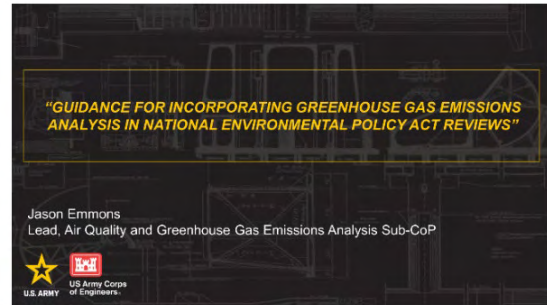


Guidance for Incorporating Greenhouse Gas Emissions Analysis in NEPA Reviews

22 August 2024

Q&A Summary

This webinar provided an overview of [Engineering and Construction Bulletin \(ECB\) 2024-9: Guidance for Incorporating Greenhouse Gas Emissions Analysis in National Environmental Policy Act Reviews](#). Presented by Jason Emmons (Lead for the Air Quality and Greenhouse Gas Emissions Sub-CoP), the presentation reviewed the requirements for performing greenhouse gas emissions analysis and utilizing emissions quantities for project planning in compliance with the National Environmental Policy Act (NEPA) as applicable for Civil Works, Regulatory, and MILCON projects. Recommended resources for completing emissions analysis were also discussed.



This summary of the Question/Answer session of the webinar is not a transcription; questions and responses have been edited and reordered for clarity.

Applying ECB 2024-09 to USACE Projects

What is the scope of greenhouse gas emissions analysis for a USACE project?

Greenhouse gas emissions evaluation should be limited to reasonable assumptions. For example, the scope of the Greenhouse gas emissions that need to be accounted for and evaluated should include: emissions to bring the project materials to the site (upstream), emissions to build the project (direct emissions), and subsequent emissions during the 50-year life cycle (downstream, indirect) for what it takes to maintain the project.

Are new land owners/users responsible for quantifying the emissions of their own projects under the No Action Alternative?

No Action Alternative emissions must be quantified. The party responsible for quantifying emissions will depend on how project planning work is to be carried out. For Regulatory Projects – the Decision Document Templates will be updated within 1 year of the publication of ECB 2024-9 which would provide additional information for the responsible party for completing emissions analyses.

For feasibility studies that have environmental assessments going out for public comment and agency review imminently, do the requirements in [ECB 2024-9](#) still apply?

The guidance requires that a greenhouse gas emissions analysis should be included for studies that have not yet distributed the draft NEPA document for public and agency review. If a draft has already been distributed for review, the statement, "project delivery teams should use professional judgment when considering how to apply this guidance to analyze actions at the feasibility stage of review," within the ECB would apply so that project delivery teams would have discretion to include it for the final draft of the NEPA document.

Do the requirements for greenhouse gas evaluation under ECB 2024-09 for ongoing studies also cover smaller studies (e.g., environmental infrastructure or Continuing Authorities Program projects)?

Yes, this ECB applies for all USACE actions covered under NEPA.

How does greenhouse gas emissions evaluation under ECB 2024-09 relate to Real Estate outgrants for work on USACE property?

As part of the real estate outgrant process, there is a check for whether NEPA was completed. If NEPA is required for the action then this ECB applies.



Greenhouse Gas Analysis Requirements and Process

In ECB 2024-09, Section 5(c) states: "The recommended metric for determining significant effects is to evaluate whether anticipated greenhouse gas emissions from each alternative prevent the federal greenhouse gas reduction goal from being met...." However, the documents referenced in the ECB do not provide specific guidance on characterizing levels of significance, especially for the construction sector. How should study teams define "level of significance"?

Please see the Preliminary GHG Emissions Analysis SOP which provides more information on how to determine the level of significance using the 2050 Federal Net Zero GHG Reduction Goal as contained in the US Long-Term Strategy, using specific emissions sectors. Here is the Preliminary Greenhouse Gas Emissions Analysis Standard Operating Procedure: [GHG Emissions Analysis Resources and SOP](#).

What does it mean to "adopt" a greenhouse gas analysis, and particularly how does this analysis differ from a smaller project (e.g., Continuing Authorities Program study or Environmental Infrastructure project) to a larger project? Often, the only information available is from the proponent and they may not have the right detail or type of information to conduct a legitimate calculation.

Adoption of an analysis refers to the process of using results from a previous and similar project's emissions analysis to disclose expected emissions for a new project. As detailed in ECB 2024-9, you must disclose how the actual project emissions may differ from those in the example analysis that is being adopted. The analysis scope is the main difference between small, medium, and larger projects. Please refer to slide 11 from the presentation "Timing and Scoping" which contains the below graphic and details how the project size affects the analysis scope and which quantification methods are recommended.

Analysis Scope	Analysis Uncertainty	Emissions Quantification Method	Project Size	Equipment Quantity*	Construction, Maintenance, and Operations* (years)
Less Complexity  More Complexity	More Assumptions  Less Assumptions	Method 1: Adoption of an Emissions Analysis	Small	< 10	< 1
		Method 2: Unitized Project Emissions Rates	Small-Medium	10 < 20	1 < 3
		Method 3: Fuel Volume Emissions Factors	Medium-Large	20 < 30	1 < 3
		Method 4: Equipment Emissions Factors	Medium - Mega	30 <	3 <

* May not determine the amount of emissions, but is generally used to indicate project size as it relates to emissions anticipated.

Does the Air Quality and Greenhouse Emissions Analysis Sub-CoP have plans to develop regional emissions factor ranges to be used in Micro-Computer Aided Cost Estimating System Second Generation application (MII) cost-estimating reports for each equipment type?

There are no plans by the Sub-CoP for providing this type of information for cost-estimating software at this time.

When study teams evaluate impacts to resource categories, should they fall under "Air Quality" or "Climate Change"?

It is generally recommended to place greenhouse gas emissions in the Climate Change section or a standalone section if needed. If the yearly greenhouse gas emissions (in CO_{2e}) from stationary sources are in such high quantities that within a margin of error they could produce 100,000 tons CO_{2e} per year, then greenhouse gas emissions should also be included in the Air Quality section and have an included conformity determination as needed.

Should both increases and decreases in emissions be quantified and recorded? For example, for a navigation study, should the reduction in emissions over the 50-year project life cycle be compared to the emissions during construction?

Yes. The emissions savings (often in the form of Carbon sequestration) should be quantified and subtracted from the total emissions for each alternative to calculate the gross emissions. With gross emissions totals from each alternative, you can then calculate the new emissions by subtracting the no-action emissions from each of the action alternatives. If an action alternative's emissions are less than the no-action emissions, it will result in a negative number which shows a net reduction in emissions for performing the action.

Is the [Net Emissions Analysis Tool \(NEAT\)](#) model or other quantitative analysis mandatory for policy compliance with ECB 2024-09, and if so, is there an exemption process?

Although highly recommended, the NEAT model is not required to be used per the ECB 2024-9. However, the social costs of greenhouse gases that are published in the NEAT model are required to be used. Please see the Social Costs sheet in the NEAT model to find the tables of social costs.

Are there requirements for conducting a quantitative emissions analysis in the case of a categorical exclusion?

Greenhouse gas emissions should be used to scope which NEPA document is applicable which can be accomplished using a qualitative analysis. If a CATEX is applicable, a quantitative analysis is not required.

Are cement emissions (e.g., to construct a large boat ramp) required to be included in the greenhouse gas analysis for projects that propose new concrete work?

Inferring that you are referring to embodied carbon emissions from cement production- these can be included in a greenhouse gas emissions analysis as a way to quantify upstream emissions for concrete work. The NEAT model provides an easy way to do this calculation within the "Embodied Carbon" sheet.

Why are global warming potentials from [CFR Title 40 Chapter I Subchapter C Part 98 \(Mandatory Greenhouse Gas Reporting\)](#) used instead of potentials from the Intergovernmental Panel on Climate Change Sixth Assessment Report ([IPCC AR6](#))?

CFR Title 40 Chapter I Subchapter C Part 98: Table A-1 “Global Warming Potential” contains the recommended Federal global warming potentials per USEPA. The federal register notice includes the below excerpt regarding background information for compiling these global warming potentials. Notably, EPA will periodically update Table A-1 as new values are evaluated or reevaluated by the scientific community, which may utilize consensus formed within subsequent IPCC reports.

1. BACKGROUND ON ADDITION OF GWPS TO SUBPART A

Table A-1 to subpart A of [40 CFR part 98](#) (Table A-1) is a compendium of GWP values of certain GHGs that are required to be reported under one or more subparts of the GHG Reporting Rule. These GWPs are used to convert tons of chemical into tons of CO₂-equivalent (CO₂ e) for purposes of various calculations and reporting under the rule. As indicated in the **Federal Register** document for the final Part 98 ([74 FR 56348](#)), it is the EPA's intent to periodically update Table A-1 as GWPs are evaluated or reevaluated by the scientific community. This will provide a more accurate and complete account of the atmospheric impacts of GHG emissions and supplies.

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