



Rachel Assink  
Rulemaking Lead  
Washington Department of Ecology  
Air Quality Program  
P.O. Box 47600  
Olympia, WA 98504-7600

**Re: Twelve Benefit Corp.'s Comments on the Draft Clean Fuels Program Rule Language Presented at Various Stakeholder Meetings**

Dear Ms. Assink:

Twelve Benefit Corp. (dba Twelve) is a company based in Berkeley, CA that has developed a market-leading carbon dioxide (CO<sub>2</sub>) to carbon monoxide (CO) electrolysis technology. The CO can then be combined with hydrogen and converted into liquid fuels via several downstream processes. With the passage of the Clean Fuels Program, Twelve is planning on selling liquid fuel products into Washington state that qualify for credits under the Clean Fuel Standard and is also likely to pursue in-state project development activities. Twelve has an interest in ensuring that any credits that the company qualifies for are available on a timeline consistent with our project development activities and other alternative technologies for sustainable fuels.

Twelve has the following comments on the Draft Clean Fuels Program Rule Language:

**Alternative Jet Fuel and Tier 2 Pathway Delays:**

Twelve is requesting that Ecology NOT delay implementation of the original Tier 2 pathway applications for alternative jet fuel until July 1st, 2025 as presented in the March 15th, 2022 Stakeholder Meeting and draft rules. Tier 2 fuels include alternative jet fuels such as Twelve's electrofuels. Twelve requests Ecology reconsider the delay of processing original Tier 2 pathways, and instead consider implementing adequate fees from industry stakeholders so that Ecology has sufficient resources to complete the pathway process and permit sales of all renewable fuels in the state of Washington at the onset of the CFP program on January 1, 2023.

Twelve recognizes that many alternative jet fuel pathways will be able to leverage the California LCFS or Oregon CFP pathway approvals to supply Washington as allowed by WAC 173-424-4, however any alternative jet fuel pathway not already approved by California or Oregon will not flow to Washington. This could either delay entry of alternative jet fuel into Washington, or worse, prevent a unique low CI alternative jet fuel from entering the state.

Twelve believes making alternative jet fuel available for aviation from the January 1, 2023 CFP program start date will support the decarbonization goals of major airlines in the region and facilitate our decision regarding siting an alternative jet fuel production facility in Washington State.

**Alternative Jet Fuel CI Standard:**

Twelve also supports the various comments made requesting that diesel and alternative jet fuel have the same CI benchmark to be consistent with California and Oregon clean fuel standards.



The separate alternative jet fuel CI standard presented at the March 15th, 2022 Stakeholder Meeting could result in producers prioritizing renewable diesel over jet fuel in Washington since it would generate more credits. California and Oregon recognize that conventional diesel and jet have similar CI's, and thus have the same CI standard starting as early as 2023. Furthermore, page 10 of the document "WA-GREET 0.7a Supplemental Document and Tables of Changes" states "No changes were made to jet refining parameters and inputs.", suggesting that the jet CI standard was established using California refinery inputs. This further makes the case for consistency between the jet and diesel standard because California refinery data was used to establish the Washington jet standard. It is important that the CFP recognize important market considerations and establish policy to drive production of alternative jet fuels by setting the same benchmark for conventional diesel and jet like in California and Oregon.

Additionally, the production of alternative jet fuel that Twelve's process will be producing for credit under the CFP includes the binding of CO with hydrogen. In reviewing the text of the draft rule, we request clarification for what appears to be an overlapping or possibly conflicting treatment of hydrogen in calculation of its pathway in what seems to be both Tier 1 or Tier 2 pathway classifications.

Hydrogen is listed as a Tier 2 fuel on page 52 in WAC 173-424-CI(5)(b)(iii), while in the Tier 1 section on pg 51 in WAC 173-424-CI(3)(b) it states: *A hydrogen supplier may use the applicable CI value in Table 4 under WAC 173-424-TBLE, or apply for a specific carbon intensity under WAC 173-424-OC.*

We request that hydrogen be clearly included in the Tier 1 category, especially low-carbon hydrogen.

Please feel free to contact us with any other questions or concerns.

Best regards,

Andy Stevenson  
VP of Project Development and Partnerships  
Phone: 847-924-3890  
Email: andy.stevenson@twelve.co