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Please see a comment letter attached.
Sincerely, Derik Broekhoff, Peter Erickson, and Michael Lazarus, Senior scientists, Stockholm Environment Institute, U.S

1402 Third Avenue, Suite 900
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[Via Public Comment Portal, ecology.wa.gov]

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Dear Department of Ecology GAP Rulemaking Team:

We write to provide additional input to the Department of Ecology's draft conceptual framework ("draft framework") for the Greenhouse Gas Assessment for Projects (GAP) Rule process, along with related questions pertaining to greenhouse gas mitigation. In general, we find the draft framework provides a sound basis for evaluating the greenhouse gas (GHG) impacts of proposed projects. Our comments primarily concern some possible areas of clarification in how assessment concepts and methods could be presented. With regard to developing mitigation plans, we encourage Ecology to consider alternative models besides simple "offsetting" of emissions.

As ever, we are grateful for the opportunity to provide these comments and would be happy to answer any questions about them.

Sincerely,

Derik Broekhoff, Peter Erickson, and Michael Lazarus
Senior scientists
Stockholm Environment Institute, U.S.

The draft GAP Rule conceptual framework presents basic concepts, definitions, and parameters for assessing the effect of a proposed industrial or fossil fuel project on greenhouse gas (GHG) emissions. It also proposes criteria and guidelines for how emissions caused by a project could be mitigated. The Department of Ecology is developing rules for both of these elements consistent with the Governor's Directive to "strengthen and standardize the consideration of climate change risks, vulnerability, and impacts in environmental assessments for major projects with significant environmental impacts."[1]

These comments address both environmental assessment and mitigation concepts in turn.

Environmental assessment concepts

The draft framework proposes a two-part environmental analysis, consisting of a GHG and energy analysis, along with two "analysis conditions," which are effectively different benchmarks or references against which a project's GHG emissions could be assessed. The GHG analysis would have two components: an estimate of "facility emissions" and an estimate of lifecycle emissions associated with a project, including inputs and outputs.

However, it is not always clear how the different elements of the environmental analysis relate to each other, nor how the analysis conditions would be used to determine a project's impact and inform mitigation requirements. Based on our understanding of the intent of the Governor's Directive, we offer the following possible clarifications and refinements for consideration by Ecology.

First, the framing and intended application of the proposed "analysis conditions" is somewhat unclear. These conditions would seem to apply only to a GHG analysis, not the energy analysis for a project. The first condition is a "baseline condition," and as described refers to "current" or "existing" conditions as the basis for determining a project's expected future contribution to GHG emissions. For new projects that do not yet exist, this language would seem to be mostly unnecessary, since the comparison to current conditions is essentially a comparison to zero GHG emissions.[2] An alternative (and perhaps simpler) way to frame this could be to borrow additional terminology from life cycle analysis: namely, that project proponents must estimate future GHG emissions *attributable* to a project, holding all else constant. "Attributional" GHG accounting methods are well-established for industrial facilities (e.g., under WAC 173-441-120 and the U.S. EPA's GHG reporting program methods specified in 40 CFR Part 98), for corporate entities (e.g., ISO 14064 Part 1 and the Greenhouse Gas Protocol Corporate Standard), and for lifecycle analyses (e.g., ISO 14040 and 14044, as indicated in the draft framework).

Attributional GHG accounting methods are appropriate when seeking to understand the contribution of a project (and its underlying processes) to global GHG emissions, and appropriately, the draft framework indicates that the "baseline condition" would be used to assess the impacts of a project and determine a mitigation plan. However, requiring comparison to a "baseline condition" could be confusing, especially since the term "baseline" is typically used to refer to a counterfactual scenario used in a different form of emissions analysis, often called *consequential* GHG analysis.

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[1] https://www.governor.wa.gov/sites/default/files/directive/19-18%20-%20ECY%20Climate%20Rules%20%28tmp%29.pdf

[2] We recognize that, in cases where a new project is expanding infrastructure or new facilities or changing an industrial process, that a comparison to current conditions would be necessary; still, it would seem those cases could be addressed by defining the project itself as the act of expansion or change, rather than use the language about comparing to current conditions for all projects.

We therefore recommend dropping the term "baseline condition" and simply requiring an "attributional" GHG analysis.

The second analysis condition, a "no action alternative," would evaluate a project against "future conditions without the project." This type of analysis can be considered as analogous to a counterfactual baseline used in a different, consequential lifecycle analysis (LCA). Consequential LCA, and other types of consequential GHG analysis are used to answer questions about how emissions *change* in response to a project or intervention (Brander, 2017; Brander et al., 2009) – typically (but not only) when the project or intervention is designed as a *mitigation,* or GHG emission *reduction*, measure (and where uncertainty is often higher than for attributional approaches). Consequential approaches are therefore less appropriate for assessing a project's overall contribution to GHG emissions, which should be the basis for determining *what needs to be mitigated*. **The draft framework does not indicate how the "no action alternative" condition could or should be used; we recommend clarifying its use,** especially if Ecology is contemplating using it as a method for determining whether a project "supports decarbonization," i.e., whether a project is consistent or not with the State of Washington's goal to "limit global warming to one and one-half degrees."[3]

Second, the draft framework proposes two separate elements of a GHG analysis but does not clearly indicate a separate purpose for each. A "facility emissions" analysis would look at GHG emissions attributable to a project that are generated "on or near" a project facility. However, this analysis would go beyond facility direct emissions (such as those reported under Washington's existing GHG reporting program) and include various categories of indirect emissions, including Scope 2 (electricity use) and certain types of Scope 3 emissions (e.g., construction emissions, employee commuting, local traffic congestion, etc.) A "life cycle analysis" would extend the analysis boundaries further to include additional upstream and downstream sources of emissions. The basis for distinguishing these two elements is not entirely clear, especially since the "facility emissions" analysis would not be limited to direct emissions.

The Governor's Directive indicates that the GAP Rule should include "Methods, procedures, protocols, criteria or standards for mitigation of greenhouse gas emissions, as necessary to achieve a goal of no net increase in greenhouse gas emissions attributable to the project." The key question here would seem to be what constitutes emissions "attributable" to a project. The most comprehensive and relevant way to answer this question for mitigation purposes is to perform an attributional LCA. Since an attributional LCA should encompass all the sources of emissions included in the "facility emissions" analysis, the two elements would seem to be redundant. **We therefore suggest dropping the facility emissions component and simply folding this element into a single requirement for an attributional LCA.**

(Notably, the Governor's Directive also refers to establishing criteria for assessing "leakage and market effects" of a project. The draft framework rightly notes that these are not typically part of an attributional LCA. They could be considered within a consequential LCA, but mixing of attributional and consequential analysis methods should, in general, be avoided (Brander et al., 2009). The appropriate analysis framework for determining GHG emissions attributable to a project is – not surprisingly – an attributional one.)

[3] We previously provided some suggestions on the importance of using low-carbon scenarios as the primary baselines (or no-action scenarios) in evaluating net emissions (December 15, 2020 letter), as well as some further details on how to construct such low-carbon scenarios (January 14, 2021). Those comments would still apply here, especially if the goal of "a No Action Alternative with a future where these Washington State GHG reduction limits will be met" is to evaluate whether a project "supports decarbonization".

Third, where consequential analysis does appear to enter the picture is in the "energy analysis." As written, the scope here, however, would seem to be narrower than a full consequential LCA for GHG emissions, focusing instead on a more preliminary and qualitative assessment of the potential impact of a project on *energy* markets. This assessment could include estimation of potential emission leakage effects, as well as exploration of a project's potential use of alternative energy sources. **We recommend clarifying how the energy analysis might be used, especially as it relates to potential mitigation measures.** For example, is the concept here that a project that might "significantly affect" an energy market would need to develop alternative energy sources? Are there circumstances under which significant energy market impacts would be deemed unmitigable?

Mitigation plan concepts

Ecology seeks input on three questions related to project mitigation requirements. Below, we address the first two of these questions, and then discuss mitigation plan concepts presented in the draft framework in the context of answering the third.

The first questions is what emissions should be included in a mitigation plan**. We recommend that mitigation plans address all GHG emissions attributable to a project, as determined by an attributional LCA** (as discussed above). This would include upstream and downstream emissions, occurring both within and outside the State of Washington. There could be scope for prescribing different mitigation approaches depending on whether emissions occur in- or out-of-state, but mitigation plans should not arbitrarily exclude any categories of attributable emissions.

The second question is whether mitigation should be required for projects that "support decarbonization," and related to his, how supporting decarbonization should be defined. Whether a project "supports decarbonization" should depend on whether it has an emissions intensity consistent with internationally recognized scenarios for global deep decarbonization. We would refer Ecology to our earlier letter (dated January 14, 2021), which describes an approach for comparing projects to a "low-carbon baseline" consistent with scenarios for achieving Paris Agreement targets. Specific benchmarks would need to be developed depending on the type of project and its associated industry.

We support the idea of exempting projects that "support decarbonization" (i.e., meet or go below a Paris-consistent emissions intensity according to established decarbonization scenarios) from some or all mitigation requirements. For these kinds of projects, one option would be to require mitigation only for a project's in-state emissions, on the grounds that these projects could still impact Washington's ability to meet its GHG reduction targets. However, such a requirement would need to be weighed against the possible discouragement of clean industries (e.g., projects clearly aligned with limiting global warming to one and one-half degrees) from locating in Washington.

With regard to the mitigation plan concepts presented in the draft framework, the focus appears be on investing in mitigation through the procurement of carbon offsets (either through direct project investments or purchase of carbon credits). There is a long history of using offsets (carbon or otherwise) in the context of mitigating environmental harms, and the draft framework helpfully lays out examples of specific carbon offset protocols (and associated crediting programs) that could be used to provide a minimum guarantee for meeting offset "quality" criteria. At the same time, there is a nearly-as-long history of critiques off carbon offsets, calling into question the validity of offsets from a variety of crediting programs and mitigation activity types. Many critiques have focused on the world's large offsetting program, the United Nations "Clean Development Mechanism" (Alexeew et al., 2010; Cames

et al., 2016; Gillenwater & Seres, 2011; Haya & Parekh, 2011; Lazarus et al., 2012; Ruthner et al., 2011; Schneider, 2009; Schneider et al., 2010; Schneider & Kollmuss, 2015; Spalding-Fecher et al., 2012); more recent studies have targeted U.S. domestic programs like California's carbon offset program (Haya et al., 2020). While these critiques do not imply that all carbon offsets are invalid, they do strongly suggest that buyers (and regulators) need to be selective in choosing among offset projects and project types (Broekhoff et al., 2019). A blanket approach that allows industrial and fossil fuel project developers to choose among any credits offered in the market – even those certified by established crediting programs – could result in inefficient mitigation and real opportunity costs.

Moreover, the whole notion of carbon offsetting is increasingly being questioned as the world embarks on collective efforts to mitigate climate change under the Paris Agreement. In short, with every country in the world (including the United States) now adopting emission reduction pledges, it is unclear where entity's seeking to *offset* emissions can turn to find additional mitigation that is not effectively double claimed (Broekhoff, 2021; Environmental Defense Fund & Engie Impact, 2020).

In that vein, we recommend that Ecology consider a different model. An approach that is gaining traction in corporate voluntary climate action, for example, is to apply an internal carbon price to any attributable emissions, and use this as a basis for determining how much to invest in external mitigation efforts (Schallert et al., 2020). Investment can then be channelled to higher-value, often higher-cost mitigation activities that help advance global decarbonization goals, but that do not function as "offsets" (Kachi et al., 2020; New Climate Institute & Data-Driven EnviroLab, 2020).

Such "higher hanging fruit" investments may or may not expressly reduce emissions in an amount corresponding to the investor's (here, the project's) attributable emissions. However, they could arguably have a more meaningful impact in terms of advancing climate action goals. In a Washington State context, for example, industrial and fossil fuel project mitigation investments could be applied to infrastructure and other transformational projects identified by Ecology as having high mitigation value and/or helping to advance state climate goals. This approach could avoid some of the "pitfalls" that occur when simply targeting least-cost mitigation opportunities (Broekhoff et al., 2017). It would also obviate Ecology's third question concerning how project proponents could demonstrate that in-state mitigation is "unavailable" – Ecology could simply stipulate an amount to invest in high-value in-state efforts.

The carbon price that project proponents use to calculate an amount to invest could be determined in a variety of ways, but at a minimum should be higher than current market prices for carbon credits. One starting point, for example, could be the State's current estimate for the "social cost of carbon" (Department of Ecology, 2016). However, higher benchmarks should also be considered, such as the State of New York's carbon price of $125 per ton CO_2 (Wagner, 2021), or the City of Vancouver's carbon price of CAD 160 per ton.[4] The price could also be graduated, such that projects with higher GHG emission intensities – relative to the benchmark for "supporting decarbonization" – would need to invest higher amounts per ton of attributable emissions. More work would be needed to elaborate this type of mitigation policy, but if designed well it could yield significant benefits beyond a simple offsetting approach as the State seeks to advance ambitious climate change goals.

[4] https://policy.vancouver.ca/ADMIN019.pdf

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