Brad Powell

#332182 | November 14, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

To Portland City Council: We're a small business providing moving and cleaning services to many of our community's aged, disabled, Veteran, and houseless citizens. We partner with Home Forward, DHS, Multnomah County, multiple non-profits, and even the City of Portland on occasion to serve citizens in need of our services. In most cases, our services are utilized to help keep our fellow citizens in lease compliance and housed in a safe, healthy environment. As a small business we've persevered through the early days waiting for the phone to ring, through lockdown and the ongoing restrictions associated with Covid-19; now we're working against a tight labor market, and increasing costs for everything from labor/wages to non-recoverable supplies to taxes to fuel. This biodiesel/renewable diesel ordinance adds proverbial fuel to the fire of already escalating costs. Some points to consider: Business Impact: The ordinance will have a severe negative impact on local businesses in the city of Portland, who will have to pay the high cost of biofuels and deal with regular shortages of supply. Meanwhile, businesses operating outside the city will be able to easily circumvent the rule and outcompete local businesses who are subject to higher operating costs from this new rule. The result will be a loss of jobs and tax revenue in the city without any decrease in emissions. After Covid-19 and the city’s homelessness crisis, local businesses cannot keep operating in the face of more and more rules and regulations hindering their ability to operate. A Barrier to Transitioning to Zero-Emission Vehicles: Oregon businesses are already committed to moving away from fossil fuels and to transitioning to zero-emission technologies, but this process is expected to be extremely costly and complex. This new ordinance will be a barrier to that transition by forcing businesses to make costly adjustments and changes that will only slow down our work to move toward zero emissions. A biofuel mandate is not a step toward that transition – it’s a diversion on a completely different pathway that will eat up resources and time. Impact on Supply Chains: Over the past two years, we’ve all experienced the complexity and pain of persistent supply chain problems. This ordinance will guarantee that Portlanders will have to endure endless supply bottlenecks and fuel shortages that will constantly disrupt business and daily lives. While the ordinance gives the director authority to try and mitigate these problems, these powers won’t be nearly enough to resolve the types of broad, persistent crises that emerge from snarled supply chains. Cost to Portlanders: The increased operating costs and persistent fuel shortages from this ordinance will ultimately increase prices and cost of living for the city’s residents, disproportionately hurting the most vulnerable Portlanders. Groceries, supplies, and shipping will all see price increases from this ordinance. With ongoing economic instability and persistent inflation, it’s cruel and unfair to add further economic burdens to regular people’s daily lives. Carrots, Not Sticks: Despite all of this, we

still believe that biofuels are a promising technology and are very interested in finding how they can fit in a greener future. However, the only effective way to incentivize use of this fuel source is to make sure there is a reliable and affordable supply for businesses to use. The current proposal contains only a mandate without any incentives or production guarantees, and so won’t be successful in helping to build a robust and sustainable market for biofuels. We appreciate your time and consideration and hope you'll support us in the same spirit we're helping to support our community with the services our business provides. Respectfully, The Pegasus Team Brad Powell, Owner phone: 503.308.9430 |https://www.pegasuspdx.org

Testimony is presented without formatting.

Holli Johnson
Manager, NW Region

Submitted via: https://www.portlandmaps.com/bps/mapapp/proposals/#/renewable-fuel-standard

November 14, 2022

Bureau of Planning and Sustainability
City of Portland
1810 SW 5th Ave, Suite 710,
Portland, OR 97201

Re: WSPA Comments on Revised Proposed Amendment to Portland Renewable Fuel Standard

Dear Portland Bureau of Planning and Sustainability,

Thank you for the opportunity to provide the Portland Bureau of Planning and Sustainability (BPS) our concerns with the proposed amendment to the City's Renewable Fuel Standard (RFS), dated October 27, 2022. Western States Petroleum Association (WSPA). WSPA is a non-profit trade association that represents companies that explore for, produce, refine, transport and market transportation energy supplies in Oregon and four other western states.

The way the world produces and consumes energy is evolving, and our members are on the cutting edge of these changes investing in research and developing the diverse energy sources and technologies of the future of transportation energy. This includes investing billions of dollars in hydrogen technologies for modern trucking; battery storage; development of renewable diesel and biodiesel plants; and investing in carbon capture and sequestration technologies and more.

We want to begin by thanking you for the inclusion of phasing in the minimum biodiesel and renewable diesel content requirements to allow a modest transition time for the development of the building/converting fuel storage facilities, upgrading of blending systems and other logistical elements that would take place to meet the program goals.

We have two primary significant concerns we would like to bring to your attention. The first relates to limiting the carbon intensity “CI” number to 40 in the code language, which limits the acceptable products for Portland. The second is the lack of compliance clarity related to the broad authority given to the agency director and subsequent rulemaking.

Furthermore, we have concerns that several critical items are being left out of the code such as program safeguards, compliance demonstration/assurance and enforceability. WSPA appreciates the discussion of the assembly of a Technical Advisory Committee and would strongly encourage such a team to include WSPA and a variety of fuel market and fuel supply chain technical experts.

Narrow definition of Carbon Intensity, "40" CI

The state of Oregon currently manages the carbon intensity of fuels coming to Oregon through the Clean Fuels Program, using complex models to calculate these values, called GREET models. [Note: a CI of 40 represents a fuel that is roughly 40% as carbon intensive as its fossil-based counterpart]. It is our understanding that the purpose of such a low number (40) is to avoid including "food to fuel" renewable products. What may be of key interest is that "crop" related fuels receive higher numbers in the GREET modeling, do not generate as many credits in the Clean Fuels Program, and are thus less valuable. This is an intentional part of the GREET modeling; the DEQ Clean Fuels Program already inherently accounts for this concern and incentivizes lower CI fuels. [1]

Oregon uses about 50,000 barrels of diesel a day[2]. For the in the Oregon region, known as PADD 5, approximately 11 percent of the total diesel supply was supplied in Oregon in 2021 [3]. According to DEQ data for 2021, only 1 percent was renewable diesel (renewable diesel and biodiesel combined were 10 percent)[4]. Over this same time frame in two of the four quarters in 2021 the CI of renewable diesel exceeded 40. In the third quarter of 2020 the average CI of renewable diesel was 64[5]. Over time the volume of renewable diesel could reasonably be expected to increase as more projects come online regionally.

As these programs develop, the supply volumes from varying types of sources of these new technologies necessary to achieve program goals are also still building up. By limiting to 40 CI, the city is limiting an already limited supply.

If Portland still feels compelled to include its own CI number, the City should consider using the state CI numbers in the Oregon Clean Fuels Program and conduct further code revisions at these numbers shift. For example, more current rulemaking could begin with a CI limit of 60 gCO2e/MJ, then moving to 50 gCO2e/MJ, and ultimately to 40 gCO2e/MJ. This approach would allow most

[1] The goal for Portland is to increase the use of biodiesel and renewable diesel. With that in mind we suggest following the ODEQ's Clean Fuels Program reduction in carbon intensity as the city transitions from the current B5 requirement (final blended CI approximately 95) to the ambitious R99 (final blended CI approximately 20-40). See the Estimated Lifecycle Carbon Intensities of Common Fuels and Blends using 2021 CFP data published by ODEQ at the bottom of this letter. Availability of biodiesel and renewable diesel could become challenging as more states are adopting Clean Fuels Program. To maximize optionality to meet Portland's goals our first recommendation is that the City gradually reducing the CI over time in line with the ODEQ CFP.

[2] https://www.oregon.gov/deq/ghgp/cfp/Pages/Quarterly-Data-Summaries.aspx#e385bbc1-32f3-4a4e-a322-e7e1e19ca030
[3] PAD District 5 Prices, Sales Volumes & Stocks (eia.gov)
[4] https://www.oregon.gov/deq/ghgp/cfp/Pages/Quarterly-Data-Summaries.aspx#e385bbc1-32f3-4a4e-a322-e7e1e19ca030
[5] Id.

biofuels pathways available today to be used while recognizing the expectation of lower CI fuel options in the future[6].

This highlights a second concern about the way the language is crafted, which could result in some difficulty for suppliers and the City to manage administratively. In short, the language appears to require a rigid limit of 40 CI or less for the diesel product at the retail site, which does not allow enough flexibility for products to intermingle when they are blended in a tank at a terminal or retail site. For example, a fuel supplier in Portland, subject to both the Portland RFS and the Oregon Clean Fuels Program, may have stored a diesel product in a tank at the terminal of 65 CI. After emptying the tank for distribution in Oregon, there is a residual amount of fuel left in the tank known as a "heel". If the supplier were to then fill the tank with a shipment of diesel intended for distribution in Portland that met the 40 CI limit, the blended diesel could exceed the 40 CI threshold which would not be allowed, according to existing language. WSPA recommends that flexibility be reflected in the code language to ensure that blending is allowed. If not addressed in the code language, this needs to be a key item of discussion in the Technical Advisory Committee.

Similarly, the language as proposed appears to require that the volume standard be met by either biodiesel or renewable diesel, not and/or. For example, the initial limit of 15 volume percent should be allowed to be met through a combination of 5 percent biodiesel and 10 percent renewable diesel. The necessity of having this flexibility of complying through a combination of the renewable fuels is particularly needed as the RFS stringency increases and the ability demonstrate compliance by biodiesel alone is hampered by vehicle Original Equipment Manufacturer (OEM) warranty considerations. WSPA recommends that the code allow for the percentage standard with biodiesel, renewable diesel, or a combination of the two, which is a minor textual change.

Implementing these suggestions into the code language could alleviate comparable significant administrative and compliance burden of having to verify the CI of fuels distributed in the Portland city limits.

Lack of Compliance Clarity

The second issue of concern for WSPA is language that provides the Director of BPS to temporarily suspend or modify the minimum biofuel content requirements based on a determination that such requirements are temporarily infeasible due to economic or technical circumstances.

For companies which comply with such programs, the lack of certainty is complicated, and it is more straightforward to have known metrics of cause and action, which then allows companies to develop planned forecasts for markets they operate in. A good example can be seen in the

[6] If a Portland specific CI limit is pursued, the need to further consider this issue is accentuated by the fact that the October 27, 2022 amendments acknowledge that that there isn't an identified method for reporting and enforcing a differentiated CI for the city. Establishing a limit that cannot be implemented or enforced will be a detriment to the implementation of the RFS.

Oregon Clean Fuels Program. There, the program has specific triggers which occur if the forecast supply is below targets or there is a shortage, which was built into the law itself.

In order to aid BPS and relieve some administration pressure, WSPA recommends inclusion of City Council oversight for this type of program, given its significance - both for the climate program goals and for overall economic impacts to the City.

WSPA recommends that BPS make additional changes to the code draft, that could greatly benefit the City. Taking the time to make modest changes and define clear triggers could (1) provide for a similar annual fuel forecast review and (2) afford BPS the ability to adjust implementation schedule, allow for blending, and other items.

WSPA appreciates the opportunity to provide comments on the City's proposed RFS amendment. If you have any questions, please contact me or via email at hjohnson@wspa.org and 360.352.4506.

Sincerely,

cc: Jim Verburg, WSPA
Jessica, Spiegel, WSPA

Holli Johnson

#332183 | November 15, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

See attached

Testimony is presented without formatting.

Mollie Corcoran
Analyst, State Government Affairs West

November 11, 2022

Via *https://www.portlandmaps.com/bps/testify/#/renewable-fuel-standard*

Director Donnie Oliveira
Bureau of Planning and Sustainability
City of Portland
1810 SW 5th Ave, Suite 710
Portland, OR 97201

Re: Chevron Comments on Proposed Amendment to Portland Renewable Fuel Standard

Dear Director Oliveira,

Chevron is a major marketer of petroleum products and renewable fuels in the state of Oregon and a regulated party under the Oregon Clean Fuels Program (CFP). With the recent acquisition of Renewable Energy Group, Inc., Chevron is also an international producer of lower carbon intensity fuels with a global integrated procurement, distribution, and logistics network and 11 biorefineries in the U.S. and Europe. In 2021, Chevron Renewable Energy Group produced 480 million gallons of renewable fuels, resulting in 4.1 million metric tons of CO_2 reduction, and is helping lead the energy transition to a lower carbon future. Furthermore, Chevron Renewable Energy Group is a significant supplier of biodiesel in the state of Oregon, supplying tens of millions of gallons of biodiesel in Oregon each year, and was a Rulemaking Advisory Committee member for the most recent Oregon Clean Fuels Program expansion rulemaking earlier this year.

We appreciate the opportunity to provide comments on the October 27, 2022 proposed amendments to the City of Portland's Renewable Fuel Standard (RFS). We appreciate that the October 27, 2022 amendments removed the fuel pathway code requirements that were in the earlier version of the proposed amendments. But, we still have significant concerns with the RFS amendment as currently written, as it is overly prescriptive, impractical to implement, and may lead to unintended consequences.

Chevron opposes the inclusion of a carbon intensity (CI) maximum threshold in general and particularly the overly restrictive CI requirement of 40 gCO_2e/MJ. Maintaining a CI limit of 40 specifically for the City of Portland will pose supply and administrative challenges which will hamper the implementation of the mandate. The inclusion of this threshold is unnecessary as carbon intensity is already regulated through the Oregon Clean Fuels Program (CFP). Though the City of Portland has stated that the state average is below a CI of 40, this ignores the inability to segregate renewable diesel and biodiesel that is above a CI of 40 from those that are below a CI of 40 in a fungible supply chain. Such a segregation would require production, storage, and distribution systems for supplying Portland that are segregated from the rest of the state.

Chevron Corporate Affairs
1201 K Street, Suite 1910, Sacramento, CA 95814
Tel 916 325 3028
mcorcoran@chevron.com

The requirement for 40 CI blendstock would exclude all fuel produced using soybean oil and canola oil. This is a significant issue for the success of the program as soybean oil is the number one feedstock used in the U.S. to produce biodiesel and renewable diesel. Canola oil is also widely used and is grown in the Northwest U.S. and in Canada, making it a locally grown feedstock for fuel producers in the Northwest. Use of these feedstocks are already accounted for in the indirect land use charge included in the lifecycle assessment modeling in Oregon's Clean Fuels Program. In addition to the concerns discussed above, excluding biodiesel and renewable diesel produced using these feedstocks will greatly reduce the optionality for suppliers to Portland and will drive up prices to source fuel below 40 CI due to the low supply and competition for these fuels in all GHG incentive programs.

If the City of Portland is resolute on including a maximum CI threshold, we suggest aligning with the federal RFS requirements for biomass-based diesel or advanced biofuel. To meet the federal RFS standards, by definition, biomass-based diesel and advanced biofuel require a GHG reduction of 50%. This equates to a maximum CI limit of 50.37 gCO2e/MJ.[1] This will help ensure that there is an adequate supply of biodiesel and renewable diesel to meet the City's RFS. The October 27, 2022 version of the amendments that direct the establishment of rules for reporting and enforcement of carbon intensity requirements emphasizes that there is not a practical and effective means for implementing a differentiated carbon intensity for biofuels within the Portland City limits. Until which time those rules are established and shown to be effective for enforcement, the GHG reduction for renewable diesel and biodiesel should not be set any lower than 50%.

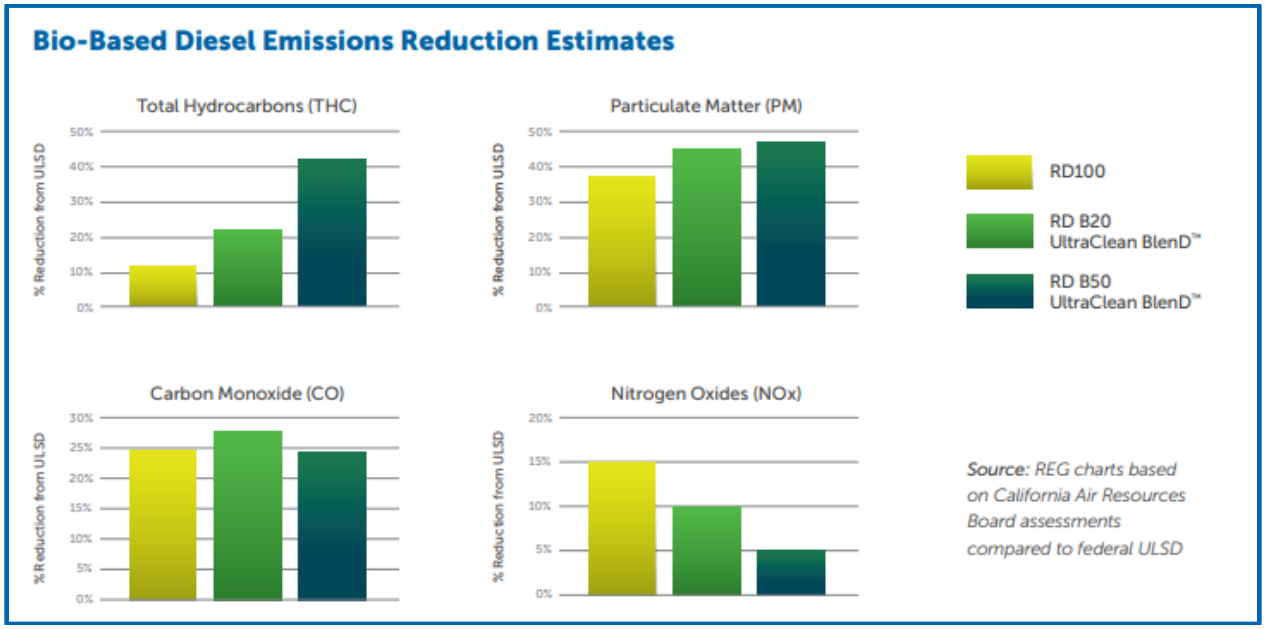
Additionally, we recommend setting a timeline that considers market implementation. We recommend that the implementation be at least 18 months from the adoption of revised RFS standards. We recognize that the average amount of renewable diesel and biodiesel is in proximity to the initial requirement of 15% volume, but this does not account for the possibility that some marketers and retailers within the City of Portland are currently complying with the minimum requirements of the statewide 5% biodiesel mandate and that contracts and supply would need to be modified in very short order to meet the 15% requirement.

Chevron supports regular review of the program feasibility with respect to the cost to consumers, supply reliability, emergency response, and carbon intensity threshold (if implemented). The current RFS empowers the Director of the Bureau of Planning and Sustainability to temporarily suspend or modify the RFS based on economic or technical circumstances. This authority must be maintained along with routine review of the program operation.

We also support the flexibility of using biodiesel and/or renewable diesel to meet the standard. However, we are opposed to the 20% limit on biodiesel eligibility and implied requirement that the standards have to be met by renewable diesel or biodiesel in the October 27, 2022 version of the amendments. Any biodiesel blends greater than 20% that are accepted by consumers as suitable for use in their equipment must be eligible to demonstrate compliance with the RFS standards. Revisions are necessary to maintain flexibility by permitting compliance by either renewable diesel, biodiesel, or blends of the two fuels. Both fuels provide performance and lifecycle carbon emission benefits[2] and have complementary properties. Biodiesel offers increased lubricity and more complete combustion, while renewable diesel offers increased cetane. Together, biodiesel and renewable diesel offer the potential for smoother-running

[1] This CI number calculation is based off the Oregon GREET modeling.
[2] https://www.regi.com/filesimages/Documents/EnDura/ultraclean-blend-spec-sheet-ef.pdf

engines, less engine wear, and reliable operation in all conditions. Additional benefits of biodiesel and renewable diesel blends include increased reductions in total hydrocarbons and particulate matter, as depicted below:



Chevron appreciates the opportunity to provide comments on the City of Portland's proposed RFS amendment. If you have any questions regarding this submittal, please contact me at 916-325-3028 or via email at mcorcoran@chevron.com

Sincerely,

Mollie Corcoran
Analyst, State Government Affairs West, Chevron

Mollie Corcoran

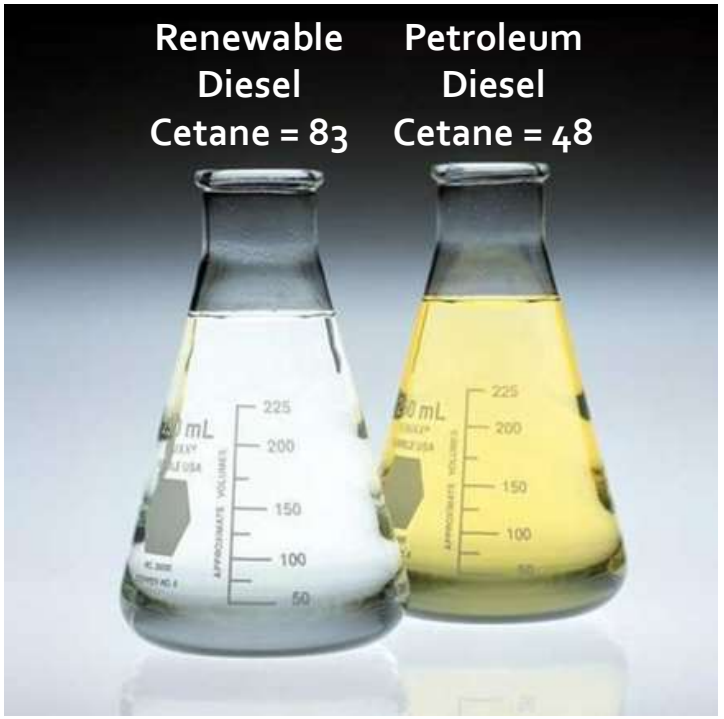
#332184 | November 15, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

Please see Chevron's comments on the Renewable Fuel Standard update in the attached document. Thank you.

Testimony is presented without formatting.

Renewable Diesel is Ultra Clean Burning



Up to 80% reduction in CO_2 and 40% less soot & black carbon

Clean Energy Calculator – TITAN Freight

Clean Energy Calculator - TITAN Freight	**Renewable**	**Totals**
Diesel Gallons Used - Annual	135,416	275,927
Total Miles Travelled - Annual (Gallons x MPG)	952,008	1,939,831
Savings Calculator		
RD Total Cost Per Mile Savings		-$0.01
Total Cost Savings - Annual		**-$19,398**

Metric Tons of CO2e (MTCO2e) Calculator	**Petroleum**	**Renewable**	**Totals**
MTCO2 = 2,204.6 pounds of CO2	1,778	711	**-1,067**
MTCO2e reduced with switch to Renewable Diesel			**-60%**

There is no scenario in the future where petroleum diesel gets cheaper

"Renewable diesel beating conventional diesel on price"
Commercial Carrier Journal, June 29, 2022

March 2022

Diesel Price, Production Cost, Credits & Profit Per Gallon

Per Gallon	Petroleum	Renewable
Price - Diesel Wholesale (1)	**$3.82**	**$3.82**
Production Cost (2) (3)	$3.44	
Production Cost (4)		$3.75
US Blenders Credit (5)		-$1.00
US Renewable Fuels Standard RIN Credit (5)		-$2.04
Oregon Clean Fuels Program Credit (6)		-$1.11
Profit Per Gallon	**$0.38**	
Profit Per Gallon		**$4.22**

(1) TITAN Freight Portland terminal contract price, 1/2/2021
(2) Production Cost (excluding Selling, distribution and administrative expenses) Shell Annual Report and Accounts 2019
(3) "Permanent fossil fuel subsidies outweigh renewables Seven to One," "Dirty Energy Dominance: Dependent on Denial"
(4) "Analysis: High credit values outweigh cost of production for US renewable distillates," S&P Global, 09/21/2020
(5) "Renewable Diesel Rising," Ethanol Producer Magazine, 04/19/2021
(6) Oregon Clean Fuels Program, Program Review, Submitted to: 2022 Oregon Legislature, Feb. 1, 2022

Projected RD Production Capacity

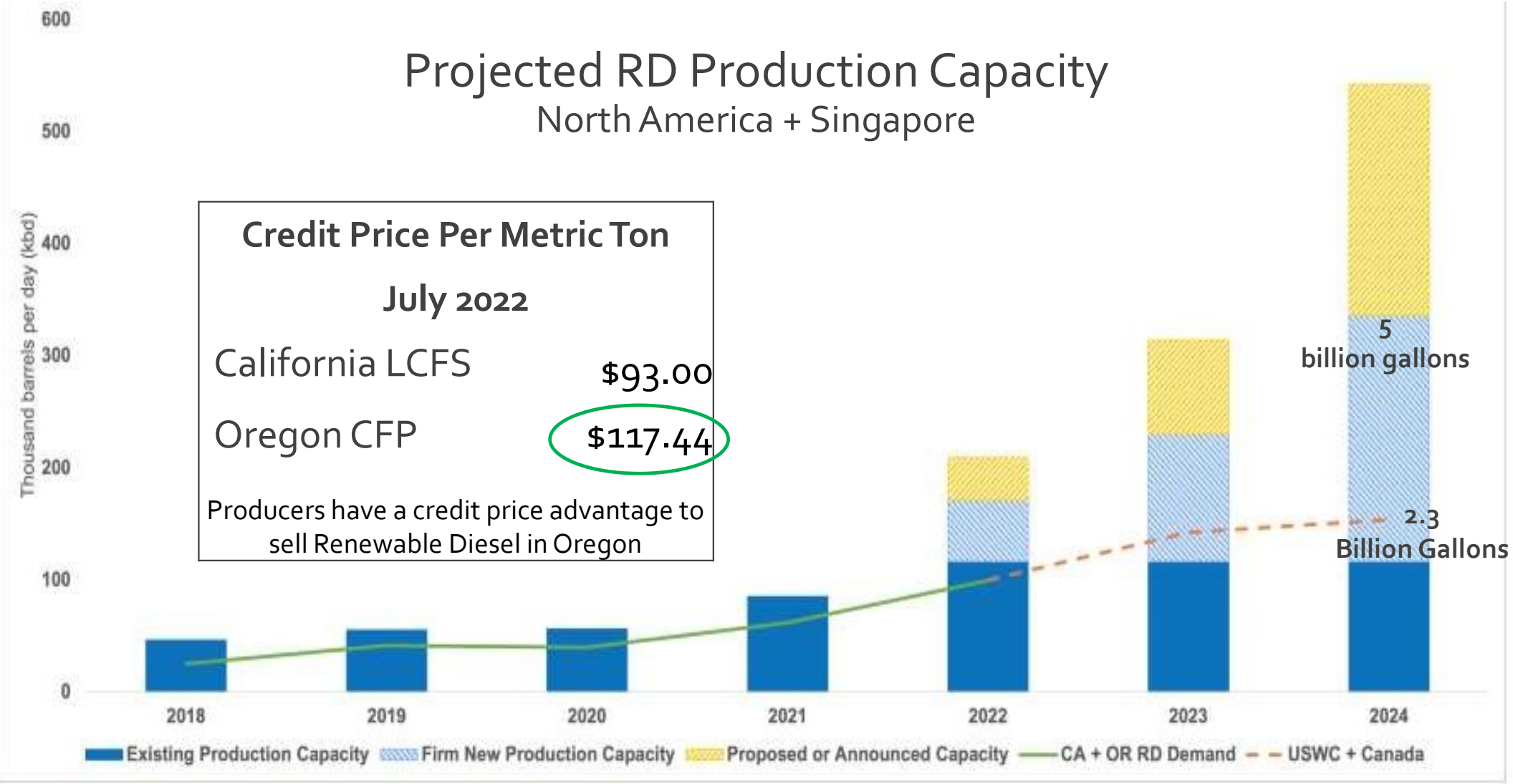
North America + Singapore

Credit Price Per Metric Ton

July 2022

California LCFS	$93.00
Oregon CFP	$117.44

Producers have a credit price advantage to sell Renewable Diesel in Oregon



Production capacity based on publicly available information, Stillwater Analysis
Demand capacity sources: CARB, OR DEQ, Stillwater Analysis

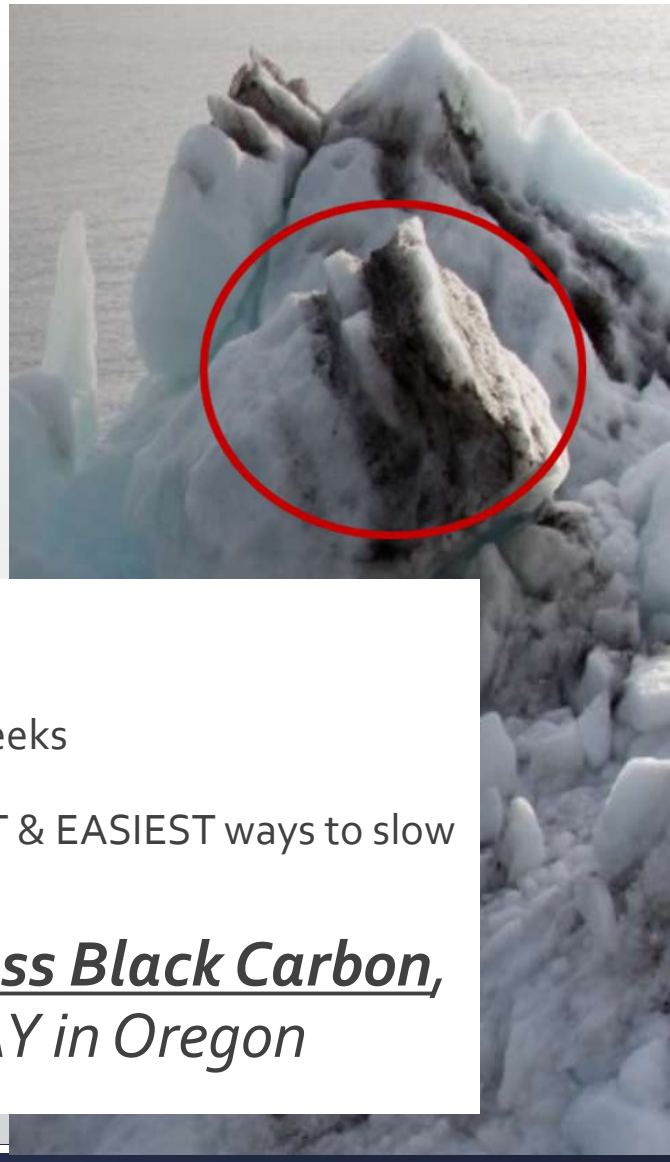
Renewable Diesel – Pollution Scorecard

Deadly Diesel Pollution	Why is it Deadly	Petroleum Diesel (B5)	Renewable Diesel (R99)
PM (2.5 & 10) / Black Carbon	Lung cancer, makes asthma symptoms worse	Baseline	-30%
NOx - Nitrogen Oxides	Causes breathing problems, chronically reduced lung function	Baseline	-10%
CO - Carbon Monoxide	Deprives the heart, brain and other vital organs of oxygen	Baseline	-24%
HC - Hydrocarbons	Lung and eye irritation	Baseline	-30%
		Average Pollution Reduced:	**-24%**

Renewable Diesel – We Can Live with That

Diesel Pollution Fatalities	Fatalities (DEQ Estimate)	Pollution Reduced	Oregonians Saved
Oregon	460	-24%	**108**

60% of Black Carbon Emissions Come From Diesel Engines



- Black Carbon is 2nd largest contributor to global warming
- Black Carbon has a short life span and dissipates in ONE to SIX weeks
- The IPCC states that reducing black carbon is one of the FASTEST & EASIEST ways to slow down LOCAL warming

Renewable Diesel, which emits ***30% to 40% less Black Carbon***, *can reduce warming and snowmelt TODAY in Oregon*

Keith Wilson

#332185 | November 16, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

Dear Mr. Mayor and Commissioners, I am submitting the attached testimony supporting updating Portland's RFS. TITAN Freight Systems, the transportation company I own and operate, has been using renewable diesel for the past three years and have had positive outcomes and superior performance in almost all comparisons to petroleum diesel. I encourage you to vote in favor of the RFS Code Update. Thank you for your consideration.

Testimony is presented without formatting.

DAIMLER TRUCK
North America

November 15th, 2022

Donnie Oliveira, Director
Portland Bureau of Planning and Sustainability
1810 SW 5th Ave
Suite 710
Portland, OR 97201

Re: Comments on Renewable Fuel Standard Code Update

Daimler Truck North America (DTNA) submits the following comments in response to the Portland Bureau of Planning and Sustainability's (BPS) proposed Renewable Fuel Standard (RFS) Code Update.

DTNA is the largest producer of medium- and heavy-duty vehicles in North America. Our facilities in Portland include our U.S. headquarters, where administrative functions as well as research and development are based. In the city, we also operate (jointly with Portland General Electric) the nation's first-of-its-kind public charging station for commercial vehicles and the Portland Truck Manufacturing Plant. In total, we employ approximately 3,000 people in Portland.

DTNA is fully committed to supporting the emerging zero-emission vehicle (ZEV) market; we expect these technologies to play a significant role in the future of commercial transportation, and know they are a vital contributor to lowering NO_x and GHG emissions. DTNA is investing heavily in the development of electric vehicles. We currently offer battery electric school buses, walk-in van chassis (Class 4), as well as heavy-duty (Class 8) trucks for sale, and we are preparing for the market introduction of an all-electric medium-duty (Class 6/7) truck.

DTNA is Supportive of the Vehicle Manufacturing and Product Validation Exemptions

DTNA's Portland based truck plant, currently producing industry-leading low- and zero-emission commercial vehicles, carries out a partial first fuel fill of every diesel truck that comes off the production line. This fuel fill is required to lubricate and prime fuel system components. These vehicles are then shipped to their final destinations, a process that can take weeks to months depending on destination and logistical constraints. It is imperative that fuel used for this purpose is exceptionally stable, non-corrosive, and free of impurities. Biodiesel content in excess of 5% is incompatible with this use case. DTNA is concerned that the alternative, renewable diesel, cannot be secured in the required volumes and that competition for this limited fuel supply will significantly increase the cost of producing vehicles in Portland. DTNA supports the vehicle manufacturing exemption, and believes that local renewable diesel supply capacity should be increased before implementation in 2030.

DTNA also conducts extensive product development and validation engineering from our Portland headquarters, including our state-of-the-art Reliability Growth fleet, which operates 24/7 to prove the durability and reliability of commercial motor vehicles. These products must be extensively tested to demonstrate durability and reliability of their mechanical components, safety equipment, and emissions systems. This fleet refuels daily at a DTNA facility on Swan Island. Product validation engineering must be conducted with fuels that are representative of the marketplace. In most of the United States and other markets to which these vehicles are exported, representative marketplace fuel is ultra-low sulfur diesel meeting ASTM D975. This fleet utilizes biofuels at the discretion of the product development team, but neither biodiesel nor renewable diesel in high concentrations are representative of the conditions founds in most markets. For this reason, we fully support the product validation engineering exemption provided in the draft code update.

DTNA Does Not Recommend Biodiesel Content Greater than 5%, but Fully Supports Renewable Diesel

DTNA does not approve biodiesel content greater than 5% in current production vehicles or legacy product due a number of fuel characteristics that are incompatible with modern high-pressure common rail fuel injection systems. DTNA would require improvements to the ASTM D7467 specification limits for oxidation stability, total acid number, metal content, and glycerides before reconsidering support for biodiesel. These properties directly affect engine performance and durability.

DTNA is not aware of any manufacturer, regardless of vehicle class, that approves biodiesel content greater than 20% as of 2022. In fact, there are no ASTM specifications for biodiesel blends from B21-B99. Specifications must exist before manufacturers evaluate fuels for release. Most manufacturers who do release biodiesel up to 20% publish maintenance guidelines for usage, that include provisions like shortening the fuel filter and oil change interval, thereby creating greater environmental impact and driving up vehicle maintenance costs for owners.

Renewable diesel has not shown any of the above mentioned compatibility issues during testing and development. DTNA is fully supportive of renewable diesel as a drop-in low carbon fuel that meets ASTM D975, and allows renewable diesel in concentrations up to 100% in current production engines and some legacy product. DTNA recommends the city work closely with state legislators to encourage growth of renewable diesel production in Oregon, and to ensure Oregon's low carbon fuel programs are robust enough to make renewable diesel available in Oregon, instead of being dispensed in other states with competing LCFS programs.

Special Considerations for Biofuels

DTNA believes it is important that biofuels be clearly labeled, so that operators may adjust their maintenance practices as recommended by their vehicle manufacturer. State and federal

guidelines for biodiesel blends up to 20% require labeling with “contains biomass-based diesel or biodiesel in quantities between 5 percent and 20 percent”. This label is not particularly informative for operators with vehicles that may require different maintenance between 5% and 20% biodiesel, or where greater than 5% biodiesel is not recommended for use in a particular piece of equipment. DTNA recommends the city work with retailers to go above and beyond state and federal labeling requirements, and specifically indicate the biodiesel and renewable diesel content dispensed at the pump (i.e. B5/R10, B15, etc.).

Manufacturers require that any approved fuels meet their relevant ASTM specifications for vehicle use. Due to the properties mentioned above, higher concentrations of biodiesel may require special attention with respect to storage and handling, as well as cold weather operability. Fuel quality should be regularly assessed at the pump to ensure compliance with ASTM specifications, and prevent costly equipment failures for vehicle operators.

We thank the City and BPS staff for the opportunity to submit these comments on the Renewable Fuel Standard code update.

Alissa Recker

#332186 | November 17, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

Please find attached comments from Daimler Truck North America.

Testimony is presented without formatting.

enough fuel ethanol annually to meet about one-fourth of the state's needs.[108,109] Additional fuel ethanol supplies primarily come by rail from the Midwest.[110] Diesel fuel sold in Oregon must be blended with at least 5% biodiesel.[111] Oregon has one biodiesel plant, in Portland, that collects used cooking oils and grease from restaurants and other businesses.[112] Its production capacity is less than three-tenths of the state's annual biodiesel consumption.[113,114]

Today's AAA National Average $3.725 ▼
Price as of 11/17/22

Today's AAA Oregon Avg. $4.722 ▼
Price as of 11/17/22

OREGON AVERAGE GAS PRICES ⓘ

	Regular	Mid-Grade	Premium	Diesel
Current Avg.	$4.722	$4.950	$5.176	$5.548
Yesterday Avg.	$4.755	$4.978	$5.186	$5.556
Week Ago Avg.	$4.831	$5.027	$5.232	$5.568
Month Ago Avg.	$5.344	$5.567	$5.775	$5.720
Year Ago Avg.	$3.783	$3.953	$4.149	$3.796

Jeremy Dueck

#332187 | November 17, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

As an advocate for alternative fuels, a Tesla owner and a truck driver in the city of Portland, please consider the following. Portland is already one of the country's most expensive states in terms of fuel, even compared to the islands of Hawaii. The people of the city do not need new pressures that increase prices; not without an available support system for alternatives. The cost of diesel raises the costs of every other item transported. We must find options that improve clean transportation without negative costs pressures. Diesel prices on the West Coast are up a $1.70 per gallon from one year ago. That equals thousands of dollars per shipment of goods and increases prices for every consumer due to increased fuel surcharges. Also, the ONE biodiesel plant in Portland only supplies 30% of the level of biodiesel needed for 5% amounts, how are you prepared to require the massive increase in biodiesel to get to the 99% blend requirement? Politics cannot ignore these questions and try to force clean energy. Flip the effort to increase the production of biodiesels and then enact a clean diesel requirement. The cart cannot be put before the horse. We must do better.

Testimony is presented without formatting.

CHRISTENSEN

1060 Jadwin Ave.
Richland, WA. 99301

November 16, 2022

Portland City Council
1221 SW Fourth Ave
Portland, OR 97204

Subject: Opposition to Amend Code Chapter 16.60: Portland Biodiesel/Renewable Diesel Ordinance

Dear Council Members,

On behalf of Christensen, Inc., a leading fuels, lubricants, and propane distributor in the Pacific Northwest, I urge you to reconsider amending the motor vehicle code to increase requirements for biofuels in Portland. Christensen is not opposed to forward-thinking fuel solutions. Our goal is for 50% of our profits to be derived from economically sustainable products and services by 2035. However, this new ordinance will slow down that process, by having to adhere to costly changes without an adequate supply of renewable diesel in the marketplace. This ordinance does not include any incentives or production guarantees for biofuels, which will only cause more supply chain issues and rising costs. Business owners will have no choice but to pass the cost increase to consumers, who are already battling relentless inflation and economic instability. The result will be a loss of jobs and reduced tax revenue in the city.

While we respect your posture to reduce carbon emissions in the city of Portland, I do not believe this proposed ordinance will help you achieve that desired outcome. Consumers will still have the capability to purchase diesel fuel in neighboring cities, which will inevitability enter Portland's city limits. This is a state issue and not a decision that should impede the lives of residents and business owners who chose to live and work in the city of Portland.

As you weigh your decision, I hope you consider the impact this will have on your community and explore other alternatives that might better help us reach the same goal.

On behalf of Christensen, Inc.

Tony Christensen, President & CEO

Tony Christensen

#332188 | November 17, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

November 17, 2022 Subject: Opposition to Amend Code Chapter 16.60: Portland Biodiesel/Renewable Diesel Ordinance Dear Council Members, On behalf of Christensen, Inc., a leading fuels, lubricants, and propane distributor in the Pacific Northwest, I urge you to reconsider amending the motor vehicle code to increase requirements for biofuels in Portland. Christensen is not opposed to forward-thinking fuel solutions. Our goal is for 50% of our profits to be derived from economically sustainable products and services by 2035. However, this new ordinance will slow down that process by having to adhere to costly changes without an adequate supply of renewable diesel in the marketplace. This ordinance does not include any incentives or production guarantees for biofuels, which will only cause more supply chain issues and rising costs. Business owners will have no choice but to pass the cost increase to consumers, who are already battling relentless inflation and economic instability. The result will be a loss of jobs and reduced tax revenue in the city. While we respect your posture to reduce carbon emissions in the city of Portland, I do not believe this proposed ordinance will help you achieve that desired outcome. Consumers will still have the capability to purchase diesel fuel in neighboring cities, which will inevitability enter Portland's city limits. This is a state issue and not a decision that should impede the lives of residents and business owners who chose to live and work in the city of Portland. As you weigh your decision, I hope you consider the impact this will have on your community and explore other alternatives that might better help us reach the same goal. On behalf of Christensen, Inc. Tony Christensen, President & CEO

Testimony is presented without formatting.

Marc Ventura
Fuel Issues Advisor
Fuels, Sustainability & Regulatory Affairs

Phillips 66 Company
1380 San Pablo Avenue
Rodeo, California 94572
Phone: (1) 510-245-4405
Email: marc.v.ventura@p66.com

November 17, 2022

City Council of Portland, Oregon

Submitted Electronically via On-Line Public Comment Form

Portland City Code Chapter 16.60 Motor Vehicle Fuel – Renewable Fuel Standard

Dear Portland City Council Members,

Phillips 66 Company (Phillips 66) appreciates the opportunity to comment on the proposed Renewable Fuel Standard (RFS) amendments per Portland City Code Chapter 16.60, Motor Vehicle Fuel.

Phillips 66 produces petroleum fuels and renewable diesel. Phillips 66 is planning to expand production of renewable diesel at its Rodeo facility near San Francisco. In Oregon, Phillips 66 operates a fuel terminal in Portland and is a major fuel supplier in the state, marketing products under the 76® brand.

Phillips 66 is a member of the Western Petroleum States Association (WSPA) and supports the comments submitted by WSPA.

The State is Regulating GHG Emissions

The state of Oregon, through the Department of Environmental Quality (DEQ), is regulating greenhouse gases (GHG) emissions in the state under two programs: the Clean Fuels Program (CFP) and the Climate Protection Program (CPP). These programs cover fuels sold throughout the state, including the City of Portland. Because both programs incentivize the production and blending of renewable diesel and biodiesel and the phase-out of petroleum diesel (and petroleum gasoline), there is no need for the City of Portland to establish another GHG program that would increase the complexity of fuel logistics and the costs of fuels supplied in the City.

However, if the City of Portland plans to move forward with amending the RFS, Phillips 66 is requesting modifications in the carbon intensity (CI) limit and flexibility in compliance options.

Carbon Intensity (CI) Limit

Oregon DEQ sets CI standards, which apply statewide, and the CI standards are more stringent each year. Therefore, it is not necessary for the City of Portland to set a limit on the CI of the renewable fuel. The proposed CI limit of 40 gCO_2e/MJ for the renewable fuels would preclude a significant volume of renewable fuels to be eligible in the City RFS, as there is a limited volume

Marc Ventura
Fuel Issues Advisor
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of renewable fuel with a 40 CI or lower. The latest data (link below) from DEQ shows that both renewable diesel and biodiesel average CI values are higher than 40.
https://www.oregon.gov/deq/ghgp/cfp/Pages/Quarterly-Data-Summaries.aspx

This CI limit would make the program more costly by restricting supply to the City and may even lead to supply disruptions. Phillips 66 requests that the CI restriction be removed, by eliminating the language in the proposed new section 16.60.025 of the Portland City Code.

If the City decides to maintain a CI limit, the limit should be set at a higher value, at least 65 gCO_2e/MJ, as this value is the temporary CI value for new facilities producing renewable diesel or biodiesel from plant oils. See Oregon Clean Fuel Program, section 340-253-8010, table 9, at link below. The higher CI value would ensure a greater supply of renewable fuels for Portland and at a lower cost.
https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=277343

Compliance Options

To enable more flexibility in the program, Phillips 66 requests that averaging compliance options be implemented in the event that the City maintains a CI limit.

The compliance on the CI limit should be achieved on an annual basis, as a volumetric average of all the biodiesel and renewable diesel fuel pathway CI values delivered to the City. This would be similar to the compliance under the Oregon CFP.

Furthermore, the averaging compliance option should allow distributing fuels with low (or zero) renewable content to some retail stations, while other stations would receive fuels with higher renewable content. This compliance option would allow a more effective management of fuel labeling at the pumps, as required by the Federal Trade Commission (FTC).

Program Review and Adjustments

The City should conduct an annual program review of the RFS, including an annual fuel forecast, and incorporate a mechanism in the regulation that would trigger an adjustment to the RFS in the event of fuel supply issues, if predicted by the fuel forecast or due to unexpected events that limit fuel availability in Portland.

Conclusion

In summary, Phillips 66 requests that the City of Portland eliminate the carbon intensity limit from the proposed regulation to mitigate potential adverse supply issues and to decrease the likelihood of adverse fuel cost impacts in the City.

Marc Ventura
Fuel Issues Advisor
Fuels, Sustainability & Regulatory Affairs

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Rodeo, California 94572
Phone: (1) 510-245-4405
Email: marc.v.ventura@p66.com

Phillips 66 appreciates the opportunity to work with the City of Portland and the Bureau of Planning and Sustainability. Please reach out by email or phone if you need any clarification or if you would like to discuss further.

Sincerely,

Marc Ventura

Marc Ventura
Fuel Issues Advisor
Fuels, Sustainability & Regulatory Affairs
Phillips 66 Company

Marc Ventura

#332189 | November 17, 2022

Testimony to on the **Renewable Fuel Standard Update, Draft Ordinance Draft**

Please find attached a PDF file with comment on the proposed RFS amendments.

Testimony is presented without formatting.

Oregon Clean Fuels Program: Estimated Lifecycle Carbon Intensities of Common Fuels and Blends

This spreadsheet shows the volumes reported into the Clean Fuels Program, and uses the average reported CI to provide estimates of the lifecycle carbon intensity for fuels and blends being used in Oregon. These values do not correspond to specific delivered gallons, which may have lower or higher carbon biofuels blended into them, but provide a general reference for what the carbon intensities of those blends are. Fleets interested in the carbon intensity of the fuels they are being delivered should inquire with their fuel supplier.

Carbon Intensities of Common Blends	2021			
	gCO2e/MJ	gCO2e/Gal, GGE, DGE	kgCO2e/Gal,GGE,DG	lbCO2e/Gal,GGE,DGE
Pure Diesel	100.74	13547.52	13.55	29.87
B5	97.79	13133.97	13.13	28.96
B10	94.85	12720.43	12.72	28.04
B15	91.90	12306.89	12.31	27.13
B20	88.96	11893.35	11.89	26.22
B50	71.29	9412.09	9.41	20.75
R5	97.55	13109.86	13.11	28.90
R99	37.62	4881.99	4.88	10.76
B20R80	37.95	4890.90	4.89	10.78
Pure Gasoline	100.14	12265.15	12.27	27.04
E10	95.50	11625.15	11.63	25.63
E15	93.18	11275.46	11.28	24.86
E85 (51%)	76.46	8900.23	8.90	19.62
E85 (83%)	61.61	6788.90	6.79	14.97
Propane	80.88	7249.27	7.25	15.98
Renewable Propane	34.66	3106.58	3.11	6.85
Electricity (GGE)	25.35	3104.87	3.10	6.85
Electricity (DGE)	25.35	3409.07	3.41	7.52

Carbon Intensities of Blendstocks	Unit	2021					
		Q1	Q2	Q3	Q4	Total	Reference
Diesel	gCO2e/MJ					100.74	ORULSD001*
Biodiesel	gCO2e/MJ	43.25	40.49	41.89	42.08	41.84	derived from above*
Renewable diesel	gCO2e/MJ					36.98	derived from above*
Gasoline	gCO2e/MJ					100.14	ORGAS001*
Ethanol	gCO2e/MJ	53.55	53.66	53.67	53.98	53.72	derived from above*
Renewable natural gas	gCO2e/MJ					20.55	Average CI***
Fossil natural gas	gCO2e/MJ					79.98	ORCNG001*
Fossil propane	gCO2e/MJ					80.88	ORLPG001*
Renewable propane	gCO2e/MJ					34.66	Average CI***
Electricity	gCO2e/MJ					25.35	Average Non-residential CI****
Hydrogen	gCO2e/MJ					156.83	Average CI***
Composite Volume-Weighted Carbon Intensity of Oregon's Transportation Fuels (in gCO2e/MJ)						94.60	

NOTE: Due to variability in RD import and exports this year, this spreadsheet provides only the annualized CI value.

or ORCNG500T* @ 70C

or ORRNWP401T* @ 65C

Combined Volume by Fuel Type	Unit	2021					Share
		Q1	Q2	Q3	Q4	Total	
Diesel	gal	180,452,942	181,865,583	196,899,970	164,118,747	723,337,243	31.17%
Biodiesel	gal	15,032,524	20,169,399	20,844,700	19,284,566	75,331,189	3.25%
Renewable diesel	gal	6,944,201	(447,123)	3,308,553	85,108	9,890,739	0.43%
Gasoline	gal	325,632,683	318,363,130	377,421,554	319,286,472	1,340,703,839	57.78%
Ethanol	gal	31,022,129	43,283,556	43,695,969	37,553,113	155,554,757	6.70%
Renewable natural gas	dge	685,786	749,677	877,412	902,449	3,215,324	0.14%
Fossil natural gas	dge	143,046	136,047	38,773	9,309	327,175	0.01%
Fossil propane	gal	419,595	691,611	412,444	631,223	2,154,873	0.09%
Renewable propane	gal	-	-	121,787	167,601	289,388	0.01%
Electricity	qge	1,040,548	1,389,951	1,460,971	1,565,500	9,659,987	0.42%
Hydrogen	gal	21,110	25,066	17,257	16,399	79,832	0.00%
Total volume of Oregon's Transportation Fuels (in gallons)						2,320,544,345	100.00%

Energy Densities	Megajoules	Unit of Measure
Diesel	134.48	Gal
Biodiesel	126.13	Gal
Renewable diesel	129.65	Gal
Gasoline	122.48	Gal
Ethanol	81.51	Gal
Renewable natural	105.5	Therm
Fossil natural gas	105.5	Therm
Fossil natural gas	78.83	Gal
Fossil propane	89.63	Gal
Renewable propane	89.63	Gal
Electricity	3.6	kWh

Total Volume	Unit	2021				
		Q1	Q2	Q3	Q4	Total
B20 Diesel	gal	(49,197)	(111,794)	(91,233)	(54,634)	(306,858)
B5 Diesel	gal	(5,896,193)	(4,577,061)	(7,472,751)	(7,510,373)	(25,456,378)
Bio-CNG	dge	685,786	749,677	877,412	902,449	3,215,324
Biodiesel	gal	15,337,173	20,420,611	21,236,584	19,671,011	76,665,379
Bio-LNG	dge	-	-	-	-	-
Diesel	gal	186,093,683	186,303,226	204,072,070	171,297,309	747,766,288
E10 Gasoline	gal	(14,338,164)	(18,507,064)	(20,717,409)	(17,988,756)	(71,551,393)
Electricity - Offroad: eForklifts	qge	589,145	730,594	808,479	863,348	2,991,566
Electricity - Offroad: Fixed Guideway	qge	376,080	391,958	393,256	383,894	1,545,188
Electricity - Offroad: Other	qge	466	158,788	117,356	172,091	448,701
Electricity Onroad: Non-residential	qge	74,857	108,611	141,880	146,167	471,515
Electricity Onroad: Residential	qge	-	-	-	-	4,203,017
Ethanol <55	gal	22,585,155	35,498,361	34,468,597	28,661,261	121,213,374
Ethanol >75	gal	-	-	-	-	-
Ethanol 55-65	gal	9,870,790	9,635,901	11,299,103	10,690,728	41,496,522
Ethanol 65-75	gal	-	-	-	-	-
Fossil CNG	dge	143,046	136,047	38,773	9,309	327,175
Fossil LNG	dge	-	-	-	-	-
Gasoline	gal	338,537,031	335,019,488	396,067,222	335,476,352	1,405,100,093
Hydrogen	gal	21,110	25,066	17,257	16,399	79,832
Liquefied Petroleum Gas	gal	419,595	691,611	412,444	631,223	2,154,873
Renewable Diesel	gal	6,944,201	(447,123)	3,308,553	85,108	9,890,739
Renewable Propane	gal	-	-	121,787	167,601	289,388

Source: The source of the volumes is the quarterly CFP data summaries: https://www.oregon.gov/deq/ghgp/cfp/Pages/Quarterly-Data-Summaries.aspx. These are published on a quarterly basis, approximately 90 days after the closure of the calendar quarter. DEQ audits the data prior to publishing. Beginning in 2022, this information will also be subject to verification by a third party.

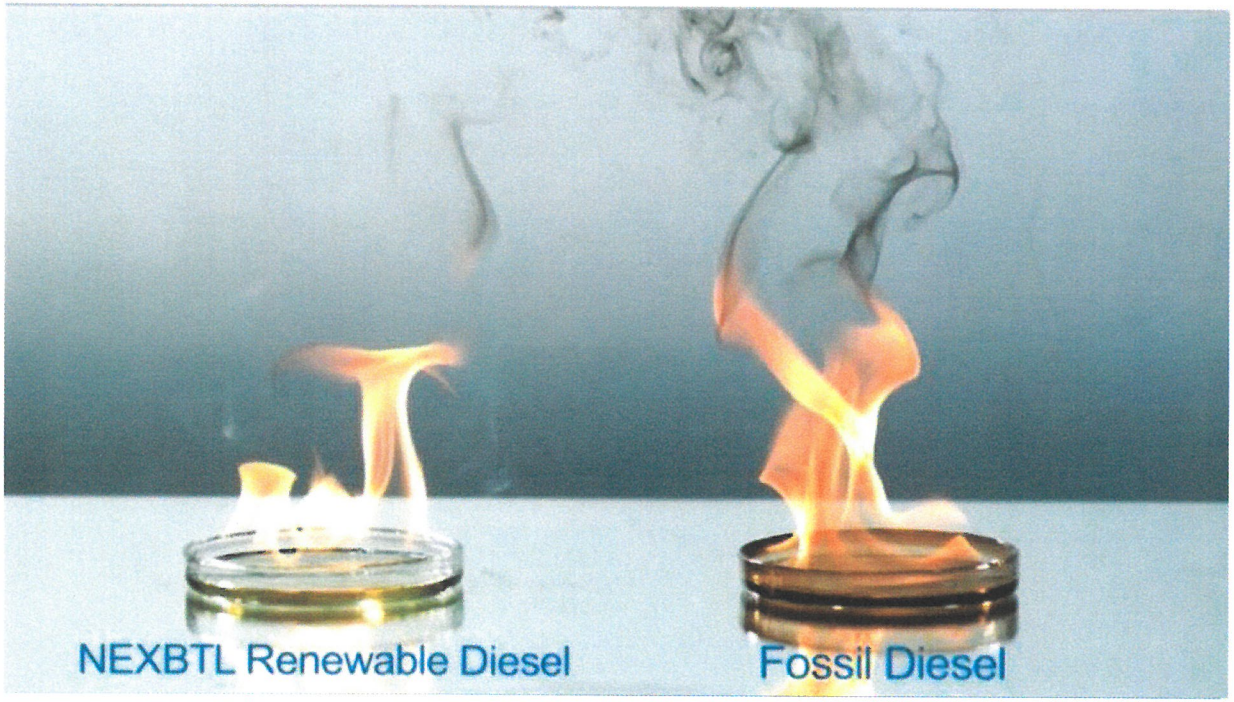
Source: The source of the residential charging numbers is the DMV registrations. # EVs x 8.5 kWh/day x the number of days in a year = kWh/yr.

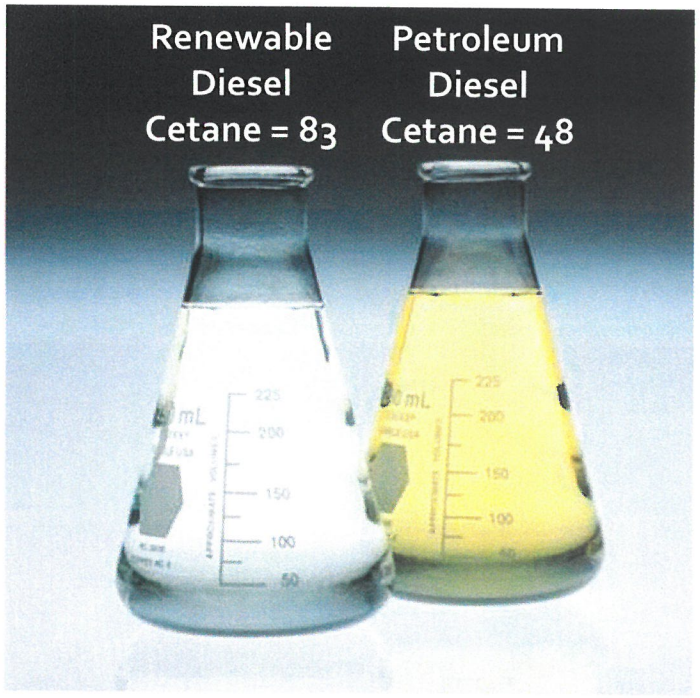
142,995,968	kWh/yr	amount of electricity from residential charging
3.6	MJ/kWh	energy density of electricity
514,785,484.80	MJ/yr	amount of energy from residential charging
122.48	MJ/gallon of	energy density of gasoline
4,203,016.69	gge/yr	amount of gasoline gallon equivalents from residential charging

Source: The source of the carbon intensity values are listed below:
*These pathway codes can be found in OAR 340-253-8010, Tables 4 & 5
**These are volume-weighted averages based on the reported volumes above
***These are averages based on volumes reported but do not appear above
****This value represents the average CI of electricity used in reporting to the Clean Fuels Program, which starting in 2021 included a large majority of charging from renewable electricity sources. The statewide grid average CI, along with all of the utility-specific CI that are appropriate for fleets to use if renewable electricity is not being procured for their charging, can be found: https://www.oregon.gov/deq/ghgp/Documents/cfpUpdated2021CIs.pdf

Date published:	7/19/2022
Date revised:	

Renewable Diesel is Ultra Clean Burning





Up to <u>80% reduction in CO_2</u> and <u>40% less soot & black carbon</u>

Clean Energy Calculator – TITAN Freight

Clean Energy Calculator - TITAN Freight	Renewable	Totals
Diesel Gallons Used - Annual	135,416	275,927
Total Miles Travelled - Annual (Gallons x MPG)	952,008	1,939,831
Savings Calculator		
RD Total Cost Per Mile Savings		-$0.01
Total Cost Savings - Annual		**-$19,398**

Metric Tons of CO2e (MTCO2e) Calculator	Petroleum	Renewable	Totals
MTCO2 = 2,204.6 pounds of CO2	1,778	711	**-1,067**
MTCO2e reduced with switch to Renewable Diesel			**-60%**

There is no scenario in the future where petroleum diesel gets cheaper

"Renewable diesel beating conventional diesel on price"
Commercial Carrier Journal, June 29, 2022

March 2022

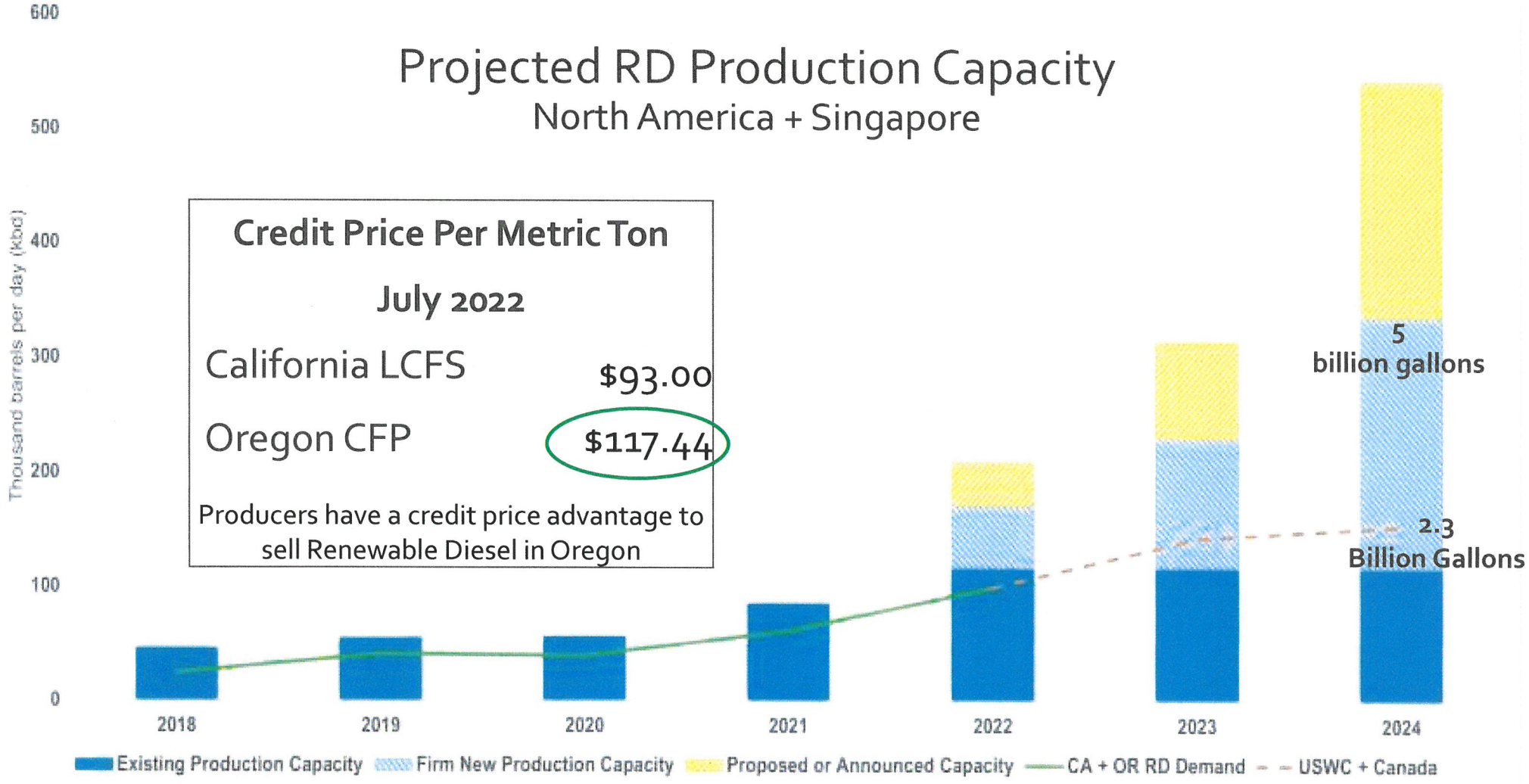
Diesel Price, Production Cost, Credits & Profit Per Gallon

Per Gallon	Petroleum	Renewable
Price - Diesel Wholesale (1)	**$3.82**	**$3.82**
Production Cost (2) (3)	$3.44	
Production Cost (4)		$3.75
US Blenders Credit (5)		-$1.00
US Renewable Fuels Standard RIN Credit (5)		-$2.04
Oregon Clean Fuels Program Credit (6)		-$1.11
Profit Per Gallon	**$0.38**	
Profit Per Gallon		**$4.22**

(1) TITAN Freight Portland terminal contract price, 1/2/2021
(2) Production Cost (excluding Selling, distribution and administrative expenses) Shell Annual Report and Accounts 2019
(3) "Permanent fossil fuel subsidies outweigh renewables Seven to One," "Dirty Energy Dominance: Dependent on Denial"
(4) "Analysis: High credit values outweigh cost of production for US renewable distillates," S&P Global, 09/21/2020
(5) "Renewable Diesel Rising," Ethanol Producer Magazine, 04/19/2021
(6) Oregon Clean Fuels Program, Program Review, Submitted to: 2022 Oregon Legislature, Feb. 1, 2022

Projected RD Production Capacity

North America + Singapore



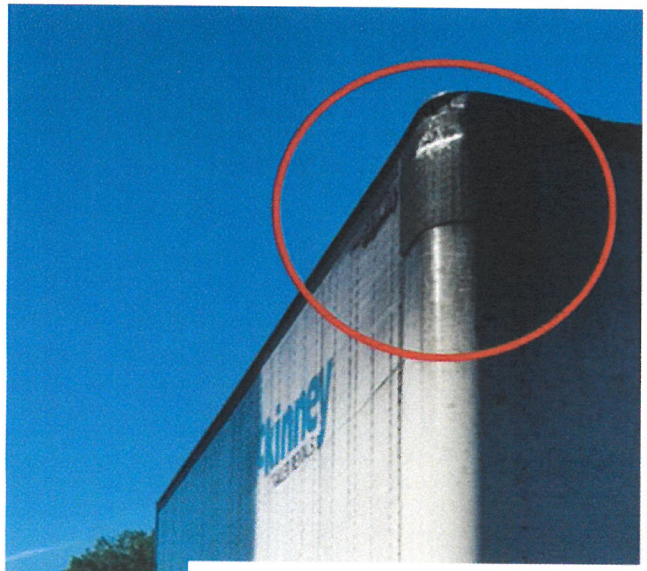
Production capacity based on publicly available information, Stillwater Analysis
Demand capacity sources: CARB, OR DEQ, Stillwater Analysis

Renewable Diesel – Pollution Scorecard

Deadly Diesel Pollution	Why is it Deadly	Petroleum Diesel (B5)	Renewable Diesel (R99)
PM (2.5 & 10) / Black Carbon	Lung cancer, makes asthma symptoms worse	Baseline	-30%
NOx - Nitrogen Oxides	Causes breathing problems, chronically reduced lung function	Baseline	-10%
CO - Carbon Monoxide	Deprives the heart, brain and other vital organs of oxygen	Baseline	-24%
HC - Hydrocarbons	Lung and eye irritation	Baseline	-30%
		Average Pollution Reduced:	**-24%**

Renewable Diesel – We Can Live with That

Diesel Pollution Fatalities	Fatalities (DEQ Estimate)	Pollution Reduced	Oregonians Saved
Oregon	460	-24%	**108**



60% of Black Carbon Emissions Come From Diesel Engines

- Black Carbon is 2nd largest contributor to global warming
- Black Carbon has a short life span and dissipates in ONE to SIX weeks
- The IPCC states that reducing black carbon is one of the FASTEST & EASIEST ways to slow down LOCAL warming

Renewable Diesel, which emits ***30% to 40% less Black Carbon,*** *can reduce warming and snowmelt TODAY in Oregon*

City Council Meeting - November 16, 2022 2:00 p.m.

Agenda No.	First Name	Last Name
978-01	Greg	Peden
978-02	Holli	Johnson
978-03	Jon	Isaacs
978-04	Jana	Jarvis
978-05	Evan	Oneto
978-06	Paul	Graves
978-07	Marc	Ventura
978-08	Keith	Wilson
978-09	Jacqui	Treiger
978-10	Mark	Fitz