



Department of Environmental Quality

Low Carbon Fuel Advisory Committee
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**Establishing New Fuel Pathways
and Sub-pathways**

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Department of Environmental Quality

Establishing New Fuel Pathways

**Importance of Process for New
Pathways and Sub-pathways:**

- Ensure that the LCFS carbon intensity lookup table accurately reflects the fuels that are actually being sold in Oregon
- Reward genuine innovations and efficiencies

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Establishing New Fuel Pathways

Presentation Overview:

- Review definitions
- Situations calling for new pathways and sub-pathways
- Process for proposing new pathways and sub-pathways

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Review definitions

- **Pathway and Sub-pathway both refer to the whole lifecycle of producing and using a fuel**
- **Each pathway is a unique combination of feedstock and fuel.**
 - Example: Ethanol produced from corn
- **Each sub-pathway takes into account the different processes and sources of process energy for making a fuel.**
 - Examples: Corn ethanol produced using the wet mill process using natural gas, or using the dry mill process with coal energy

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Situations Calling for New Pathways and Sub-pathways

- New low-carbon fuels developed
- New technologies developed to produce existing fuels from new feedstocks
- New and improved processes for producing existing fuels from existing feedstocks
- Increased percentage of high carbon intensity crude oils in refinery mix
- Producers of high carbon intensity crude oils adopt CCS or other methods to lower carbon intensity of product

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Establishing New Pathways

Questions for discussion:

- Under what circumstances should a new pathway or sub-pathway be added to the carbon intensity lookup table?
- What considerations should DEQ keep in mind when designing a process for adding new pathways and sub-pathways?

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Significance Threshold

- **New Pathway due to new fuel or feedstock:**
 - Presumed to be significant, no threshold requirements for minimum production volume
- **New Sub-pathway due to new or improved process for existing fuel-feedstock combination:**
 - Must meet two thresholds
 1. Minimum threshold for improvements in carbon intensity
 2. Minimum fuel volume threshold

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New Sub-pathway: Minimum Threshold for Improvements in Carbon Intensity

DEQ Proposal: Threshold for consideration is an improvement in “source-to-tank” carbon intensity of 5.0 g CO₂E/MJ or 10 percent, whichever is less

- **Example 1: North American LNG, 72.38 gCO₂E/MJ**
 - Lesser of 5.0 gCO₂E/MJ or 10 percent (7.24 gCO₂E/MJ)
- **Example 2: LNG from Landfill Gas, 15.56 gCO₂E/MJ**
 - Lesser of 5.0 gCO₂E/MJ or 10 percent (1.56 gCO₂E/MJ)

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New Sub-pathway: Minimum Fuel Volume Threshold

DEQ Proposal: Regulated party is able and intends to provide more than one million gasoline gallon equivalents (gge) per year in Oregon

- **Exception:** Minimum volume criterion does not apply if all providers of the fuel in question supply less than one million gge in total
- Purpose of exception: Preserve incentive for innovation in emerging fuels

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Questions for discussion:

- Do you agree with the proposed minimum carbon intensity threshold for new fuels and new fuel pathways?
- Do you agree with the minimum volume criterion?
- Are there additional situations which call for additions to the carbon intensity lookup table?

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Establishing New Pathways

Process would require regulated party to submit updated GREET spreadsheet for new fuel or process

DEQ seeks committee input on the following considerations:

- Kinds of support documentation required to demonstrate improvements are genuine
- Opportunity for public review and comment
- Protection of confidential business information (to extent allowed by Oregon law)

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