy, Nat'l Energy Tech. Lab., U.S. Dep't of Energy, *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States*, Pub. No. DOE/NETL-2014/1649 (2014), available at <http://energy.gov/sites/prod/files/2014/05/f16/Life%20Cycle%20GHG%20Perspective%20Report.pdf>.

with any NEPA analysis, the level of effort should be proportionate to the scale of the emissions relevant to the NEPA review.

## 5. Cumulative Effects

“Cumulative impact” is defined in the CEQ Regulations as the “impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”<sup>44</sup> All GHG emissions contribute to cumulative climate change impacts. However, for most Federal agency actions CEQ does not expect that an EIS would be required based *solely* on the global significance of cumulative impacts of GHG emissions, as it would not be consistent with the rule of reason to require the preparation of an EIS for every Federal action that may cause GHG emissions regardless of the magnitude of those emissions.

Based on the agency identification and analysis of the direct and indirect effects of its proposed action, NEPA requires an agency to consider the cumulative impacts of its proposed action and reasonable alternatives.<sup>45</sup> As noted above, for the purposes of NEPA, the analysis of the effects of GHG emissions is essentially a cumulative effects analysis that is subsumed within the general analysis and discussion of climate change impacts. Therefore, direct and indirect effects analysis for GHG emissions will adequately address the cumulative impacts for climate change from the proposed action and its alternatives and a separate cumulative effects analysis for GHG emissions is not needed.

## 6. Short- and Long-Term Effects

---

<sup>44</sup> 40 CFR 1508.7.

<sup>45</sup> See 40 CFR 1502.16, 1508.7, 1508.8. See also CEQ Memorandum to Heads of Federal Agencies, *Guidance on the Consideration of Past Actions in Cumulative Effects Analysis*, June 24, 2005, available at [https://ceq.doe.gov/nepa/regs/Guidance\\_on\\_CE.pdf](https://ceq.doe.gov/nepa/regs/Guidance_on_CE.pdf).



When considering effects, agencies should take into account both the short- and long-term adverse and beneficial effects using a temporal scope that is grounded in the concept of reasonable foreseeability. Some proposed actions will have to consider effects at different stages to ensure the direct effects and reasonably foreseeable indirect effects are appropriately assessed; for example, the effects of construction are different from the effects of the operations and maintenance of a facility.

Biogenic GHG emissions and carbon stocks from some land or resource management activities, such as a prescribed burn of a forest or grassland conducted to limit loss of ecosystem function through wildfires or insect infestations, may result in short-term GHG emissions and loss of stored carbon, while in the longer term a restored, healthy ecosystem may provide long-term carbon sequestration. Therefore, the short- and long-term effects should be described in comparison to the no action alternative in the NEPA review.

## 7. Mitigation

Mitigation is an important component of the NEPA process that Federal agencies can use to avoid, minimize, and compensate for the adverse environmental effects associated with their actions. Mitigation, by definition, includes avoiding impacts, minimizing impacts by limiting them, rectifying the impact, reducing or eliminating the impacts over time, or compensating for them.<sup>46</sup> Consequently, agencies should consider reasonable mitigation measures and alternatives as provided for under existing CEQ Regulations and take into account relevant agency statutory authorities and policies. The NEPA process is also intended to provide useful advice and information to State, local

---

<sup>46</sup> See 40 CFR 1508.20, 1508.25 (Alternatives include mitigation measures not included in the proposed action).

and tribal governments and private parties so that the agencies can better coordinate with other agencies and organizations regarding the means to mitigate effects of their actions.<sup>47</sup> The NEPA process considers the effects of mitigation commitments made by project proponents or others and mitigation required under other relevant permitting and environmental review regimes.<sup>48</sup>

As Federal agencies evaluate potential mitigation of GHG emissions and the interaction of a proposed action with climate change, the agencies should also carefully evaluate the quality of that mitigation to ensure it is additional, verifiable, durable, enforceable, and will be implemented.<sup>49</sup> Agencies should consider the potential for mitigation measures to reduce or mitigate GHG emissions and climate change effects when those measures are reasonable and consistent with achieving the purpose and need for the proposed action. Such mitigation measures could include enhanced energy efficiency, lower GHG-emitting technology, carbon capture, carbon sequestration (e.g., forest, agricultural soils, and coastal habitat restoration), sustainable land management practices, and capturing or beneficially using GHG emissions such as methane.

Finally, the CEQ Regulations and guidance recognize the value of monitoring to ensure that mitigation is carried out as provided in a record of decision or finding of no significant impact.<sup>50</sup> The agency's final decision on the proposed action should identify those mitigation measures that the agency commits to take, recommends, or requires

---

<sup>47</sup> NEPA directs Federal agencies to make "advice and information useful in restoring, maintaining, and enhancing the quality of the environment" available to States, Tribes, counties, cities, institutions and individuals. NEPA Sec. 102(2)(G).

<sup>48</sup> See CEQ Memorandum to Heads of Federal Agencies, *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact*, 76 FR 3843 (Jan. 21, 2011) available at [https://ceq.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

<sup>49</sup> See Presidential Memorandum: *Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment* (<https://www.whitehouse.gov/the-press-office/2015/11/03/mitigating-impacts-natural-resources-development-and-encouraging-related>) defining "durability" and addressing additionality.

<sup>50</sup> See 40 CFR 1505.2(c), 1505.3. See also CEQ Memorandum to Heads of Federal Agencies, *Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact*, 76 FR 3843 (Jan. 21, 2011) available at [https://ceq.doe.gov/current\\_developments/docs/Mitigation\\_and\\_Monitoring\\_Guidance\\_14Jan2011.pdf](https://ceq.doe.gov/current_developments/docs/Mitigation_and_Monitoring_Guidance_14Jan2011.pdf).

others to take. Monitoring is particularly appropriate to confirm the effectiveness of mitigation when that mitigation is adopted to reduce the impacts of a proposed action on affected resources already increasingly vulnerable due to climate change.

## B. CONSIDERING THE EFFECTS OF CLIMATE CHANGE ON A PROPOSED ACTION AND ITS ENVIRONMENTAL IMPACTS

According to the USGCRP and others, GHGs already in the atmosphere will continue altering the climate system into the future, even with current or future emissions control efforts.<sup>51</sup> Therefore, a NEPA review should consider an action in the context of the future state of the environment. In addition, climate change adaptation and resilience — defined as adjustments to natural or human systems in response to actual or expected climate changes — are important considerations for agencies contemplating and planning actions with effects that will occur both at the time of implementation and into the future.<sup>52</sup>

### 1. Affected Environment

An agency should identify the affected environment to provide a basis for comparing the current and the future state of the environment as affected by the proposed action or its reasonable alternatives.<sup>53</sup> The current and projected future state of the environment without the proposed action (i.e., the no action alternative) represents the reasonably foreseeable affected environment, and this should be described based on

---

<sup>51</sup> See Third National Climate Assessment, *Appendix 3 Climate Science Supplement 753-754*, available at [http://s3.amazonaws.com/nca2014/low/NCA3\\_Full\\_Report\\_Appendix\\_3\\_Climate\\_Science\\_Supplement\\_LowRes.pdf?download=1](http://s3.amazonaws.com/nca2014/low/NCA3_Full_Report_Appendix_3_Climate_Science_Supplement_LowRes.pdf?download=1).

<sup>52</sup> See Third National Climate Assessment, Chapter 28, “Adaptation” and Chapter 26, “Decision Support: Connecting Science, Risk Perception, and Decisions,” available at <http://www.globalchange.gov/nca3-downloads-materials>; see also, Exec. Order No. 13653, 78 Fed. Reg. 66817 (Nov. 6, 2013) and Exec. Order No. 13693, *Planning for Federal Sustainability in the Next Decade*, 80 Fed. Reg. 15869 (Mach 25, 2015) (defining “climate-resilient design”).

<sup>53</sup> See 40 CFR 1502.15 (providing that environmental impact statements shall succinctly describe the environmental impacts on the area(s) to be affected or created by the alternatives under consideration).

authoritative climate change reports,<sup>54</sup> which often project at least two possible future scenarios.<sup>55</sup> The temporal bounds for the state of the environment are determined by the projected initiation of implementation and the expected life of the proposed action and its effects.<sup>56</sup> Agencies should remain aware of the evolving body of scientific information as more refined estimates of the impacts of climate change, both globally and at a localized level, become available.<sup>57</sup>

## 2. Impacts

The analysis of climate change impacts should focus on those aspects of the human environment that are impacted by both the proposed action and climate change. Climate change can make a resource, ecosystem, human community, or structure more susceptible to many types of impacts and lessen its resilience to other environmental impacts apart from climate change. This increase in vulnerability can exacerbate the effects of the proposed action. For example, a proposed action may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to a water body that is already warming due to increasing atmospheric temperatures. Such considerations are squarely within the scope of NEPA and can inform decisions on whether to proceed with, and how to design, the proposed action to eliminate or mitigate impacts exacerbated by climate change. They can also

---

<sup>54</sup> See, e.g., Third National Climate Assessment (Regional impacts chapters) available at <http://www.globalchange.gov/nca3-downloads-materials>.

<sup>55</sup> See, e.g., Third National Climate Assessment (Regional impacts chapters, considering a low future global emissions scenario, and a high emissions scenario) available at <http://www.globalchange.gov/nca3-downloads-materials>.

<sup>56</sup> CEQ, *Considering Cumulative Effects Under the National Environmental Policy Act* (1997), [https://ceq.doe.gov/publications/cumulative\\_effects.html](https://ceq.doe.gov/publications/cumulative_effects.html). Agencies should also consider their work under Exec. Order No. 13653, *Preparing the United States for the Impacts of Climate Change*, 78 Fed. Reg. 66817 (Nov. 6, 2013), that considers how capital investments will be affected by a changing climate over time.

<sup>57</sup> See, e.g., <http://nca2014.globalchange.gov/report/regions/coasts>.

inform possible adaptation measures to address the impacts of climate change, ultimately enabling the selection of smarter, more resilient actions.

### 3. Available Assessments and Scenarios

In accordance with NEPA's rule of reason and standards for obtaining information regarding reasonably foreseeable effects on the human environment, agencies need not undertake new research or analysis of potential climate change impacts in the proposed action area, but may instead summarize and incorporate by reference the relevant scientific literature.<sup>58</sup> For example, agencies may summarize and incorporate by reference the relevant chapters of the most recent national climate assessments or reports from the USGCRP.<sup>59</sup> Particularly relevant to some proposed actions are the most current reports on climate change impacts on water resources, ecosystems, agriculture and forestry, health, coastlines, and ocean and arctic regions in the United States.<sup>60</sup> Agencies may recognize that scenarios or climate modeling information (including seasonal, inter-annual, long-term, and regional-scale projections) are widely used, but when relying on a single study or projection, agencies should consider their limitations and discuss them.<sup>61</sup>

### 4. Opportunities for Resilience and Adaptation

As called for under NEPA, the CEQ Regulations, and CEQ guidance, the NEPA review process should be integrated with agency planning at the earliest possible time that would allow for a meaningful analysis.<sup>62</sup> Information developed during early

---

<sup>58</sup> See 40 CFR 1502.21 (material may be incorporated by reference if it is reasonably available for inspection by potentially interested persons during public review and comment).

<sup>59</sup> See <http://www.globalchange.gov/browse/reports>.

<sup>60</sup> See Third National Climate Assessment, *Our Changing Climate*, available at <http://nca2014.globalchange.gov/report>. Agencies should consider the latest final assessments and reports when they are updated.

<sup>61</sup> See 40 CFR 1502.22. Agencies can consult [www.data.gov/climate/portals](http://www.data.gov/climate/portals) for model data archives, visualization tools, and downscaling results.

<sup>62</sup> See 42 U.S.C. 4332 (“agencies of the Federal Government shall ... utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decision-making”); 40 CFR 1501.2 (“Agencies shall integrate the NEPA process with other planning at the earliest possible time...”); See also CEQ Memorandum

planning processes that precede a NEPA review may be incorporated into the NEPA review. Decades of NEPA practice have shown that integrating environmental considerations with the planning process provides useful information that program and project planners can consider in the design of the proposed action, alternatives, and potential mitigation measures. For instance, agencies should take into account increased risks associated with development in floodplains, avoiding such development wherever there is a practicable alternative, as required by Executive Order 11988 and Executive Order 13690.<sup>63</sup> In addition, agencies should take into account their ongoing efforts to incorporate environmental justice principles into their programs, policies, and activities, including the environmental justice strategies required by Executive Order 12898, as amended, and consider whether the effects of climate change in association with the effects of the proposed action may result in a disproportionate effect on minority and low income communities.<sup>64</sup> Agencies also may consider co-benefits of the proposed action, alternatives, and potential mitigation measures for human health, economic and social stability, ecosystem services, or other benefit that increases climate change preparedness or resilience. Individual agency adaptation plans and interagency adaptation strategies, such as agency Climate Adaptation Plans, the National Fish, Wildlife and Plants Climate Adaptation Strategy, and the National Action Plan: Priorities for Managing Freshwater

---

for Heads of Federal Departments and Agencies, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*, 77 Fed. Reg. 14473 (Mar. 12, 2012), available at [https://ceq.doe.gov/current\\_developments/docs/Improving\\_NEPA\\_Efficiencies\\_06Mar2012.pdf](https://ceq.doe.gov/current_developments/docs/Improving_NEPA_Efficiencies_06Mar2012.pdf).

<sup>63</sup> See Exec. Order No. 11988, "Floodplain Management," 42 Fed. Reg. 26951 (May 24, 1977), available at <http://www.archives.gov/federal-register/codification/executive-order/11988.html>; Exec. Order No. 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*, 80 Fed. Reg. 6425 (Jan. 30, 2015), available at <https://www.gpo.gov/fdsys/pkg/FR-2015-02-04/pdf/2015-02379.pdf>.

<sup>64</sup> See Exec. Order No. 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, 59 Fed. Reg. 7629 (Feb. 16, 1994), available at <https://ceq.doe.gov/nepa/regs/eos/ii-5.pdf>; CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act* (Dec. 1997), available at <http://ceq.doe.gov/nepa/regs/ej/justice.pdf>.

Resources in a Changing Climate, provide other good examples of the type of relevant and useful information that can be considered.<sup>65</sup>

Climate change effects on the environment and on the proposed project should be considered in the analysis of a project considered vulnerable to the effects of climate change such as increasing sea level, drought, high intensity precipitation events, increased fire risk, or ecological change. In such cases, a NEPA review will provide relevant information that agencies can use to consider in the initial project design, as well as alternatives with preferable overall environmental outcomes and improved resilience to climate impacts. For example, an agency considering a proposed long-term development of transportation infrastructure on a coastal barrier island should take into account climate change effects on the environment and, as applicable, consequences of rebuilding where sea level rise and more intense storms will shorten the projected life of the project and change its effects on the environment.<sup>66</sup> Given the length of time involved in present sea level projections, such considerations typically will not be relevant to short-term actions with short-term effects.

In addition, the particular impacts of climate change on vulnerable communities may be considered in the design of the action or the selection among alternatives to

---

<sup>65</sup> See <http://sustainability.performance.gov> for agency sustainability plans, which contain agency adaptation plans. See also <http://www.wildlifeadaptationstrategy.gov>; [http://www.whitehouse.gov/sites/default/files/microsites/ceq/2011\\_national\\_action\\_plan.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ceq/2011_national_action_plan.pdf); and <https://www.epa.gov/greeningepa/climate-change-adaptation-plans>

<sup>66</sup> See U.S. Department of Transportation, Gulf Coast Study, Phase 2, *Assessing Transportation Vulnerability to Climate Change Synthesis of Lessons Learned and Methods Applied*, FHWA-HEP-15-007 (Oct. 2014) (focusing on the Mobile, Alabama region), available at [http://www.fhwa.dot.gov/environment/climate\\_change/adaptation/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study/phase2\\_task6/fhwahep15007.pdf](http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/gulf_coast_study/phase2_task6/fhwahep15007.pdf); U.S. Climate Change Science Program, Synthesis and Assessment Product 4.7, *Impacts of Climate Change and Variability on Transportation Systems and Infrastructure: Gulf Coast Study, Phase I* (Mar. 2008) (focusing on a regional scale in the central Gulf Coast), available at <https://downloads.globalchange.gov/sap/sap4-7/sap4-7-final-all.pdf>. Information about the Gulf Coast Study is available at [http://www.fhwa.dot.gov/environment/climate\\_change/adaptation/ongoing\\_and\\_current\\_research/gulf\\_coast\\_study](http://www.fhwa.dot.gov/environment/climate_change/adaptation/ongoing_and_current_research/gulf_coast_study). See also Third National Climate Assessment, Chapter 28, “Adaptation,” at 675 (noting that Federal agencies in particular can facilitate climate adaptation by “ensuring the establishment of federal policies that allow for “flexible” adaptation efforts and take steps to avoid unintended consequences”), available at <http://nca2014.globalchange.gov/report/response-strategies/adaptation#intro-section-2>.

assess the impact, and potential for disproportionate impacts, on those communities.<sup>67</sup> For example, chemical facilities located near the coastline could have increased risk of spills or leakages due to sea level rise or increased storm surges, putting local communities and environmental resources at greater risk. Increased resilience could minimize such potential future effects. Finally, considering climate change preparedness and resilience can help ensure that agencies evaluate the potential for generating additional GHGs if a project has to be replaced, repaired, or modified, and minimize the risk of expending additional time and funds in the future.

### C. Special Considerations for Biogenic Sources of Carbon

With regard to biogenic GHG emissions from land management actions – such as prescribed burning, timber stand improvements, fuel load reductions, scheduled harvesting, and livestock grazing – it is important to recognize that these land management actions involve GHG emissions and carbon sequestration that operate within the global carbon and nitrogen cycle, which may be affected by those actions. Similarly, some water management practices have GHG emission consequences (e.g., reservoir management practices can reduce methane releases, wetlands management practices can enhance carbon sequestration, and water conservation can improve energy efficiency).

Notably, it is possible that the net effect of ecosystem restoration actions resulting in short-term biogenic emissions may lead to long-term reductions of atmospheric GHG concentrations through increases in carbon stocks or reduced risks of future emissions. In the land and resource management context, how a proposed action affects a net carbon sink or source will depend on multiple factors such as the climatic region, the distribution

---

<sup>67</sup> For an example, *see* [https://www.blm.gov/epl-front-office/projects/nepa/5251/42462/45213/NPR-A\\_FINAL\\_ROD\\_2-21-13.pdf](https://www.blm.gov/epl-front-office/projects/nepa/5251/42462/45213/NPR-A_FINAL_ROD_2-21-13.pdf).



of carbon across carbon pools in the project area, and the ongoing activities and trends. In addressing biogenic GHG emissions, resource management agencies should include a comparison of estimated net GHG emissions and carbon stock changes that are projected to occur with and without implementation of proposed land or resource management actions.<sup>68</sup> This analysis should take into account the GHG emissions, carbon sequestration potential, and the changes in carbon stocks that are relevant to decision making in light of the proposed actions and timeframes under consideration.

One example of agencies dealing with biogenic emissions and carbon sequestration arises when agencies consider proposed vegetation management practices that affect the risk of wildfire, insect and disease outbreak, or other disturbance. The public and the decision maker may benefit from consideration of the influence of a vegetation management action that affects the risk of wildfire on net GHG emissions and carbon stock changes. NEPA reviews should consider whether to include a comparison of net GHG emissions and carbon stock changes that are anticipated to occur, with and without implementation of the proposed vegetation management practice, to provide information that is useful to the decision maker and the public to distinguish between alternatives. The analysis would take into account the estimated GHG emissions (biogenic and fossil), carbon sequestration potential, and the net change in carbon stocks relevant in light of the proposed actions and timeframes under consideration. In such cases the agency should describe the basis for estimates used to project the probability or likelihood of occurrence or changes in the effects or severity of wildfire. Where such

---

<sup>68</sup> One example of a tool for such calculations is the Carbon On Line Estimator (COLE), which uses data based on USDA Forest Service Forest Inventory & Analysis and Resource Planning Assessment data and other ecological data. COLE began as a collaboration between the National Council for Air and Stream Improvement, Inc. (NCASI) and USDA Forest Service, Northern Research Station. It currently is maintained by NCASI. It is available at <http://www.fs.usda.gov/ccrc/tools/cole>.

tools, methodologies, or data are not yet available, the agency should provide a qualitative analysis and its rationale for determining that the quantitative analysis is not warranted. As with any other analysis, the rule of reason and proportionality should be applied to determine the extent of the analysis.

CEQ acknowledges that Federal land and resource management agencies are developing agency-specific principles and guidance for considering biological carbon in management and planning decisions.<sup>69</sup> Such guidance is expected to address the importance of considering biogenic carbon fluxes and storage within the context of other management objectives and ecosystem service goals, and integrating carbon considerations as part of a balanced and comprehensive program of sustainable management, climate change mitigation, and climate change adaptation.

#### IV. TRADITIONAL NEPA TOOLS AND PRACTICES

##### A. Scoping and Framing the NEPA Review

To effectuate integrated decision making, avoid duplication, and focus the NEPA review, the CEQ Regulations provide for scoping.<sup>70</sup> In scoping, the agency determines the issues that the NEPA review will address and identifies the impacts related to the proposed action that the analyses will consider.<sup>71</sup> An agency can use the scoping process to help it determine whether analysis is relevant and, if so, the extent of analysis

---

<sup>69</sup> See Council on Climate Change Preparedness and Resilience, *Priority Agenda Enhancing the Climate Resilience of America's Natural Resources*, at 52 (Oct. 2014), available at [http://www.whitehouse.gov/sites/default/files/docs/enhancing\\_climate\\_resilience\\_of\\_americas\\_natural\\_resources.pdf](http://www.whitehouse.gov/sites/default/files/docs/enhancing_climate_resilience_of_americas_natural_resources.pdf).

<sup>70</sup> See 40 CFR 1501.7 (“There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping.”); see also CEQ Memorandum for Heads of Federal Departments and Agencies, *Improving the Process for Preparing Efficient and Timely Environmental Reviews under the National Environmental Policy Act*, March 6, 2012, available at [https://ceq.doe.gov/current\\_developments/docs/Improving\\_NEPA\\_Efficiencies\\_06Mar2012.pdf](https://ceq.doe.gov/current_developments/docs/Improving_NEPA_Efficiencies_06Mar2012.pdf) (the CEQ Regulations explicitly require scoping for preparing an EIS, however, agencies can also take advantage of scoping whenever preparing an EA).

<sup>71</sup> See 40 CFR 1500.4(b), 1500.4(g), 1501.7.

appropriate for a proposed action.<sup>72</sup> When scoping for the climate change issues associated with the proposed agency action, the nature, location, timeframe, and type of the proposed action and the extent of its effects will help determine the degree to which to consider climate projections, including whether climate change considerations warrant emphasis, detailed analysis, and disclosure.

Consistent with this guidance, agencies may develop their own agency-specific practices and guidance for framing the NEPA review. Grounded on the principles of proportionality and the rule of reason, such aids can help an agency determine the extent to which an analysis of GHG emissions and climate change impacts should be explored in the decision-making process and will assist in the analysis of the no action and proposed alternatives and mitigation.<sup>73</sup> The agency should explain such a framing process and its application to the proposed action to the decision makers and the public during the NEPA review and in the EA or EIS document.

#### B. Frame of Reference

When discussing GHG emissions, as for all environmental impacts, it can be helpful to provide the decision maker and the public with a recognizable frame of reference for comparing alternatives and mitigation measures. Agencies should discuss relevant approved federal, regional, state, tribal, or local plans, policies, or laws for GHG emission reductions or climate adaptation to make clear whether a proposed project's

---

<sup>72</sup> See 40 CFR 1501.7 (The agency preparing the NEPA analysis must use the scoping process to, among other things, determine the scope and identify the significant issues to be analyzed in depth) and CEQ, *Memorandum for General Counsels, NEPA Liaisons, and Participants in Scoping*, April 30, 1981, available at <https://ceq.doe.gov/nepa/regs/scope/scoping.htm>.

<sup>73</sup> See, e.g., Matthew P. Thompson, Bruce G. Marcot, Frank R. Thompson, III, Steven McNulty, Larry A. Fisher, Michael C. Runge, David Cleaves, and Monica Tomosy, *The Science of Decisionmaking Applications for Sustainable Forest and Grassland Management in the National Forest System* (2013), available at [http://www.fs.fed.us/rm/pubs\\_other/rmrs\\_2013\\_thompson\\_m004.pdf](http://www.fs.fed.us/rm/pubs_other/rmrs_2013_thompson_m004.pdf); U.S. Forest Service Comparative Risk Assessment Framework And Tools, available at [http://www.fs.fed.us/psw/topics/fire\\_science/craft/craft/](http://www.fs.fed.us/psw/topics/fire_science/craft/craft/); and Julien Martin, Michael C. Runge, James D. Nichols, Bruce C. Lubow, and William L. Kendall, *Structured decision making as a conceptual framework to identify thresholds for conservation and management* (2009), *Ecological Applications* 19:1079–1090, available at <http://www.esajournals.org/doi/abs/10.1890/08-0255.1>.

GHG emissions are consistent with such plans or laws.<sup>74</sup> For example, the Bureau of Land Management has discussed how agency actions in California, especially joint projects with the State, may or may not facilitate California reaching its emission reduction goals under the State's Assembly Bill 32 (Global Warming Solutions Act).<sup>75</sup> This approach helps frame the policy context for the agency decision based on its NEPA review.

### C. Incorporation by Reference

Incorporation by reference is of great value in considering GHG emissions or where an agency is considering the implications of climate change for the proposed action and its environmental effects. Agencies should identify situations where prior studies or NEPA analyses are likely to cover emissions or adaptation issues, in whole or in part. When larger scale analyses have considered climate change impacts and GHG emissions, calculating GHG emissions and carbon stocks for a specific action may provide only limited information beyond the information already collected and considered in the larger scale analyses. The NEPA reviews for a specific action can incorporate by reference earlier programmatic studies or information such as management plans, inventories, assessments, and research that consider potential changes in carbon stocks, as well as any relevant programmatic NEPA reviews.<sup>76</sup>

Accordingly, agencies should use the scoping process to consider whether they should incorporate by reference GHG analyses from other programmatic studies, action

---

<sup>74</sup> See 40 CFR 1502.16(c), 1506.2(d) (where an inconsistency exists, agencies should describe the extent to which the agency will reconcile its proposed action with the plan or law). See also Exec. Order No. 13693, 80 Fed. Reg. 15869 (Mar. 25, 2015) (establishing GHG emission and related goals for agency facilities and operations. Scope 1, 2, and 3 emissions are typically separate and distinct from analyses and information used in an EA or EIS.).

<sup>75</sup> See, e.g., U.S. Bureau of Land Management, Desert Renewable Energy Conservation Plan Proposed Land Use Plan Amendment and Final Environmental Impact Statement, Vol. I, § I.3.3.2, at 12, available at <http://drecp.org/finaldrecp/>.

<sup>76</sup> See 40 CFR 1502.5, 1502.21.

specific NEPA reviews, or programmatic NEPA reviews to avoid duplication of effort. Furthermore, agencies should engage other agencies and stakeholders with expertise or an interest in related actions to participate in the scoping process to identify relevant GHG and adaptation analyses from other actions or programmatic NEPA documents.

#### D. Using Available Information

Agencies should make decisions using current scientific information and methodologies. CEQ does not expect agencies to fund and conduct original climate change research to support their NEPA analyses or for agencies to require project proponents to do so. Agencies should exercise their discretion to select and use the tools, methodologies, and scientific and research information that are of high quality and available to assess the impacts.<sup>77</sup>

Agencies should be aware of the ongoing efforts to address the impacts of climate change on human health and vulnerable communities.<sup>78</sup> Certain groups, including children, the elderly, and the poor, are more vulnerable to climate-related health effects, and may face barriers to engaging on issues that disproportionately affect them. CEQ recommends that agencies periodically engage their environmental justice experts, and the Federal Interagency Working Group on Environmental Justice,<sup>79</sup> to identify approaches to avoid or minimize impacts that may have disproportionately high and

---

<sup>77</sup> See 40 CFR 1502.24 (requiring agencies to ensure the professional and scientific integrity of the discussions and analyses in environmental impact statements).

<sup>78</sup> USGCRP, *The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment* (Apr. 2016), available at <https://health2016.globalchange.gov/downloads>.

<sup>79</sup> For more information on the Federal Interagency Working Group on Environmental Justice co-chaired by EPA and CEQ, see <http://www.epa.gov/environmentaljustice/interagency/index.html>.

adverse human health or environmental effects on minority and low-income populations.<sup>80</sup>

#### E. Programmatic or Broad-Based Studies and NEPA Reviews

Agency decisions can address different geographic scales that can range from the programmatic or landscape level to the site- or project-specific level. Agencies sometimes conduct analyses or studies that are not NEPA reviews at the national level or other broad scale level (e.g., landscape, regional, or watershed) to assess the status of one or more resources or to determine trends in changing environmental conditions.<sup>81</sup> In the context of long-range energy, transportation, and resource management strategies an agency may decide that it would be useful and efficient to provide an aggregate analysis of GHG emissions or climate change effects in a programmatic analysis and then incorporate by reference that analysis into future NEPA reviews.

A tiered, analytical decision-making approach using a programmatic NEPA review is used for many types of Federal actions<sup>82</sup> and can be particularly relevant to addressing proposed land, aquatic, and other resource management plans. Under such an approach, an agency conducts a broad-scale programmatic NEPA analysis for decisions such as establishing or revising USDA Forest Service land management plans, Bureau of Land Management resource management plans, or Natural Resources Conservation Service conservation programs. Subsequent NEPA analyses for proposed site-specific

---

<sup>80</sup> *President's Memorandum for the Heads of All Departments and Agencies, Executive Order on Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (Feb. 11, 1994), available at <https://ceq.doe.gov/nepa/regs/eos/ii-5.pdf>; CEQ, *Environmental Justice Guidance Under the National Environmental Policy Act*, available at <https://ceq.doe.gov/nepa/regs/ej/justice.pdf>.

<sup>81</sup> Such a programmatic study is distinct from a programmatic NEPA review which is appropriate when the action under consideration is itself subject to NEPA requirements. See CEQ, *Memorandum for Heads of Federal Departments and Agencies, Effective Use of Programmatic NEPA Reviews*, Dec. 18, 2014, § 1(A), p. 9, available at [https://www.whitehouse.gov/sites/default/files/docs/effective\\_use\\_of\\_programmatic\\_nepa\\_reviews\\_final\\_dec2014\\_searchable.pdf](https://www.whitehouse.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_final_dec2014_searchable.pdf) (discussing non-NEPA types of programmatic analyses such as data collection, assessments, and research, which previous NEPA guidance described as joint inventories or planning studies).

<sup>82</sup> See 40 CFR 1502.20, 1508.28. A programmatic NEPA review may be appropriate when a decision is being made that is subject to NEPA, such as establishing formal plans, programs, and policies, and when considering a suite of similar projects.

decisions – such as proposed actions that implement land, aquatic, and other resource management plans – may be tiered from the broader programmatic analysis, drawing upon its basic framework analysis to avoid repeating analytical efforts for each tiered decision. Examples of project- or site-specific actions that may benefit from being able to tier to a programmatic NEPA review include: constructing transmission lines; conducting prescribed burns; approving grazing leases; granting rights-of-way; issuing leases for oil and gas drilling; authorizing construction of wind, solar or geothermal projects; and approving hard rock mineral extraction.

A programmatic NEPA review may also serve as an efficient mechanism in which to assess Federal agency efforts to adopt broad-scale sustainable practices for energy efficiency, GHG emissions avoidance and emissions reduction measures, petroleum product use reduction, and renewable energy use, as well as other sustainability practices.<sup>83</sup> While broad department- or agency-wide goals may be of a far larger scale than a particular program, policy, or proposed action, an analysis that informs how a particular action affects that broader goal can be of value.

#### F. Monetizing Costs and Benefits

NEPA does not require monetizing costs and benefits. Furthermore, the weighing of the merits and drawbacks of the various alternatives need not be displayed using a monetary cost-benefit analysis and should not be when there are important qualitative considerations.<sup>84</sup> When an agency determines that a monetized assessment of the impacts of greenhouse gas emissions or a monetary cost-benefit analysis is appropriate and

---

<sup>83</sup> See Exec. Order No. 13693, 80 Fed. Reg. 15869 (Mar. 25, 2015).

<sup>84</sup> See 40 CFR 1502.23.

relevant to the choice among different alternatives being considered, such analysis may be incorporated by reference<sup>85</sup> or appended to the NEPA document as an aid in evaluating the environmental consequences.<sup>86</sup> For example, a rulemaking could have useful information for the NEPA review in an associated regulatory impact analysis which could be incorporated by reference.<sup>87</sup> When using a monetary cost-benefit analysis, just as with tools to quantify emissions, the agency should disclose the assumptions, alternative inputs, and levels of uncertainty associated with such analysis. Finally, if an agency chooses to monetize some but not all impacts of an action, the agency providing this additional information should explain its rationale for doing so.<sup>88</sup>

## V. CONCLUSION AND EFFECTIVE DATE

Agencies should apply this guidance to all new proposed agency actions when a NEPA review is initiated. Agencies should exercise judgment when considering whether to apply this guidance to the extent practicable to an on-going NEPA process. CEQ does not expect agencies to apply this guidance to concluded NEPA reviews and actions for

---

<sup>85</sup> See 40 CFR 1502.21 (material may be cited if it is reasonably available for inspection by potentially interested persons within the time allowed for public review and comment).

<sup>86</sup> When conducting a cost-benefit analysis, determining an appropriate method for preparing a cost-benefit analysis is a decision left to the agency's discretion, taking into account established practices for cost-benefit analysis with strong theoretical underpinnings (for example, see OMB Circular A-4 and references therein). For example, the Federal social cost of carbon (SCC) estimates the marginal damages associated with an increase in carbon dioxide emissions in a given year. Developed through an interagency process committed to ensuring that the SCC estimates reflect the best available science and methodologies and used to assess the social benefits of reducing carbon dioxide emissions across alternatives in rulemakings, it provides a harmonized, interagency metric that can give decision makers and the public useful information for their NEPA review. For current Federal estimates, see Interagency Working Group on Social Cost of Carbon, United States Government, *Technical Support Document Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866* (revised July 2015), available at <https://www.whitehouse.gov/omb/oira/social-cost-of-carbon>.

<sup>87</sup> For example, the regulatory impact analysis was used as a source of information and aligned with the NEPA review for Corporate Average Fuel Economy (CAFE) standards, see National Highway Traffic Safety Administration, Corporate Average Fuel Economy Standards, Passenger Cars and Light Trucks, Model Years 2017-2025, Final Environmental Impact Statement, Docket No. NHTSA-2011-0056 (July 2012), § 5.3.2, available at <http://www.nhtsa.gov/Laws+&+Regulations/CAFE+-+Fuel+Economy/Environmental+Impact+Statement+for+CAFE+Standards,+2017-2025>.

<sup>88</sup> For example, the information may be responsive to public comments or useful to the decision maker in further distinguishing between alternatives and mitigation measures. In all cases, the agency should ensure that its consideration of the information and other factors relevant to its decision is consistent with applicable statutory or other authorities, including requirements for the use of cost-benefit analysis.



which a final EIS or EA has been issued. Agencies should consider applying this guidance to projects in the EIS or EA preparation stage if this would inform the consideration of differences between alternatives or address comments raised through the public comment process with sufficient scientific basis that suggest the environmental analysis would be incomplete without application of the guidance, and the additional time and resources needed would be proportionate to the value of the information included.

# # #

# **EXHIBIT 4**

## Guidance on Fossil Fuel Energy at the Multilateral Development Banks

Under the *Executive Order on Tackling the Climate Crisis at Home and Abroad*, the United States will promote ending international financing of carbon-intensive fossil fuel-based energy while simultaneously advancing sustainable development and a green recovery. We recognize it is incumbent on the U.S. and other advanced economies to limit fossil fuel energy domestically as we seek to send a strong message to international partners. At the Multilateral Development Banks (MDBs), the United States is committed to supporting developing countries to achieve a clean and sustainable future that is consistent with their development goals and the goals of the Paris Agreement. We will work with MDB Management and shareholders to prioritize clean energy, innovation, and energy efficiency. When considering projects, we will advocate for MDB staff to assess these options first, and only consider fossil fuels if they are unfeasible. We will use the following guidance to inform our positions on fossil fuel energy policies, strategies, and projects at the MDB Boards.<sup>1</sup>

Direct investment projects:

- *Opposition to coal.* We will oppose new coal-based projects. We may consider coal decommissioning projects so long as they do not expand the capacity of a plant or extend its life.
- *Opposition to oil.* We will oppose oil-based energy projects. There may be limited exceptions, such as oil-based power generation in crisis circumstances or as backup for off-grid clean energy, if no cleaner options are feasible.
- *Narrow support for natural gas.* We will oppose upstream natural gas projects. We will **only** support midstream and downstream natural gas projects when **all** of the below criteria are met:
  1. The project supports IDA-eligible countries, fragile and conflict-affected states, or small-island developing states;<sup>2</sup>
  2. There is a credible alternatives analysis that demonstrates that there is no economically and technically feasible clean energy alternative;
  3. The project has a significant positive impact on energy security, energy access, or development; and
  4. The project is aligned with and supports the goals of the Paris Agreement as outlined by the joint MDB Paris-alignment methodology, which factors in a country's decarbonization pathway, greenhouse gas reduction strategies, and avoiding carbon lock-in.
- *Open to support for Carbon Capture, Use & Storage (CCUS) and methane abatement projects.* We are open to supporting CCUS and methane abatement solutions as stand-

---

<sup>1</sup> The guidance is in addition to, and does not supersede, other U.S. policies, considerations, and legislative provisions regarding MDB projects. Fossil fuel energy issues not addressed by this guidance will be assessed with the guidance in mind. This guidance replaces previous guidance on use of fossil fuels in energy projects at the MDBs.

<sup>2</sup> Fragile and conflict-affected states based on annual World Bank Fragile and Conflict-affected Situations (FCS) list. Small island developing states based on UN Small Island Developing States (SIDS) list.

alone investments for existing fossil fuel projects assuming they do not expand the capacity of the existing project or a significantly extend its operational life.

- *Open to support for natural gas and oil heat generation.* We are open to supporting the use of natural gas and oil products for household heat generation projects, in particular clean cooking projects, if no cleaner options are feasible. We will consider natural gas and oil products for industrial or district heat generation on a case-by-case basis.

Other types of projects:

- *Policy-based operations.* We will oppose operations with policy reforms that directly support fossil fuel activities that are not consistent with our approach for direct investment projects. We will consider policy-based operations with significant macroeconomic or development reforms that may indirectly support these activities on a case-by-case basis.
- *Financial intermediary and equity investments.* We will oppose all investments to financial intermediaries or companies where we can reasonably determine that the MDB funds will be used for subprojects or activities that are not consistent with our approach for direct investment projects. Where we are unable to determine how the funds will be used, we will assess the project based on decarbonization of the client's overall portfolio on a case-by-case basis.

# U.S. DEPARTMENT OF THE TREASURY

## FAQ for New Fossil Fuel Energy Guidance for the Multilateral Development Banks

- What did the U.S. Department of the Treasury announce today? As part of President Biden’s first executive order on climate announced earlier this year, Treasury is releasing its [Fossil Fuel Energy Guidance for Multilateral Development Banks \(MDBs\)](#) . In its guidance, Treasury is advocating for MDB investments that prioritize clean energy, innovation, and energy efficiency, to achieve a clean and sustainable future that is consistent with their development goals and the goals of the Paris Agreement. The guidance directs MDBs to oppose oil and coal projects, and to support natural gas investments only if certain strict criteria are met. Treasury developed this policy through an extensive interagency process and via consultations with various stakeholders and will continue to advocate for MDB staff to assess options for clean energy, innovation and energy efficiency first, and to only consider fossil fuels if less carbon-intensive options are unfeasible.
- Why was the Fossil Fuel Energy Guidance developed? The MDB Fossil Fuel Guidance is a result of President Biden’s first executive order on climate (Executive Order 14008), which directs Treasury and other agencies to “identify steps through which the United States can promote ending international financing of carbon-intensive fossil fuel-based energy while simultaneously advancing sustainable development and a green recovery.”
- Is this policy the same as the National Security Council and White House Guidance? The National Security Council asked agencies to develop their own policies that are either consistent with or more stringent than the White House level Guidance. This is Treasury’s policy for the MDBs.

- How will this Guidance help countries achieve Paris Alignment? We expect that the United States will advocate for clean energy and energy efficiency approaches that will help countries ultimately achieve Paris Alignment.
- What is the view on coal? We will strongly oppose coal energy projects across the entire coal value chain (e.g., mining, transport, and power generation).
- What is the view on oil? We will also oppose oil energy projects across the oil value chain, including the processing of transport fuels, e.g., a diesel refinery. We would only make exceptions to our opposition to oil projects in rare circumstances, such as in humanitarian crises or as backup generation for clean off-grid energy systems.
- What is the view on natural gas? We will oppose “upstream” natural gas projects (e.g., gas exploration), but can support midstream and downstream natural gas projects, provided certain specific criteria are all met:
  - The project supports poor and vulnerable developing countries -- which we define as IDA-eligible countries (including IDA-blend countries), fragile and conflict-affected states, and small-island developing states.
  - The project is accompanied by a credible analysis that demonstrates that there is neither an economically nor technically feasible alternative, including renewable energy, nor means of achieving the objectives of the project through other means (e.g., through energy efficiency). An example would be that there is no economically competitive way to provide baseload power, which remains the case in some circumstances.
  - The project has a significant positive impact on energy security, energy access, or development.
  - The project is aligned with the goals of the Paris Agreement.
- Will the Guidance support other technologies to reduce emissions from existing facilities? We are open to supporting abatement technologies,

including methane abatement and carbon capture utilization and storage (CCUS) or efficiency improvements for existing oil and gas assets, provided that they a) do not expand the asset's generation capacity and b) do not extend its life.

- Will the Guidance support coal decommissioning projects? Yes, we are encouraging the MDBs to explore potential projects for coal decommissioning.
- How is the Guidance applied to heat generation projects? We recognize that coal plays a significant role as a heating source in some regions and the substantial harm caused by dirty cooking fuels. We are open to supporting oil and gas projects as coal alternatives for household cooking and heating. We may also consider oil and gas projects for other heat generation purposes (e.g., industrial uses) where there are no other feasible alternatives.
- How does the Guidance apply to indirect financing through policy-based operations and financial intermediaries? These types of projects represent a large portion of MDB financing and are included in our approach.
  - For policy-based operations, we intend to oppose projects where the policy reforms are targeted towards and likely to expand the fossil fuel sector (excluding gas in IDA-eligible countries).
  - For financial intermediaries, we will determine our position based on how the bank or other intermediary is likely to use the specific MDB funds relative to our overarching guidance.
- How are middle income countries supposed to transition away from coal if you do not support MDB financing of natural gas? Some countries may use natural gas as they transition from dirtier fuels to cleaner fuels. However, middle income countries generally have better market access than poorer economies and could finance natural gas investments independently, consistent with their domestic climate plans. In addition, we want to focus

our limited development assistance on helping countries invest in a clean technology future.

---