

To: Department of Ecology
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Subject: Comments Responding to October 29 Ecology GAP-Rule Webinar Questions

Thank you for the opportunity to submit public comments on this important rulemaking.

Questions about Mitigation:

- What types of emissions should mitigation address? On-site emissions, in-state emissions (on-site, upstream, and downstream), upstream out-of-state emissions, downstream out-of-state emissions?

The GAP Rule should address greenhouse gas emissions. The IPCC has identified a list of compounds that are identified as greenhouse gases. In addition, where a project potentially has other climate impacts, such as from emissions of aerosols and particulates, or impacts on carbon uptake or carbon sinks from land use changes, those impacts should be included.

Clearly, in dealing with the problem of global warming, there can be no geographic boundaries used in limiting the assessment of emissions; i.e., the analysis must include on-site and off-site, in-state and out-of-state, in country and out of country, upstream and downstream, etc.

- The Washington State Legislature has established GHG reduction goals for the future; how should these GHG reduction goals influence the mitigation plan?

The Governor's directive states the goal is "no net increase in greenhouse gas emissions attributable to the project." That means that any emissions resulting from a new project must be fully mitigated; i.e., have net zero emissions. The state's GHG reduction goals should serve to define the bounds for emissions mitigation. For example, in a world where GHG emissions goal had reached zero, you could not justify new project emissions by mitigating GHG emissions elsewhere; you could only mitigate with negative emissions. Any mitigation proposal involving removing positive emissions should be rejected if those positive emissions are not compatible with a linear pursuit of the state's GHG reduction goals.

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- Should mitigation vary for different types of projects, such as factories, export facilities, or linear projects like pipelines or electricity lines?

No. The rules should be consistent across project types. However, it may be useful to think about specific example projects in fashioning rules that will be reasonable and effective in meeting the intent of the directive and the updated goals set by the Legislature.

Factories – A big new factory would need to operate on emissions-free energy, or, if it does not, to mitigate those GHG emissions, the embedded emissions from its construction, and any induced emissions from its operations; e.g., feedstocks, if not already mitigated under some other verifiable and enforceable program.

Export Facilities – Facilities that export fossil fuels should effectively be prohibited. It is not reasonable to imagine that a facility could fully offset the GHG emissions inherent in exporting fossil fuels economically using any technology that is currently available or on the horizon. A plant exporting a fossil-fuel derivative, like methanol, would (and should) face a similar challenge.

Pipelines and Electrical Transmission Lines – Pipelines are generally designed for transporting specific commodities. A new oil or natural gas pipeline would need to mitigate any net increase in GHG emissions its increased capacity enabled, which is probably not feasible. A new pipeline designed to initially carry natural gas but to transition to carrying renewable natural gas and/or renewable hydrogen, could potentially comply with the “no net increase” criterion. Some mitigation would be required, but might naturally be found in decommissioning capacity of fossil-fuel infrastructure the new pipeline replaced. Electrical transmission lines would likely require little or no mitigation, provided there were regulations and commitments in place, such as Washington’s Clean Energy Transformation Act, that ensure the electrical power they transmit will increasingly be from GHG emissions-free generation.

Power Plants – If a new non GHG-emitting power plant, for example a solar farm, exceeds the proposed emissions threshold, then presumably, its embodied emissions would need to be mitigated under the “no net increase” criterion. A new fossil-fuel power-plant would need to mitigate both its embodied emissions and its direct operating emissions. Mitigation might be achieved by accelerating utility supply- or demand-side investments in emission reducing technologies, but only if they could be shown to be additional; i.e., not already indicated by regulation, climate goals, or economics.

- How should emissions involving projects that modify an existing facility be calculated?

Projects that modify an existing facility should be required to demonstrate a plan to decrease emissions consistent with state emission goals, and mitigate any emissions that exceed that plan. This approach would be similar to how building codes often work, where an addition does not require the entire building to be

brought up to current code, but does require important safety issues to be addressed.

- What process should be used to track and verify emissions subject to mitigation?

The rules need to mandate (or utilize existing) reporting requirements for greenhouse gas emissions and include significant financial penalties for nonattainment. Penalties must be set at levels high enough to ensure that paying the penalties does not come to be seen as merely a routine cost of doing business.

- How would changes to calculation methods or emissions be handled?

Ecology should review the relevant science every three years and recommend changes to the prescribed calculation methods. The changed methods should be subjected to public review before adoption.

- How should mitigation projects be prioritized? AND

- Are there types of mitigation projects which should or should not be included?

Top priority should be given to prevention of GHG emissions rather than offsetting emissions somewhere offsite or actions to remove GHGs from the atmosphere. Replacing a fossil-based feedstock in an industrial process with a carbon-free feedstock is an example of the kind of mitigation that should be prioritized.

The minimum criteria for mitigation listed on Slide 36 (Nov. Webinar)—real, permanent, enforceable, verifiable, and additional—seem appropriate. Ensuring that mitigation is real, enforceable, and verifiable will require establishing appropriate procedures.

Strict application of the criterion of *permanence* would likely disqualify some promising directions for mitigation, such as carbon capture and sequestration, that need to be developed and incentivized. Arguably, there are no available methods that can guarantee permanence, as nothing is really permanent. Perhaps this requirement would be better described as “long-term.”

Several approaches do promise long-term storage; such as injecting CO₂ into geological formations and storing carbon in agricultural soils. Perhaps a useful way to deal with uncertainties regarding the effective security of carbon storage would be to discount its awarded value for mitigation to reflect both leakage and uncertainty. So for example, a process that research shows to be capable of storing carbon for at least 100 years at a confidence level of 95% might be afforded twice as much mitigation value as one shown to store carbon for 50 years at an 80% confidence level, but only 80% as much value as one capable of storing carbon for 1,000 years at a 99% confidence level. A bit of research would likely reveal suitable economic concepts on which to base this valuation function and make it seem both reasonable and computationally straightforward.

The *additional* criteria also needs thoughtful treatment. In the past energy certificates created in accordance with the Renewable Energy Certificate System (RECS) produced notional values used in emission offset markets. Now that renewable energy is often less expensive than fossil-based energy, activities that create RECS should no longer be considered additional, and should therefore not qualify as mitigation.

In addition to RECS, other things that should NOT be considered for mitigation are the planting of trees (because they cannot be considered permanent in our fire-prone world) and building non-emitting energy infrastructure (because it is now cost-competitive and being driven by other mandates, hence it is not additional).

Two major recent infrastructure project proposals serve as good examples of mitigation measures that should NOT be permitted in the future. Tacoma LNG was asserted in its Supplemental Environmental Impact Statement to not increase GHG emissions based on claimed GHG reductions from replacing bunker fuel with LNG. Similarly, Kalama Methanol's Second Supplemental Environmental Impact Statement claimed GHG reductions from replacing dirtier methanol drawn from global markets with somewhat cleaner methanol from the plant. The claims for both projects were highly speculative and would fail to meet the proposed GAP Rule mitigation criteria of being real, permanent, enforceable, and verifiable.

Activities that should qualify as mitigation would include replacing GHG-emitting facilities or infrastructure (that is not already economically obsolete) with new non-emitting facilities or infrastructure. So, for example, to mitigate the construction of a new 100 Megawatt combustion turbine ("peaker") power plant, a utility might mitigate by committing to burn natural gas in the new plant for no more than ten years after which it would be switched to burning renewable hydrogen or renewable natural gas and to offset the ten years of natural gas emissions by electrifying and curtailing natural gas service in a part of their service area.

Responses to Live Comments on Webinar

- One commenter raised the question of what facilities should be included—airports, high-rise buildings, industrial parks, highways, public vs. private projects.

We see no reason for categorical exclusions. The proposed threshold of 10,000 MT CO₂e per year seems reasonable. Under that criterion an airport expansion, a large industrial park, a new highway, and a new power plant (or power plant expansion) would be subject to the GAP rule. A large high-rise building, particularly one that is all-electric and bound by an agreement to operate on emission-free energy likely would not be.

A commenter with Phillips 66 recommended that projects with biogenic emissions should be included, such as those using biomass or manufacturing biodiesel. We agree that a uniform yardstick should be used with respect to GHG

emissions, but the 10,000 MT CO₂e per year threshold would likely exclude such projects from GAP Rule requirements, as would be appropriate.

Ensuring against double counting seems like an important aspect of this rulemaking both for ensuring that industry is not unfairly burdened and that the integrity of emission constraints are not undermined. This would appear to be particularly relevant where an industrial activity depends on feedstocks from another entity, which may or may not be required to mitigate the emissions.

General Comment

The Governor's Directive 19-18 directs the Department of Ecology to develop rules that 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.”**

We interpret that to mean that the operations of new facilities to which the GAP Rule applies need to either be GHG-emissions-free, or, to the extent they are not GHG emissions-free, to offset those emissions with carbon sequestration or project(s) that meet all five of Ecology's mitigation criteria. So for example, a project to build a plant to export methanol, would **not** be required to mitigate to the emissions relative to current world markets but rather to zero emissions.

That is a tall order, as it should be, given the current climate crisis and the recognition of the urgency of emission reductions reflected in the state's decarbonization goals that were updated by the Legislature last March.

Given that we do not want to stifle industry in the state but rather want to accelerate investment and innovation in emissions-free technologies, we suggest that Ecology use this rulemaking to foster clear procedures, protocols, and standards for mitigation opportunities. We need to create a marketplace for mitigation investments and provide sufficient clarity on what will qualify to enable industry and investors to marshal the capital necessary to proceed. Perhaps there are models showing how to do this out there somewhere. RECS and current carbon markets are clearly not up to the tasks, and we really want those mitigation investments to take place in Washington. Virtually all the companies that have gained prominence in the clean energy technologies that are now transforming the energy sector globally—wind, solar, batteries, fuel cells, electric vehicles, etc.—have been able to do so because of domestic regulations that necessitated (and supported) the development and deployment. Ecology can help Washington businesses lead with successful development of this pioneering rule.