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Fran Sant
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Washington State Department of Ecology
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Subject: bp comments on the Proposed Greenhouse Gas Assessment for Projects Rulemaking (WAC 173-445)

Dear Ms. Sant:

On behalf of bp America ("bp"), thank you for the opportunity to provide comments on the Washington State Department of Ecology's ("Ecology") Proposed Greenhouse Gas Assessment for Projects Rulemaking (the "GAP Rule"). This letter provides our responses to the questions posed in Ecology's August 27 webinar on environmental assessment methods. As Ecology is aware, the questions raise complex issues—particularly for existing facilities with dynamic operations. As we continue to work through these issues and hear the perspectives of other stakeholders, we may provide supplemental responses.

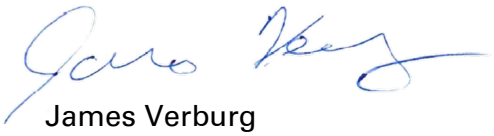
bp appreciates Ecology's efforts to obtain early feedback from and facilitate information sharing among interested stakeholders by holding webinars and making comments publicly available. In addition to these efforts, bp recommends that Ecology consider convening a technical working group comprised of interested industry and community stakeholders and agency experts to provide an ongoing resource for rule design and implementation. For example, the technical working group could help to define and standardize life cycle analysis methodologies tailored to the GAP Rule.

As with our previous letters, these comments are submitted in furtherance of our support for the GAP Rule process and are intended to reinforce and expound on the six Proposed GAP Rule Principles shared in our August 7 letter. A successful transition to a net-zero economy will require new levels of collaboration across industry, consumers, tribes, and governments, aided by technology developments and well-designed government policy. bp welcomes Ecology's efforts to clarify how state and local agencies should analyze and mitigate greenhouse gas ("GHG") emissions impacts through the GAP Rule, which we believe can play an important

part in helping bp and the State of Washington achieve our GHG emission reduction goals.

Please feel free to contact me at james.verburg@bp.com or 360-296-0692 if you would like to discuss further.

Sincerely,



James Verburg

Senior Environmental Engineer

Initial Responses to Ecology's August 27 Questions

1. **What are best practices in estimating construction-related emissions from SEPA or NEPA that we should consider for the rule?**

   - **Encourage use of publicly available tools**. As Ecology may be aware, there are numerous publicly available tools that can be used to conduct analysis of construction-related emissions. For example, bp commonly uses EPA's MOVES model to analyze the potential emissions associated with construction-related transportation activities at the Cherry Point Refinery.

   - **Focus on reasonably ascertainable emissions**. When calculating construction-related emissions, the GAP Rule should focus on those emissions that can be estimated without undue speculation. The more distant the emissions source in the supply chain, the more speculative becomes the analysis. Such speculation could be hard to apply consistently across industries and projects, thereby giving rise to inconsistent, even arbitrary, outcomes. While we believe both direct and indirect emissions must be considered, we encourage Ecology to rely on reasonably and consistently ascertainable or determinable data.

   - **Amortize the construction emissions across the lifespan of the project for purposes of applicability**. To prevent the GAP Rule from providing a distorted view of projects that have temporary GHG emissions associated with the construction phase, but limited GHG emissions over the lifespan of the project, Ecology should consider allowing project proponents and agencies to amortize the GHG emissions from the construction phase of a project over the project's lifespan when determining applicability of the GAP Rule.

2. **Have you used the ISO 14040/44 standards to conduct a life cycle analysis? If so, where do you believe the rule needs additional specificity to make implementing the standards practical or feasible?**

   bp is familiar with the ISO 14040 and 14044 standards, as well as GHG emissions calculation tools developed in conformance with these and other ISO standards to conduct life cycle analysis ("LCA") of our products (e.g., the GREET model, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy, which simulates the energy use and emissions output of various vehicle and fuel combinations). The ISO 14040 and 14044 standards provide a helpful foundation for conducting LCAs. However, to the extent that Ecology is attempting to establish LCA requirements that would result in uniform GHG emissions analyses across different types of products and industries, the ISO standards alone will not be sufficient. Adoption of these ISO standards

without significant further guidance could result in wide variations in GHG emissions estimates. For example, even among LCA models that are consistent with ISO standards that evaluate gasoline, there is wide variability in results depending on the model's data sets, methodologies, and assumptions on allocation of emissions between various products, among other factors.[1]

Furthermore, to ensure that the GAP Rule's LCA requirements are practicable, feasible, and provide meaningful analysis for decision-makers, we recommend that Ecology:

- **Use a tiered (or scalable) approach by requiring LCA only for those projects that exceed a separate threshold specifically tailored to LCA.** Conducting an LCA—including analysis of upstream, direct (i.e., on-site manufacturing and operations), and downstream emissions—is a time and resource-intensive exercise.[2] Furthermore, in the context of a dynamic refinery, it may be difficult, if not impossible, to estimate certain upstream emissions over the lifespan of a project given the constant fluctuation in a refinery's feedstock sources, suppliers, and methods of transportation—especially for innovative lower carbon-intensity fuels. This is particularly true at the Cherry Point Refinery, where we are actively engaged in evaluating adjustments to our operations and product mix that would enable us to contribute to bp's aims of achieving net zero across bp's operations and a 50% cut in the carbon-intensity of products bp sells by 2050 or sooner.

  For these reasons, we recommend that a comprehensive LCA not be required for all projects that exceed Ecology's proposed applicability threshold of 10,000 MT CO_2e/year.[3] The applicability threshold is likely to capture many routine projects—including projects necessary for maintenance, safety and regulatory compliance—that are inappropriate for an intensive LCA review. Ecology should consider establishing a secondary threshold, significantly higher than the applicability threshold, to capture major projects where the costs and resources required by an LCA may be justified.[4] Ecology could also provide an "off-ramp" from LCA

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[1] D. Vineyard, W. Ingwersen, *A Comparison of Major Petroleum Life Cycle Models*, Clean Technology Environmental Policy. 2017 Apr; 19 (3): 735–747, available at: 10.1007/s10098-016-1260-6.

[2] As demonstrated by the Kalama Manufacturing and Marine Export Facility Environmental Impact Statement ("EIS"), conducting this analysis can add years to a project development schedule.

[3] Project proponents could also elect to conduct LCA at their discretion.

[4] For comparison purposes, EPA has set a significance threshold of 75,000 tpy CO_2e for purposes of determining whether Best Available Control Technology ("BACT") analysis is required for GHG emissions from projects that require a Prevention of Significant Deterioration air permit. *See* Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program, 81 Fed. Reg. 68,113 (Dec.

requirements for projects that can reduce their emissions below this secondary threshold through, for example: (1) on-site GHG reduction measures (e.g., changes to facility operations, including reduced utilization), or (2) substitution of a lower carbon intensity product for a higher carbon intensity product (e.g., for a process that will produce X gallons of "R10" (10% renewable diesel) in lieu of X gallons of petroleum diesel).

- **Provide guidance on the appropriate use of other LCA standards, methodologies, and tools.** Devising a single LCA methodology or tool that could apply to the fundamentally different types of projects (e.g., infrastructure, fossil fuel production) and industries subject to the GAP Rule is likely not an achievable goal in the time available to complete this rulemaking. In the absence of a ready-made, GAP Rule-specific tool, we recommend that Ecology allow use of other GHG emission accounting methods and tools that have been developed or approved by other government agencies, voluntary consensus-based standards bodies (such as ASTM International, the International Organization for Standardization (ISO), and other such bodies), industry groups, and consultants. However, Ecology should provide guidance on application of these tools in the SEPA context, which is the setting most relevant to the GAP Rule.

  Due to the complexity of GHG emissions accounting, LCA tools have often been developed for specific applications. There are impact-, project-, product-, and regulatory-specific tools—which, even when combined, may fail to provide an accurate estimate of potential emissions over the lifespan of a particular *project*. For example, bp uses LCA tools (e.g., GREET) to determine our *products'* carbon intensity to comply with low carbon fuel standard ("LCFS") programs in California and Oregon. However, these tools may have limited applicability to *project*-specific proposals that will be analyzed under the GAP Rule. Specifically, we caution against requiring use of a tool such as GREET to extrapolate lifecycle emissions estimates for an entire project that may span many decades. GREET and other lifecycle modeling tools are subject to annual updates based on new information, including scientific developments that may significantly change the approach to calculating emissions associated with a product. For example, under the California GREET model used in the state's LCFS program, the average carbon intensity of ethanol changed by 11 percent over a five-year timeframe from 2015 to 2019. In few, if any, cases would it be realistic to

12, 2016) ("A 75,000 tpy CO_2 e GHG SER, based on our technical analysis, represents a level of GHGs, below which there is trivial or no value in conducting a BACT analysis for GHGs because we would not expect to obtain meaningful GHG reductions from requiring application of BACT at all such sources. In addition, there does not appear to be a basis to set a GHG SER level above 75,000 tpy CO_2 e based on our review of the GHG permitting experience to date and the fundamental principles for establishing a *de minimis* exception to a statutory requirement as described in Section V of this preamble.").

assume the LCA of a product in 2020 will be consistent in 2050 or 2060, across a 30- or 40-year project life span.

- **Require transparency in the assumptions and methods used.** A critical part of both an LCA—and the SEPA process more generally—is the ability of interested stakeholders to analyze and verify the accuracy of the analysis. Accordingly, to achieve this purpose, the GAP Rule should require project proponents and agencies to "show their work" by identifying the assumptions and data inputs used to make their GHG emissions estimates.

- **Clarify the intended use of the LCA results**. Conducting LCAs for large-scale projects with significant GHG emissions can help to serve SEPA's core information disclosure purposes, ensuring that decision-makers and the public are fully informed about the potential environmental impacts of a proposed project. However, given the inherently speculative nature of conducting assessments of upstream and downstream emissions over the lifetime of a project, we do not recommend that Ecology base mitigation requirements on the results of an LCA.

3. **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)?**[5]

   bp recommends that Ecology carefully structure the GAP Rule to ensure that GHG emissions associated with linear projects are accurately accounted for and are not double-counted as part of a facility's upstream or downstream GHG emissions. Avoiding double-counting is particularly important for purposes of imposing mitigation requirements.

4. **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?**

   bp requests that Ecology further explain the meaning of the terms "gross emissions" and "net emissions." For purposes of this initial response, we assume that "gross emissions" mean the sum of GHG emissions increases associated with a proposed project, and "net emissions" means "gross emissions" minus any GHG emissions reductions resulting from concurrent retirement of less efficient or lower emitting equipment or demonstrated displacement of higher carbon-intensity products.

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[5] In bp's August 25 letter, we raised a number of questions concerning the use of methodologies in WAC 173-441 to determine applicability under the proposed screening test. Based on the August 27 webinar, we now understand that Ecology intends the GAP Rule to apply to linear projects like pipelines and electric transmission lines. As pipelines and electric transmission lines generally do not report under WAC 173-441, Ecology should clarify how it intends to adapt the screening threshold test to these projects.

The GAP Rule must be designed so that it encourages, rather than discourages, the transition to a low carbon future by, among other things, incentivizing investment and innovation in new and advanced technologies. Therefore, it should avoid unintended consequences, such as making operational efficiency projects cost-prohibitive. Consistent with these principles and SEPA's purpose of ensuring informed decision-making, we acknowledge that both the net emissions and gross emissions of a proposed project could be helpful to the decision-making process, depending on the context. Indeed, conducting a comparative analysis of the potential "gross emissions" of a proposed action to alternative scenarios—including the no action alternative—may be required by Ecology's SEPA Rules in certain situations.[6]

Ecology should keep in mind that estimates of gross emissions alone may fail to fully demonstrate the benefits of certain types of lower carbon projects (to the extent that the GAP Rule is applicable to such projects in the first place). For example, installation and operation of new equipment at an existing refinery for the purpose of increasing production of lower carbon-intensity fuels (e.g., renewable diesel or other biofuels) may cause an increase in "gross emissions" from on-site operations due to increased energy requirements. But where that project will result in replacement of a higher carbon-intensity fuel product with a lower-carbon intensity fuel product, the project may result in a decrease of overall "net emissions." Moreover, attention must be paid to the extent a project will result in decreased *global* GHG emissions on an aggregate basis; consideration of a project's benefits should not be limited to in-state reductions. Thus, in certain circumstances, if an environmental assessment focuses exclusively on gross (on-site) emissions, it may provide an inaccurate view of a project's global GHG benefits, which in turn could render cost-prohibitive any number of innovative projects intended to reduce aggregate GHG emissions. Such a result risks disincentivizing investments in technology critical to the energy transition.

With respect to global economic analysis, we recognize that in many circumstances, methods of analyzing GHG removals/reductions—including market displacement—may be overly speculative due to data limitations and high levels of uncertainty, and therefore unhelpful to decisionmakers. Further, requiring parties to conduct global economic analyses for every project subject to the GAP Rule would likely be impractical and overly burdensome for project proponents and regulators alike. There may be circumstances in which such analyses provide qualitative insights into a project's overall environmental impacts and therefore should be considered for purposes of public information disclosure, but the utility of such an analysis must be considered carefully on a case-by-case basis.

[6] WAC 197-11-440(5).

5. **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)?**

   As a general matter, bp's view is that the nuances of an "Energy Analysis," and determinations whether to include economic assessments, are project-specific decisions that depend heavily on context and availability of relevant data and methodologies. Similarly, given the potential overlap and redundancy between an Energy Analysis and an LCA, it is not clear that both analyses would be necessary for any given project.

6. **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.**

   Consistent with the norm in SEPA and National Environmental Policy Act analyses, bp recommends that this should generally be limited to the lifespan of the project, including construction, operation, and decommissioning.

7. **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.**

   Given the potentially significant variation in project types, project life spans, and industries that will be subject to the GAP Rule and resultant variations in data quality, establishing uniform starting and ending points for all projects is not likely to be achievable. Ecology should instead consider providing general direction on when it is appropriate to exclude potential GHG emissions from the analysis. This direction could be provided on a GAP Rule-wide basis or on a project- or industry-specific basis. For example, to avoid overly speculative LCAs, the GAP Rule should exclude from analysis those emissions for which there is no data reasonably available or that cannot be estimated with any degree of reasonable certainty over the lifespan of a project. In addition, to focus the analysis on significant sources of GHG emissions, the GAP Rule should include a materiality threshold that excludes from analysis those minor emissions that will have a negligible effect on the LCA.[7]

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[7] For example, Ecology excluded emissions inputs that would account for less than 1% of the anticipated total GHG emissions in the Kalama Manufacturing and Marine Export Facility Draft Second Supplemental Environmental Impact Statement. This cut-off is consistent with the British Standard Institute's Publicly Available Specification ("PAS") 2050, which sets a materiality threshold of 1% while requiring that at least 95% of the anticipated emissions are included. *See* British Standard Institute, *Publicly Available Specification 2050 - Specification for the Assessment of the Life Cycle Greenhouse Gas Emissions of Goods and Services*, p. 5 (2011) ("A materiality threshold of 1% has been established to ensure that very minor

8. **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? 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?**

   One option Ecology could consider for purposes of determining a reasonable end-point for product-based LCAs of fuels, is using the GHG emissions associated with combustion of the fuel, as calculated by manufacturers for compliance with EPA's 40 C.F.R. Part 98, Subpart MM. It also may be appropriate for the GAP Rule to specify conceptually consistent, first use end-points for LCAs for non-fossil fuel products. Ecology should consider allowing for variations on a case-by-case, if a reasonable basis is demonstrated for tailoring an LCA to unique circumstances.

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sources of life cycle GHG emissions do not require the same treatment as more significant sources.").