

PERSPECTIVES FROM THE FIELD

NEPA and Climate Change, Part 2: Ten Steps to Taking a Hard Look

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This article is part 2 of a two-part series. Part one, which was published in the June 2008 edition of *Environmental Practice*,¹ focused on the context for considering climate change in National Environmental Policy Act (NEPA) analyses and reviewing the case law and other legal developments on the topic. The article briefly explained the phenomenon of climate change and the key climate change science findings and predictions from the most credible global and United States (US) sources. The article also briefly described some important state and local climate change policy initiatives, and provided an overview of the state of NEPA climate change case law.

This article expands on that discussion by focusing on emerging trends in climate change regulation and new approaches to NEPA analysis of climate change impacts and mitigation. It concludes with a practical step-by-step approach to ensuring that greenhouse gas (GHG) emissions and other climate change-related impacts receive appropriate consideration in NEPA documents.

NEPA requires federal agencies to take a hard look at the environmental consequences of their proposed actions; however, many agencies are preparing NEPA documents with little or no analysis of GHG emissions or the impacts of global climate change on either the proposed action or the resources affected by the action. As policy makers continue to debate how agencies should address GHG emissions and climate change impacts under NEPA, lead

agencies cannot afford to wait for answers. This article briefly explains why GHG/climate change impacts should be evaluated in most NEPA analyses and includes a recommended 10-step approach to the topic.

Every day, agencies are preparing NEPA documents with little or no official guidance about how to address GHG/climate change issues. Unfortunately, too many agencies are coming up with excuses for not addressing the issue at all or including only vague references to it. Here are some of the more common excuses:

- NEPA doesn't cover climate change impacts.
- NEPA only applies to impacts in the United States.
- Climate change impacts are speculative and not foreseeable.
- We scoped it out of our document.
- We can't solve the global problem so why discuss it.

Agencies relying on these excuses are in apparent denial that the NEPA statute and the Council on Environmental Quality (CEQ) regulations for implementing NEPA already contain provisions that strongly suggest the need to evaluate climate change-related impacts. They are also ignoring the emerging trends on this issue in the courts, in state legislatures, and within the Obama administration. For example, in a recent letter² sent from the chair of the CEQ to two senators on the Environment and Public Works Committee in response to their request for information on how the CEQ planned to address NEPA and climate change, CEQ Chair Nancy Sutley stated,

Nonetheless, NEPA compels Federal agencies to consider environmental effects before undertaking significant actions or policies. CEQ sees no basis for excluding greenhouse gas emissions from that consideration. CEQ believes that it is appropriate and necessary to con-

sider the impact of significant Federal actions on greenhouse gas emissions and the potential for climate change to affect Federal activities evaluated through NEPA and different approaches for managing those effects.

The letter also stated that CEQ was developing a guidance document on NEPA and climate change for federal agencies, and would be releasing a draft copy for public review. No timeline was given for the release of the draft document. However, there is no need or excuse for federal agencies to wait for such guidance to begin addressing the topic in their NEPA analyses. The next section describes relevant sections of the existing NEPA statute and CEQ NEPA implementing regulations that provide direction on addressing the topic.

Existing Framework under NEPA and CEQ Regulations

Language in the NEPA statute and the CEQ *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*³ strongly suggest that GHG emissions and climate change impacts should be addressed in most NEPA analyses. Consider the following:

- Effects on air quality fall under NEPA's definition under *Protection of the Environment, of Terminology and Index: Effects* on the human environment (40 CFR 1508.8): "Effects includes . . . 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, whether direct, indirect, or cumulative"—and *Human Environment* (1508.14): "*Human environment* shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment."

- NEPA requires consideration of “direct,” “indirect,” and “cumulative” effects [*Protection of the Environment*, (40 CFR 1502.16): *Environmental Consequences*]. The GHG emissions resulting from a proposed action are either direct or indirect effects, and the resulting global climate change impacts from these emissions are classic examples of cumulative effects. In addition, the same section of the CEQ implementing regulations requires that “energy requirements and conservation potential of various alternatives and mitigation measures” and “natural or depletable resources requirements and conservation potential of various alternatives and mitigation measures” be discussed in all NEPA analyses [1502.16(e)(f)].
- Since climate change impacts are inherently cumulative, they fall within the cumulative effects component of NEPA’s definition of significant [40 CFR 1508.27(b)(7)]: “Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.”
- NEPA requires discussions of “possible conflicts between the proposed action and the objectives of Federal, State, and local land use plans, policies and controls for the area concerned” [40 CFR 1502.16(c); see also 1508.27(b)(10)]. Thus, a NEPA analysis must evaluate the relationship between the GHG emissions from a proposed act and any relevant state GHG emission reduction laws or policies. Many states, such as California, Massachusetts, and New York, have already enacted such laws and policies.

As these examples illustrate, there is no reasonable interpretation of the existing regulatory framework that would suggest that GHG emissions and other climate change impacts should be left out of NEPA analyses. On the contrary, the trend in the federal courts and at the state level suggests climate change impacts should definitely be considered under NEPA. And the

statement cited earlier from CEQ’s December 2009 letter to Congress certainly reinforces these trends and policies.

In addition, there has been a burst of recent activity related to climate change regulation under the federal Clean Air Act (CAA). Most significantly, in 2007 the US Supreme Court ruled in *Massachusetts et al. v. Environmental Protection Agency*⁴ that climate change impacts are reasonably foreseeable, are caused in part by human activities, and should be considered by EPA for regulation as pollutants under the CAA. The EPA has since found that GHG emissions cause or contribute to air pollution that may reasonably be anticipated to endanger public health and welfare.⁵ The EPA is also planning on issuing a final rule in March 2010 regulating GHG emissions from passenger cars and light trucks, and in September 2009 finalized a Mandatory Reporting Rule for GHG emissions. The rule requires sources to report their GHG emissions if they emit more than 25,000 metric tons of carbon dioxide equivalent (MtCO₂e) annually or trigger other thresholds established by the EPA. Although NEPA and the CAA are obviously entirely different laws, it will be difficult for federal agencies to take the position that climate change impacts should not be addressed in NEPA analyses, given these actions by the Supreme Court and the EPA.

Also at the federal level, President Barack Obama signed Executive Order 13514 on *Federal Leadership in Environmental, Energy, and Economic Performance*⁶ in October 2009. In addition to requiring all federal agencies to calculate and identify reduction targets for all direct and indirect GHG emissions associated with their activities, the order requires all federal agencies to begin “identifying and analyzing impacts from energy usage and alternative energy sources in all Environmental Impact Statements and Environmental Assessments for proposals for new or expanded Federal facilities under the National Environmental Policy Act of 1969, as amended.” Although many agencies obviously prepare many NEPA analyses for proposed actions that do not involve federal facilities per se (such as a permit request from a private application), it will be difficult to justify preparing such analyses for federal facilities

but not other types of proposed actions, especially when the GHG emissions and/or climate change impacts would be similar. In addition, in January 2010, President Obama submitted to the United Nations Framework Convention on Climate Change (UNFCCC) a GHG target for the US in the range of a 17% below 2005 levels by 2020, in association with the Copenhagen Accord and in conformity with anticipated US energy and climate legislation. Such an official policy declaration at the federal level provides a comparison point for whether a project is contributing to this goal through its contribution to GHG emission increases or reductions.

Aside from this federal policy and judicial context, more than a dozen states have already enacted legislation establishing reduction targets for GHG emissions; in the case of California, these reductions are legislatively mandated. Although these state laws do not apply to federal agencies, NEPA does require that environmental documents consider the relationship between proposed federal actions and state environmental protection regulations and policies. Many of these regulations involve the setting of GHG emission reduction targets, and thus NEPA analyses for projects in relevant states should discuss the relationship of proposed actions and alternatives to applicable GHG reduction targets and should recommend mitigation measures and alternatives that would help to achieve those reductions.

A Ten-Step Approach to Addressing GHG and Climate Change Impacts

The preceding discussion leaves little doubt that lead agencies should evaluate GHG emissions and other climate change impacts in most of the NEPA analyses that they prepare, even in the absence of specific, mandatory requirements. Given the lack of specific regulations or guidance on the topic, the key question is, What should an agency do—*right now*—to address the issue?

The following is a 10-step approach that agencies may want to follow in their consideration of GHG emissions and other

climate change impacts in their NEPA analyses. Obviously, different types and sizes of proposed actions will necessitate different levels of treatment, and some very minor actions may not trigger the need to discuss these issues at all. NEPA analysts will need to use their best judgment in determining the level of climate change analysis for any given proposed action until more definitive guidance and/or regulations are forthcoming from the CEQ, as well as direction based on future court decisions on the matter. These recommendations take into consideration the existing provisions of the NEPA regulations, recent court decisions, and various state regulations and programs. They are broken down to conform to the main elements of a NEPA document.

Proposed Action and Alternatives

Step 1. If the proposed action involves a project where climate change is fundamental to the purpose and need of the project (such as a renewable energy project designed to meet GHG reduction goals, or an infrastructure project designed to assist in adapting to climate change), then include that discussion in the description of the proposed action.

Step 2. Some proposed actions (such as those examples described in step 1) will necessitate a discussion of alternatives that include climate change as a key component. Other proposed actions, even if they do not have climate change as a key purpose-and-need driver, may benefit from alternatives that would meet the project objectives but would also reduce GHG emissions or include alternative means of adapting to climate change impacts.

Affected Environment

Step 3. Describe the existing global, regional, and applicable local context in which climate change impacts are occurring and are expected to continue. This discussion could occur in a separate climate change section of the document but would likely be more effectively woven into the description of each resource being analyzed in detail in the NEPA document. As an example, in a NEPA analysis for a logging project in the Pacific Northwest, impacts on fisheries

are often included as one of the resources to be analyzed in depth. That section (perhaps in a separate subsection on climate change impacts) could include a discussion of what current scientific research and observation are reporting regarding climate change impacts on fisheries, as well as predicted future changes (such as changes to water flow and water temperature).

Step 4. Summarize any relevant state, regional, or local laws that address climate change and how they are related to the proposed action.

Step 5. Describe any relevant national, state-wide, and regional GHG inventories and reduction targets to which the project will contribute.

Environmental Consequences

Step 6. If possible, quantify the project's direct and reasonably foreseeable, indirect GHG emissions. Convert the GHG emissions into carbon equivalents by using an established *carbon calculator*. This analysis will necessarily involve making choices about how far "upstream" and "downstream"⁷ to go in including GHG emissions that are indirectly related to a proposed action. These choices will be difficult to make because this is a newly emerging field and there are not accepted, formal methods or protocols to follow yet for NEPA analyses. The best approach, given this uncertainty, will be to make the most rational and reasonable choice for any given proposed action and clearly explain that rationale in the NEPA document.

Step 7. Discuss whether the project would enhance or impede the attainment of any applicable state, regional, or local GHG reduction policy, regulation, or goal.

Step 8. Describe the cumulative global climate change impacts to which the proposed action would contribute, such as changes to temperature and sea level rise and the resulting impacts from those processes, such as potential damage to coastal infrastructure or changes in agricultural productivity for certain regions. For most documents, this discussion should be very brief and can largely incorporate by reference information on global climate change

impacts from sources such as, for US impacts, the US Global Change Research Program and, for global impacts, the UN Intergovernmental Panel on Climate Change (IPCC).

Step 9. Describe how the impacts of global climate change could manifest themselves in the regional or local geographic area in which the project is proposed and therefore potentially affect the project—in other words, the impacts of climate change on the project (e.g., how sea level rise could affect a coastal project). This discussion can build on the description of the past and present contributions of climate change to a resource, as described in step 3. Some state, regional, and local agencies are beginning to develop valuable data about projected climate change impacts, and this information can be incorporated by reference if it is available.

Mitigation Measures

Step 10. If warranted, identify and consider mitigation measures that would reduce GHG emissions, including both project design or operational changes and potential compensatory mitigation (e.g., carbon offsets). In addition, if relevant and feasible, describe mitigation measures that may be needed to address climate change impacts on the proposed action or resources affected by the proposed action.

The foregoing discussion is brief because this article is intended to provide only a current overview on the topic and since developments in this area of practice are rapidly changing. As mentioned previously, sometime in the near future the CEQ will likely issue guidance on addressing climate change in NEPA analyses. When that guidance is finalized, analysts will need to consider which aspects of these recommendations are still relevant or may need to be modified.

Conclusion

Keeping in mind that the standard of adequacy for a NEPA document is whether an agency has taken a hard look at the environmental effects of a proposed action, the closer an agency comes to includ-

ing all of the aforementioned steps in its analysis, the more likely the document will reflect the current trend toward evaluating climate change impacts and the better it will be perceived by reviewing agencies and the public. Additionally, the lead agency will stand a better chance of deflecting criticism and prevailing in court should the NEPA document be challenged. Obviously, numerous issues can be raised and choices can be made in deciding how to approach any of these 10 steps. The best approach during this period of uncertainty is to make rational and reasonable choices about how deeply and with what methods to address climate change impacts for a proposed action, and clearly document the rationale and analysis in agency NEPA documents.

Notes

1. Michael D. Smith (2008) "NEPA and Climate Change," *Environmental Practice* 10(2):75–77.
2. Letter from Chair Nancy Sutley, Executive Office of the President, Council on Environmental Quality, to Senators James M. Inhofe and John Barrasso, Senate Environment and Public Works Committee, December 29, 2009, available at http://www.nmfs.noaa.gov/ocs/mafacs/meetings/2010_02/docs/document_gw_02.pdf (accessed April 9, 2010).
3. Council on Environmental Quality (CEQ) (2005) *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, 40 CFR 1500–1508 (CEQ, Washington, DC), 42 pp., available at http://ceq.hss.doe.gov/nepa/regs/ceq/toc_ceq.htm (accessed April 8, 2010).
4. *Massachusetts et al. v. Environmental Protection Agency* (2007) 549 US 497, available at <http://www.scotusblog.com/archives/05-1120All.pdf> (accessed April 9, 2010).
5. US Environmental Protection Agency (EPA) (2009, December 15) *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act*, Final Rule, 74 FR 66496 (EPA, Washington, DC), 31 pp., available at <http://epa.gov/climatechange/endangerment.html> (accessed April 8, 2010).
6. Barack Obama (2009, October 5) *Federal Leadership in Environmental, Energy, and Economic Performance*, Executive Order 13514 (White House, Office of the Press Secretary, Washington, DC), 15 pp., available at http://www.whitehouse.gov/assets/documents/2009fedleader_eo_rel.pdf (accessed April 9, 2010).
7. Upstream and downstream emissions are emissions typically interrelated with energy use required for activities such as building construction, operation, and development. For example, if the proposed action under analysis was the construction of a new building, upstream emissions could include emissions associated with the production and transport of building materials, and the production and transmission of electricity for building operations. Downstream emissions could include activities such as waste disposal and building decommissioning.

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