



# Greenhouse Gas Assessment for Projects (GAP) Rulemaking

August 27, 2020 WEBINAR



# Webinar Agenda

**Introduction**

**Presentation (45 minutes)**

Environmental Assessment Methods for Greenhouse Gas Emissions

*Break and Audience Poll (5 minutes)*

**Public Input and Feedback**

Input from Groups Representing Key Interest Areas (30 minutes)

Environmental, Business and Industry, and Local Government

Public input and feedback (70 minutes)



# Hello from Ecology!

Here is who you'll be hearing speak today and who is helping with the webinar.

- Brook Swensen, Co-Host and Facilitator
- Sadie Hinklin, Co-Host and Facilitator
- Diane Butorac, GAP Rule Project Manager
- Bill Drumheller, Climate and Energy Expert



# GAP Rule

- Ecology is starting rulemaking as directed by Governor's Directive 19-18.
- The purpose of this rulemaking is to create a new rule:

## **Chapter 173-445 WAC, Greenhouse Gas Assessment for Projects**

- This rulemaking will:
  - Address analysis and mitigation of greenhouse gas emissions for environmental assessments of industrial and fossil fuel projects
  - Provide consistent and comprehensive assessment methods for industrial and fossil fuel projects
  - Provide clarity and transparency to industry, the public, and agencies



# Previous Webinars

Presentations from these webinars are available on the GAP Rule website.

## June 25, 2020 Webinar

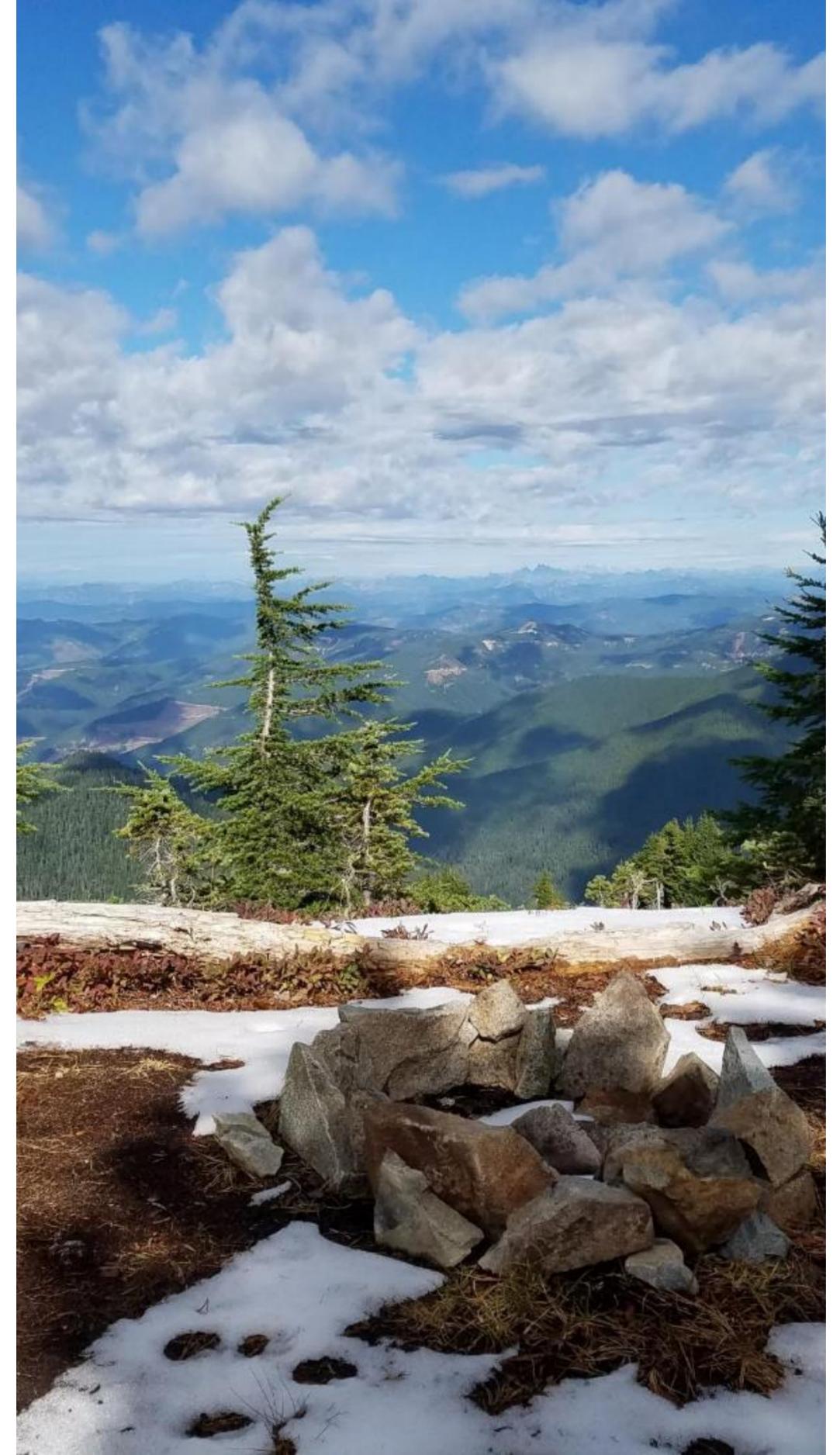
- Information on the rule purpose, process, and key concepts

## July 23, 2020 Webinar

- Rule applicability



# GAP Rulemaking Process Update



# Making Information More Available

We appreciated hearing from you as we started the rule development process.

Based on your feedback, these are changes we are implementing to make information on the GAP rulemaking more available:

- Slides of the webinar presentations will be available online a few days in advance of the event
- Videos of the webinar will be available online about 10 days after the event
- Written and verbal input will be posted online (available soon)
- A webinar summary document will be posted online to provide a quick look



# Webinar Format Changes

We received feedback on the webinars and are making the following changes:

- Webinar presentation slides will be posted online a few days before the event for you to review and consider
- Names of other attendees will be visible to everyone on the webinar
- Increased the time limit for individuals to 5 minutes each

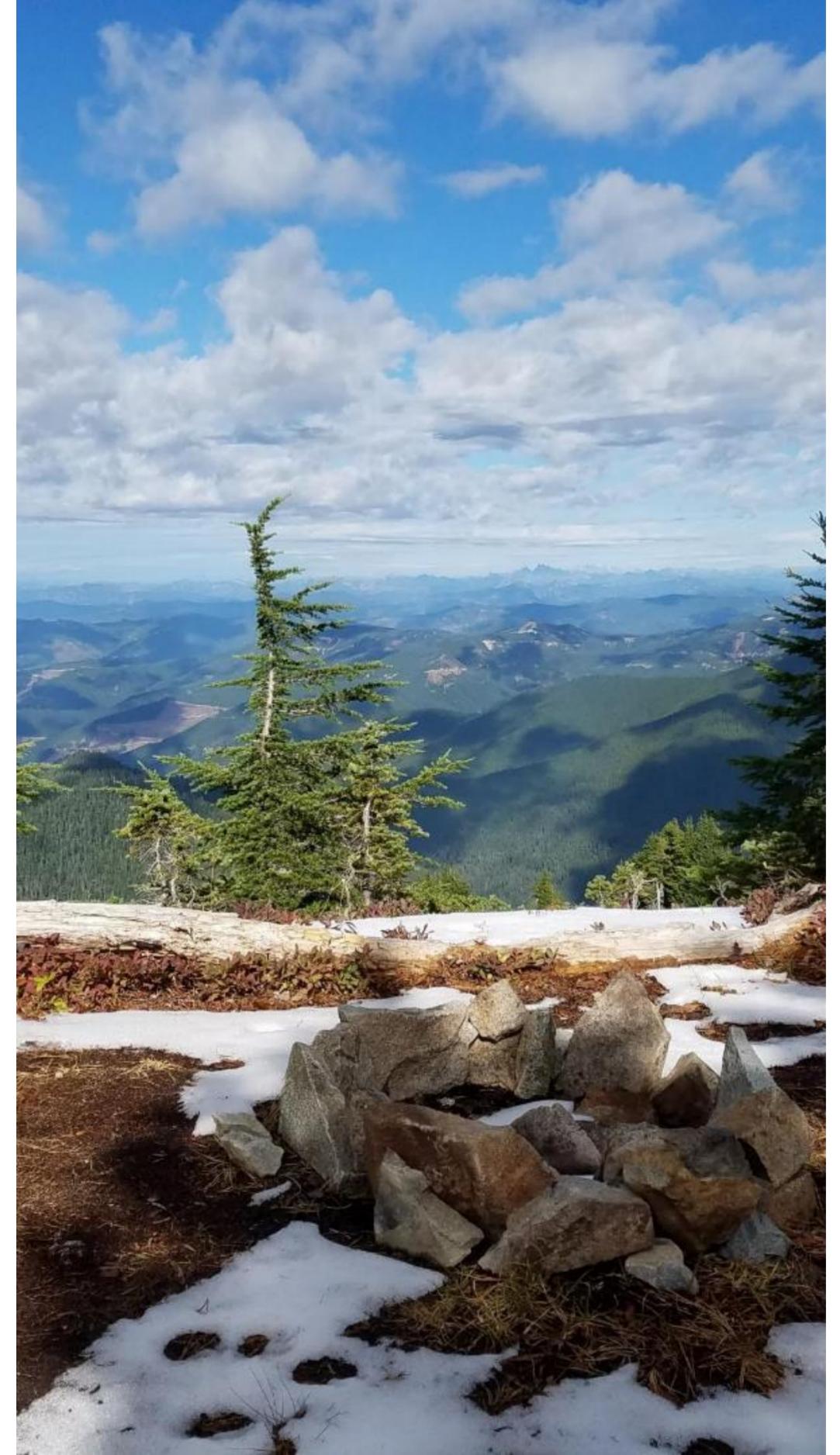


# Submitting Input and Feedback

- The [gap-rule@ecy.wa.gov](mailto:gap-rule@ecy.wa.gov) email can be used to submit input and feedback
- We are also setting up an online comment site. The link will be on our GAP Rule webpage once it is available.
  - You will be able to provide input and feedback using an online form
  - You can view input and feedback from others



# Environmental Assessment Methods for Greenhouse Gas Emissions



# Environmental Assessment Stage

- The GAP rule will be divided into multiple parts:
  - Applicability screening
  - Environmental assessment
  - Mitigation
- Last webinar we talked about the process which determines if the GAP rule would apply to a project
- The next webinar will focus on mitigation
- Today we will focus on the environmental assessment, the second stage of the GAP rule process if the first stage (the screening process) requires it



# Context for Environmental Assessment

Per the Governor's Directive #19-18, the environmental assessment should include:

- *“20-year and 100-year global warming potentials for all greenhouse gases attributable to the project, as provided by the most recent international assessment;*
- *An assessment of any induced load or growth in fuel or energy consumption or electricity generation from the project;*
- *Criteria for assessing upstream and likely downstream lifecycle emissions attributable to the project, including transportation, leakage, and market and indirect effects.”*



# Global Warming Potentials

- Global Warming Potential (GWP) is a measure of how much energy the emissions of a greenhouse gas will absorb over a given period of time, relative to the emissions of the same amount of carbon dioxide (CO<sub>2</sub>)
- The larger the GWP, the more a given gas warms the earth compared to CO<sub>2</sub> over the measurement time period
- The United Nations' Intergovernmental Panel on Climate Change (IPCC) provides GWP values for all greenhouse gases for 20, 100, and 500 year
- “The choice of time horizon is a value judgement because it depends on the relative weight assigned to effects at different times” (IPCC AR5, p. 712)
- The use of GWPs with shorter time periods (i.e., the 20-year option) focus on the impacts of climate change on this generation, longer time periods (100- and 500-year) focus on the impacts of climate change on future generations

# Use of GWPs in the Assessment

- The GAP rule will contain direction on the use of GWPs in the environmental assessment required by the rule
- Consistent with the Governor's directive, the rule will require the assessment to use both 20-year and 100-year GWPs
- All relevant assessment results would be required to be presented using GWPs for both of those time periods
- The international assessment used by the rule would be the most recent work of the U.N. Intergovernmental Panel on Climate Change (IPCC), including:
  - GWP calculations and context,
  - Scientific review work, and
  - Technical guidance on greenhouse gas inventories and measurement



# Parts of the Environmental Assessment

## “On-site” Emissions

- Focused on the project facility or core project infrastructure at its primary geographic location

## Energy Analysis

- Looking at direct or indirect effects on energy supply, output, load or other energy impacts associated with the project

## Life Cycle Analysis

- Focused on the full life cycle greenhouse gas emissions associated with the project



# Assessment Methods for “On Site” Emissions

We propose using existing methods to assess the direct and indirect emissions associated with the project facility or the core project infrastructure

- **Direct operational emissions**

- Use the existing state greenhouse gas reporting methods (WAC 173-441) which are based on EPA’s similar federal reporting program (40 CFR Part 98)
- Use 40 CFR Part 98 methods if 40 CFR Part 98 can be adapted to work with emissions that were not originally covered (e.g., some EPA methods have been developed but never implemented)

- **Indirect operational emissions**

- Provide direction for on-site use of electricity and other indirect emissions

- **Construction & decommissioning emissions**

- Best practices for construction emissions are increasingly common in SEPA and NEPA analyses. The current thinking is to utilize those best practices in the rule.



# Energy Analysis

- The Governor’s Directive requires an “*assessment of any induced load or growth in fuel or energy consumption or electricity generation from the project*”
- The Energy Analysis is proposed to require:
  - A project that would increase flow or capacity of energy supply would have to analyze the “downstream” potential impacts, regardless of whether the increased energy or commodity flow is part of the project itself
  - A project that creates a new line or route of energy supply, or a new type or form of supply, would have to address the implications of those changes if greenhouse gas emissions may be affected
- The Energy Analysis could also be used for:
  - Geographic Leakage effects - Is the project likely to result in moving greenhouse gas emissions out of state?
  - Market effects – What are the market implications of a shift in energy supply?



# Life Cycle Emissions Analysis

- The Governor's Directive says the assessment should include, "*Criteria for assessing upstream and likely downstream lifecycle emissions attributable to the project, including transportation, leakage, and market and indirect effects*"
- Upstream, downstream, and transportation emissions are all part of a typical life cycle assessment. Indirect emission effects are also captured in a normal life cycle greenhouse gas emissions assessment.
- Geographic leakage and market effects are interrelated, and potentially far more complex. These are not necessarily part of a normal life cycle analysis.

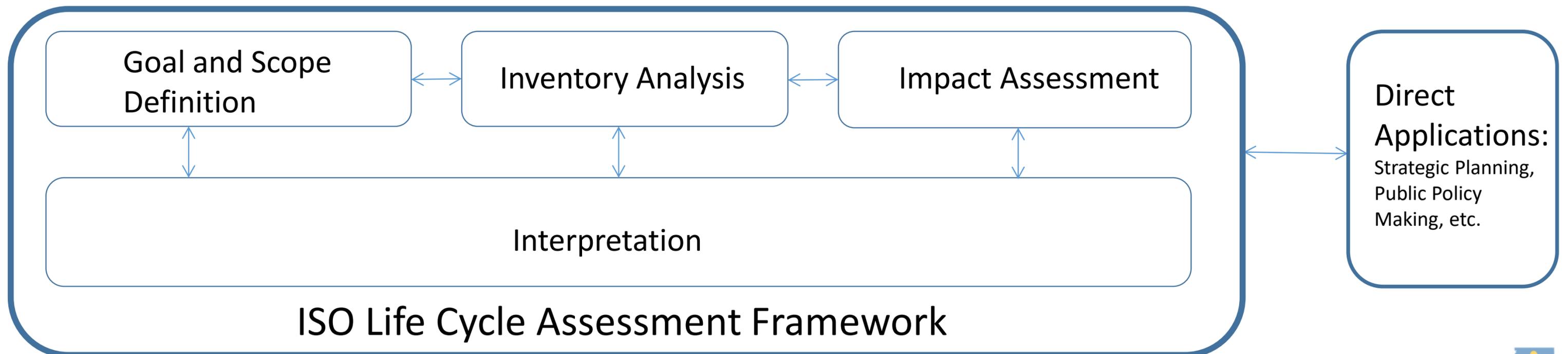
# ISO Life Cycle Assessment Standard

- The International Organization for Standardization (ISO) has put in place a series of standards (the 14040 Series) that establish a conceptual framework and guidance to conduct a life cycle assessment (LCA)
- Rather than write a life cycle analysis protocol in the rule, we are proposing that the rule use these ISO standards as a foundational framework
  - ISO 14040: Environmental management – Life cycle assessment – Principles and framework
  - ISO 14044: Environment management – Life cycle assessment – Requirements and guidelines
- The ISO 14040 standard establishes the principles and framework for how a life cycle assessment should be done
  - This standard is focused on terminology and process steps only
  - Defines framework elements like system boundaries and functional units
  - Also addresses interpretation, reporting of results, and critical review



# The ISO Standards Working Together

- The ISO 14044 standard provides the requirements and guidelines for a LCA
  - Requirements for collecting, calculating, and validating data
  - Guides the selection of impact categories and category indicators, and the classification and characterization of impact categories and results
  - Completeness, consistency, and sensitivity checks, with detailed reporting and critical review
- Taken together, the two standards (14040 and 14044) create a holistic protocol for conducting a life cycle analysis



# Market and Geographic Leakage Effects

- Many of the projects covered by the GAP rule would produce or move products that compete in the global marketplace
- Understanding these dynamics may require an economic analysis tied in with other modeling efforts
- Different emissions perspectives are possible in the assessment:
  - Gross emissions – emissions associated only with the project
  - Net emissions – project emissions relative to alternative market scenarios
- Acquiring data can be challenging, especially from foreign sources
- These projections often have a high level of uncertainty
- These analyses are typically time and resource intensive



# We'd Like Input From You

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



# We'd Like Input From You (2)

- 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.
- 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.
- 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?

# GAP Rule Webinar Series

- |                |                        |  |
|----------------|------------------------|--|
| ▪ June 25      | Presentation is online | GAP Rule purpose, process and key concepts |
| ▪ July 23      | Presentation is online | Rule applicability                         |
| ▪ August 27    | 9:30 am - noon         | Environmental assessment methods           |
| ▪ September 24 | 2:00 pm – 4:30 pm      | Mitigation                                 |
| ▪ October 29   | 9:30 am – noon         | TBD  |
| ▪ November 17  | 9:00 am – noon         | Draft GAP Rule overview                    |



# For More Information

Website: <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-445>

Join our email list:

<http://listserv.ecology.wa.gov/scripts/wa-ECOLOGY.exe?SUBED1=GAP-RULE&A=1>

Email questions, input or feedback to: [gap-rule@ecy.wa.gov](mailto:gap-rule@ecy.wa.gov)

Points of Contact:

Diane Butorac

[diane.butorac@ecy.wa.gov](mailto:diane.butorac@ecy.wa.gov)

(360) 407-6573

Fran Sant

[fran.sant@ecy.wa.gov](mailto:fran.sant@ecy.wa.gov)

(360) 407-6004



# Thank you for participating in the webinar!

The next webinar is planned for Sept 24, 2020 and  
will be about mitigation.

