

RE: NEXT First Open Record Submittal (App DR 21-03; V 21-05 and CU 21-04) Email 3

Stephenson, Garrett H. <GStephenson@SCHWABE.com>

Wed 1/26/2022 5:01 PM

To: ePermits - Planning <planning@columbiacountyor.gov>; Jacyn Normine <Jacyn.Normine@columbiacountyor.gov>
Cc: 'Jesse Winterowd' <jesse@winterbrookplanning.com>; Robin McIntyre <Robin.McIntyre@columbiacountyor.gov>; Robert Wheeldon <Robert.Wheeldon@columbiacountyor.gov>; 'Christopher Efird' <chris@nextrenewables.com>; 'Brian Varricchione (BVarricchione@mcknze.com)' <BVarricchione@mcknze.com>; 'Gene Cotten' <gene@nextrenewables.com>; 'Laurie Parry' <Laurie@stewardshipsolutionsinc.com>

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To Whom it may Concern:

Please find attached the letter from Maul Foster Alongi referenced in my letter for NEXT's first open record submittal. Also, in case Mackenzie's exhibit B did not come through, it can be downloaded via the link below. This is the final of three emails enclosing NEXT's first open record submittal.

 [220126 Mackenzie letter Att_b.pdf](#)

Thank you!

Garrett H. Stephenson

Shareholder

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gstephenson@schwabe.com

Schwabe Williamson & Wyatt

[Please visit our COVID-19 Resource page](#)

From: Stephenson, Garrett H.

Sent: Wednesday, January 26, 2022 4:54 PM

To: 'planning@columbiacountyor.gov' <planning@columbiacountyor.gov>; Jacyn.Normine@columbiacountyor.gov

Cc: 'Jesse Winterowd' <jesse@winterbrookplanning.com>; 'Robin McIntyre'

<Robin.McIntyre@columbiacountyor.gov>; 'Robert Wheeldon' <Robert.Wheeldon@columbiacountyor.gov>;

'Christopher Efird' <chris@nextrenewables.com>; 'Brian Varricchione (BVarricchione@mcknze.com)'

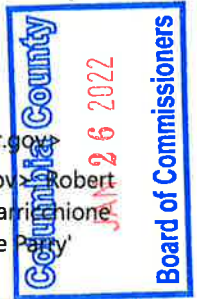
<BVarricchione@mcknze.com>; 'Gene Cotten' <gene@nextrenewables.com>; 'Laurie Parry'

<Laurie@stewardshipsolutionsinc.com>

Subject: RE: NEXT First Open Record Submittal (App DR 21-03; V 21-05 and CU 21-04) Email 2

To Whom it may Concern:

Please find attached Exhibit B to the Mackenzie exhibit referenced in email one.



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From: Stephenson, Garrett H.

Sent: Wednesday, January 26, 2022 4:41 PM

To: 'planning@columbiacountyor.gov' <planning@columbiacountyor.gov>

Cc: Jesse Winterowd <jesse@winterbrookplanning.com>; 'Robin McIntyre' <Robin.McIntyre@columbiacountyor.gov>; Robert Wheeldon <Robert.Wheeldon@columbiacountyor.gov>; 'Christopher Efird' <chris@nextrenewables.com>; Brian Varricchione (BVarricchione@mcknze.com) <BVarricchione@mcknze.com>; Gene Cotten <gene@nextrenewables.com>; Laurie Parry <Laurie@stewardshipsolutionsinc.com>

Subject: NEXT First Open Record Submittal (App DR 21-03; V 21-05 and CU 21-04) Email 1

To Whom it may Concern:

Please find attached NEXT's first open record submittal, which includes additional factual testimony. This is the first of a few emails, given the size of some of the files. Please confirm that you have received this, include this in the official record, and place it before the Board.

Thank you,

Garrett H. Stephenson

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January 25, 2022
Project No. 1724.01.03

Garrett Stephenson
Schwabe Williamson & Wyatt
1211 SW Fifth Avenue Suite 1900
Portland, OR 97204

Re: NEXT Renewable Fuels Oregon, LLC—Greenhouse Gas Emissions Summary

Dear Garrett:

NEXT Renewable Fuels Oregon, LLC (NEXT) is proposing to construct a renewable diesel, naphtha, and jet fuel manufacturing facility in Clatskanie, Oregon (proposed facility). The proposed facility will receive and process raw oil feedstocks, including vegetable oils and animal fats, to produce renewable fuel products for sale in markets in western states with Low Carbon Fuel Standards (LCFS). Implementation of LCFS creates an inelastic marketplace requiring that lower carbon fuels replace conventional petroleum-based fuels in ever-increasing amounts. The renewable fuels produced by NEXT may represent a component of the lower carbon fuel portfolios necessary to achieve LCFS program goals.

LCFS programs establish carbon intensity targets for transportation fuels. Carbon intensity represents a measure of greenhouse gas (GHG) emissions over the entire lifecycle of a fuel, accounting for extraction, production, transportation, and end consumption. During construction and operation of the proposed facility, GHG emissions will be emitted by anthropogenic sources such as non-electrical construction equipment, non-renewable source of electricity generation, and the combustion of natural gas in process equipment, and biogenic sources such as the combustion of gases generated from renewable feedstocks in the Hydrogen Plant.

All GHGs remain in the atmosphere long enough to become well mixed, meaning the amount of GHGs measured in the atmosphere is roughly the same all over the world, regardless of the source of emissions (EPA 2021a). Climate change impacts result from the incremental addition of GHG emissions from millions of individual sources, which collectively have a large impact on a global scale (CEQ 2016). As a result, it is currently not possible to correlate how the proposed facility will directly contribute to a specific climate change effect on public health and safety. GHGs do not have direct human health effects like some other regulated pollutants. Instead, the overall significance of GHG emissions from the proposed facility should be evaluated by analyzing the carbon intensity of the renewable fuel products from NEXT in relation to that of conventional petroleum-based fuels.

The proposed facility will produce approximately 17,700,000 barrels per year of renewable diesel and much smaller volumes of renewable naphtha and renewable jet fuel. This means the production of renewable diesel from NEXT will offset an equivalent amount of conventional petroleum-based fuels in the marketplace, leading to an overall net reduction in GHG emissions from existing conditions, as detailed below.

The carbon intensity for conventional diesel is 100.74 grams of carbon dioxide equivalents per megajoule of fuel (g-CO₂e/MJ). NEXT will produce renewable diesel with a weighted average carbon intensity of 48.4 g-CO₂e/MJ, accounting for each raw oil feedstock, as derived from the approved fuel pathways established under the Oregon Clean Fuels Program. In other words, NEXT will produce fuels that emit less than half (48.4%) as much GHG over their lifecycle as compared to conventional diesel. Because the renewable diesel produced by NEXT will displace conventional diesel, it will actually reduce the amount of GHG emissions by 51.6% from the existing condition. As demonstrated in the table below, NEXT's renewable diesel will result in a net reduction of approximately 5,409,379 metric tons of CO₂e per year (MTCO₂e/yr) in the LCFS transportation fuels market.

Table 1. Net Reduction in Lifecycle GHG Emissions from the Proposed Facility

Fuel Type	Default High Heat Value ⁽¹⁾ (MMBtu/gal)	Annual Production Rate ⁽²⁾ (bbl/yr)	Carbon Intensity (g-CO ₂ e/MJ)	Annual GHG Emissions Estimate (MTCO ₂ e/yr)
Renewable Diesel	0.123	17,709,902	48.4 ⁽³⁾	4,667,499 ^(a)
Conventional Diesel	0.127	17,709,902	100.74 ⁽⁴⁾	10,076,877 ^(a)
Total Net Reduction in Annual GHG Emissions Estimate =				-5,409,379 ^(b)
<p>NOTES:</p> <p>^(a) Annual emissions estimate (MTCO₂e/yr) = (carbon intensity [g-CO₂e/MJ]) x (1,055.06 MJ/MMBtu) x (42 gal/bbl) x (default high heat value [MMBtu/gal]) x (annual production rate [bbl/yr]) x (lb/453.592 g) x (ton/2,000 lb) x (MT/1.102 US tons)</p> <p>^(b) Total net reduction in annual GHG emissions estimate (MTCO₂e/yr) = (renewable diesel annual emissions estimate [MTCO₂e/yr]) - (conventional diesel annual emissions estimate [MTCO₂e/yr])</p> <p>REFERENCES:</p> <p>⁽¹⁾ Value derived from Oregon Administrative Rule (OAR) 340-253-8010, Table 6 "Oregon Energy Densities of Fuels." ⁽²⁾ Represents proposed facility maximum renewable diesel operating mode. ⁽³⁾ Carbon intensity derived from Oregon Clean Fuels Program regulatory default carbon intensity per OAR 340-253-8010, Table 9. New legislation to establish a Clean Fuels Program in the state of Washington is currently in rulemaking that may establish carbon intensity standards for transportation fuels used in Washington. The carbon intensity value for renewable diesel specific to the Washington Clean Fuels Program is expected to be similar to the California and Oregon-specific carbon intensity values. ⁽⁴⁾ See OAR 340-253-8010, Table 4 "Oregon Carbon Intensity Lookup Table."</p>				

To put this in perspective, the net reduction of 5,409,379 metric tons of GHG emissions is equivalent to removing approximately 1.2 million passenger vehicles from roadways, assuming the typical passenger vehicle emits about 4.6 metric tons of GHGs per year (EPA 2021b).

Garrett Stephenson
January 25, 2022
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Hence, there will be a net positive impact to public health and safety by constructing and operating the proposed facility.

Sincerely,

Maul Foster & Alongi, Inc.



Brian Snuffer Zukas, PE
Project Air Quality Consultant

Attachments: References

cc: Gene Cotten, NEXT Renewable Fuels Oregon, LLC
Brien Flanagan, Schwabe, Williamson & Wyatt
Chad Darby, Maul Foster & Alongi, Inc.

REFERENCES

(EPA 2021a) EPA. July 27, 2021. Overview of Greenhouse Gases. <https://www.epa.gov/ghgemissions/overview-greenhouse-gases> (accessed September 28, 2021).

(EPA 2021b) EPA. July 21, 2021. Greenhouse Gas Emissions from a Typical Passenger Vehicle. <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle> (accessed January 25, 2022).

(CEQ 2016) Council on Environmental Quality. August 1, 2016. Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf (accessed September 29, 2021).

