To: Department of Ecology
From: Robert Briggs[1]
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Subject: Comments Responding to August 27 Ecology GAP-Rule Webinar Questions

DOC Question: *Are there special considerations we should take into account for projects that may lack a central facility or clear "on site" emissions (e.g., linear projects)?*

- The Greenhouse Gas Assessment for Projects (GAP) Rule should use as its over-arching frame the orderly reduction of total GHG emissions attributable to activities in the state at a rate consistent with current science and state emissions targets. State emissions targets were updated by HB 2311 enacted March 19, 2020 to 45% below 1990 levels by 2030, 70% below 1990 levels by 2040, and 95% below 1990 levels by 2050.
- The question for applicable projects should be, "Is this project consistent with required progress towards the state's emissions reduction targets?" Any project whose estimated lifetime emissions are incompatible with those targets should not be permitted. In addition, projects should be rejected if they are at risk of becoming stranded assets as a result of economic changes associated with the state meeting its emission reduction targets.
- A linear project that facilitates increased emissions (such as a new natural gas pipeline or expansion necessary to serve a growing residential gas load) clearly would not be compatible with state emissions targets. A linear project that facilitates reduced emissions (such as a new electrical transmission line to deliver wind power from other states or from off-shore) clearly would be.

DOC Question: *Is it more important to focus on the net emissions or on the gross emissions of a project? What should be the role of global economic analysis (e.g., developing a project global supply and demand curve) in the assessment?*

The history of projects justified based on net emissions would argue against allowing use of net emissions. Here we understand net emissions to mean that the proposing entity be allowed to claim credit for offsetting decreases in emissions that are estimated to occur beyond the boundaries of the project. The past problems with these analyses have been that the offsetting emissions were speculative in nature, outside of the projects' direct control, difficult to verify, and in some cases based on fraud.

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However, the converse of this relationship may also occur, in which a project might appear to reduce emissions directly but be supported by highly emitting processes upstream or downstream of the project. This can happen any time the boundaries for the life-cycle analysis are drawn too narrowly. Arguable some biomass projects might fall in this category.

A blanket rejection of net emissions analyses might come back to bite those advocating for climate mitigation. Almost any emissions-reducing project will involve an emissions investment. We would suggest the following as a qualifying test for projects justified using net emissions analyses: 1) draw common-sense boundaries around the life-cycle assessment, 2) require that offsetting climate-beneficial impacts be measureable, and 3) require that there be some legally-enforceable mechanism to ensure that claimed emissions reductions are achieved.

Two large greenhouse gas emitting projects in the state that have gained permits in recent years and that should not be permitted under this new rule are Tacoma LNG and Kalama Methanol. In both cases, net analyses were used asserting that offsetting emissions reductions would occur that justified their new large GHG footprints. As such, they can serve as insightful examples for developing this rule.

Tacoma LNG's net analysis in their Supplemental Environmental Impact Statement (SEIS) asserted that converting shipping to LNG would displace bunker fuel and reduce GHG emissions. Yet the climate benefit of LNG in shipping is marginal at best, due to upstream and diesel engine methane slip emissions. At the same time, the International Maritime Organization has committed to major emissions reductions, and market-leading shippers like Maersk have committed to be net zero by 2050. The criteria for net analyses should include that they employ best-available decarbonization technology.

Kalama Methanol's net analysis assumes that it will provide methanol to China that is synthesized using a technology with lower GHG emissions than alternative global suppliers. However, the analysis assumes that alternative supplies will be unchanged and will not decarbonize over the coming years. Yet China and other suppliers have committed to fully decarbonize their supplies before the end of Kalama Methanol's projected life. Kalama's fossil-based methanol competes directly with the emerging emissions free technologies that are poised to displace its output. Kalama's SEIS ignores both political commitments and technological developments, and assumes zero progress in these developments over the next 40 years, which is wildly implausible. The criteria for net analyses should include realistic assessments of technology trends and political developments be taken into account.

Perhaps the most counterproductive and negatively impactful net analysis has been the portrayal of hundreds of natural gas projects across the country as deploying a "bridge fuel" that would benefit the climate. In fact, natural gas has competed directly with emissions-free wind and solar, dramatically reducing their deployment, while providing only a marginal decrease in GHG emissions compared to coal and oil[3]. The criteria for net analyses should include realistic market

[3] when fugitive methane emissions are taken into account in addition to direct CO2 emissions from natural gas combustion

assessments based on the assumption Washington State (as well as the rest of the world) meets its carbon reduction commitments.

Given the high costs that result from GHG-emissions and the adverse impacts of new GHG-emitting projects on international cooperation, the precautionary principle should be employed. The burden of proof should shift to those proposing new emitting projects to show that they employ best-available technology, that they provide benefit given political and emerging technology trends, and that they not compete with no- and low-emissions alternatives struggling to get a foothold in the marketplace.

We might think about tar sands oil and fracked gas in considering this issue. Huge emissions investments are involved with tar sands production. In the case of fracked gas, the largest part of the upstream GHG footprint is from fugitive methane emissions. We favor an approach that involves conservative (i.e., protective of climate) assumptions about upstream and downstream emissions but also provides the possibility of more generous assumptions where binding commitments and robust test procedures are in place that document lower emissions. We urgently need these test procedures and need to create demand for their development and use.

DOC Question: *What should the role of economics play in the Energy Analysis? Is it enough to note where supplies of energy will change, or should the price effects of those changes feed into a dynamic price model (or similar analyses)?*

Using economic modeling is reasonable and appropriate in many cases. For example, economic modeling is part of utility integrated resource planning processes. In the case of the GAP Rule, the goal of the economic analyses should not be to ensure that the investment is prudent but rather to show that reasonable alternatives are considered and that the project provides economic benefits and is in the public interest.

There are significant uncertainties surrounding any economic modeling. We don't think the GAP rule should specify what economic modeling be done. For example, will there be a maritime market for Tacoma LNG's product? or will Kalama Methanol draw gas supplies from the Montney Region in BC or the San Juan Basin in Utah?—these are two economic questions with potentially large impacts on project emissions. What the GAP Rule should specify is that in balancing risk from these economic uncertainties, decisions be made that minimize climate risk.

The Clean Energy Transformation Act (CETA) requires that the social cost of greenhouse gases (SCGHG) be included in integrated resource plan (IRP) analyses. As the inclusion of SCGHG more than triples the commodity cost of fossil methane, the impacts are potentially quite large. We think the GAP Rule should mandate use of SCGHG as the best available strategy for accurately including the cost of GHG emissions in these assessments.

DOC Question: *What should the time period for the assessment be? Under SEPA, the analysis usually considers the typical operational lifespan of a project and construction but the time period could be longer to align with the GHG emission limits, or for other reasons.*

GHG emissions damage a social or public good. The value of that public good is unrelated to a project life. The value is also unrelated to the expected life span of those making the decision. There is not a legitimate reason for giving higher importance to today's public vs. the public that will be alive at the end of the project's operational lifespan. There is no reason for bounding that evaluation period with an arbitrary end point for assessing the public good. There is a rich body of literature related to this topic.

A rational approach to this problem is to apply a discount rate to GHG emissions and to leave the time period unbounded in assessing the social costs. This is not computationally difficult. We would be happy to provide detail on how this could be implemented in a practical and effective way.

DOC Question: *Should the rule identify starting and ending points of the life cycle analysis for project inputs and outputs? This could be at specific points, or the rule could provide more general direction, depending on the project type.*

There are conventional values used for different types of facilities. The rule could have a list of those values that are conventionally used, and allow for use of different values with adequate justification. Perhaps a sensitivity analysis could be required where a significance departure from conventional life cycle is employed.

DOC Question: *At what point should the analysis terminate downstream? Should the first potential use be included in the life cycle analysis as the end point?*

- *For example, in the case of fossil fuels the combustion of that fuel if some other use is not known, or if the first potential use is not demonstrable?*

  If the use is uncertain or unenforceable under law, the worst-case assumption with respect to GHG forcing should be assumed. That is rational public policy because the risks from understating climate damage are far higher than the risk of understating the economic benefits of an emitting activity.

  To better understand this issue, it would make sense to list out the uses in question; e.g., use of Kalama methanol for manufacture of plastics vs. motor fuel in China. For most, we suspect fossil carbon emissions will be converted to atmospheric CO2 quite quickly.

- *For non-fossil fuel products should the first potential use be considered to be the first use, or analyzed as multiple uses, or a final end use of the product?*

  When you oxidize a hydrocarbon or a product made from a hydrocarbon, you either get CO2 or something that becomes CO2 within policy relevant time frames. If that is the case, then assuming first use would be appropriate. Again, we think citing examples would be really useful in helping reviewers clearly think this through.

Other General Concerns

- For us, the big questions are how will the GAP Rule impact the assessment of natural gas infrastructure projects (e.g., pipelines, gas power plants, and LNG plants), other fossil-fuel infrastructure (e.g., export terminals, refinery expansions, or oil-related infrastructure). Of particular concern are projects involving tar-sands oil and fracked oil and gas with their associated methane leaks. It is not yet clear when or how Ecology plans to address the rule-making in relation to those critical details.

- Assessments of gas facilities are intertwined with the question of life-cycle methane leakage, which deserves to be an important focus of this rule-making effort.

- Oil facility assessments engage questions surrounding the huge GHG emissions from tar sands production (e.g., mining, upgrading, and transport), and these are topics deserving detailed attention in the rule.

- The question of the scope of the rule remains uncertain in our minds. From the Governor's Directive: "The rules should cover major industrial projects and major fossil fuel projects..." It appears the threshold has been set at a level that will include small new gas peaker plants (e.g., 50 MW), which we believe should be included. What non fossil fuel projects would trigger the rules? Is there a definition in law for industrial? Would a new airport be considered industrial? Would a new factory to produce aircraft trigger the rule?

  We disagree with the contention by Dan Kirschner, Executive Director of the Northwest Gas Association (NWGA) during the Webinar #3 that all sources of energy should be assessed on a life-cycle basis, not just fossil fuels. The Directive says, "The rules should cover major industrial projects and major fossil fuel projects." This seems a sensible way to focus limited regulatory resources on the achievement of carbon-reduction targets.