



June 14, 2022

Comment on the
Climate Leadership and Community Protection Act
Climate Action Council Draft Scoping Plan

**Biodiesel/Renewable Diesel in the NY Renews “False Solutions” Report
Setting the Record Straight**

Submitted By:
Floyd M. Vergara, Esq., P.E.
Director of State Governmental Affairs
Clean Fuels Alliance America

Clean Fuels Alliance America (Clean Fuels) is formerly known as the National Biodiesel Board. Our name change reflects our embrace of all the products our members and the U.S. industry are producing, which include biodiesel, renewable diesel, sustainable aviation fuel, Bioheat[®] fuel for thermal space heating and maritime and railroad fuels. Clean Fuels members play an important role in displacing petroleum, improving public health, and protecting the environment. Many members are members of environmental organizations and are supportive of state and local initiatives to achieve a sustainable energy future.

Throughout the development of the Climate Leadership and Community Protection Act (CLCPA) Climate Action Council Draft Scoping Plan and during the current public hearings being held, references to the NY Renews “False Solutions” Report have been made by members of the Climate Action Council, the Climate Justice Work Group and the public.

Clean Fuels Alliance America takes exception to several claims in the “False Solution” Report and is submitting the following comments to set the record straight using scientific data, national laboratory peer-reviewed works and practical field experience.

Biofuels are not carbon neutral life cycle analysis (Pg. 5).

Most fuels, including most electricity provided for transportation and space heating, has some carbon emissions associated with their production or use. This is because some amount of fossil fuels are used in their production and processing. However, this is a relatively small amount and will decrease proportionally as the power grid and transportation fuels decarbonize as per New York State laws, directives and rules and regulations, and that further decarbonization would be accelerated with appropriate market signals like a Clean Fuel Standard.

For example, renewable diesel can result in a GHG savings of 86% relative to petroleum diesel. Notably, electric vehicles are also not net-zero carbon emissions for the exact same reason—they were not produced on a fully renewable grid, nor are they operating from fully renewable power. Even California’s grid relies heavily on natural gas and other fossil sources. Over time, policies like a low carbon fuel standard (LCFS), also known as a

Missouri Headquarters
605 Clark Ave.
PO Box 104898
Jefferson City, MO 65110

800.841.5849

Washington, D.C. Office
1331 Pennsylvania Ave. NW
Suite 505
Washington, DC 20004

888.246.3437

California Office
1415 L Street
Suite 460
Sacramento, CA 95814

916.760.8870

Massachusetts Office
36 Jonspin Road
Suite 235
Wilmington, MA 01887

978.267.3020

cleanfuels.org

clean fuel standard (CFS), will improve the lifecycle carbon scores of all fuels. To illustrate, the strong market signal from California's LCFS program has incentivized a further reduction of 40% in biodiesel's already low carbon intensity score since the start of the program in 2011.

Moreover, the chart below depicts the CO2e savings of 100% biodiesel versus ultra-low sulfur diesel:

Emissions Improvements of Biodiesel versus Low Sulfur (LS) and Ultra Low Sulfur (ULS) Heating Oil^{1, 2, 3, 4, 5}

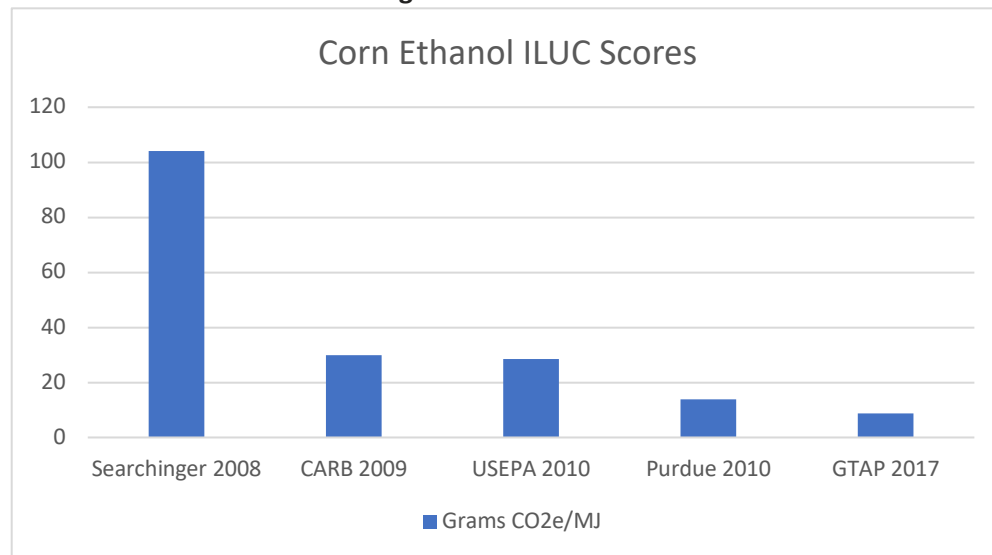
Average Change	PAH	PM	CO	NO _x	SO ₂	CO ₂
Percent	-90 to -95%	- 86%	Similar to -15%	Similar to 25%	-98% (LS) Similar (ULS)	-73%

Note: PAH-Polycyclic Aromatic Hydrocarbons; PM-Particulate Matter; CO-Carbon Monoxide; NO_x-Nitrogen Oxides; SO₂-Sulfur Dioxide; CO₂-Carbon Dioxide

Biodiesel is generally a lower carbon fuel than other biofuels, but vegetable oils are a net contributor due to indirect land use change (Pg. 15).

While this may be the opinion of this report’s authors, it certainly does not reflect the current state of the science on this issue. The authors cite a 2008 report by Timothy Searchinger, an attorney, to support their view. The results of Searchinger’s paper are compared with other works below. Notably, Oak Ridge National Laboratory responded to his report by, among other things, noting that Searchinger, et al “do not provide adequate support for their claim that biofuels cause high emissions to land-use change.” Even California’s LCFS and Oregon’s Clean Fuels Program (CFP) do not rely on Searchinger’s work. Clearly Searchinger is an outlier, a non-scientist whose opinions fall well outside the bounds of the robust work of actual scientists.

Selected Indirect Land Use Change Assessments for Corn Ethanol



¹ Macor, A., Pavanello, P., Performance and Emissions of Biodiesel in a Boiler for Residential Heating, *Energy*, vol. 34, 2009.C

² Krishna, C.R., Biodiesel Blends in Space Heating Equipment, Brookhaven National Laboratory, 2001.

³ USDA/DOE 1998, Life Cycle Inventory of Biodiesel and Petroleum Diesel for Use in an Urban Bus.

⁴ Lee, S. Win, He, I., Heritage, T., Young B., Laboratory Investigations on the Cold Temperature Combustion and Emissions Performance of Biofuels Blends, 2003.

⁵ https://www.edf.org/sites/default/files/10071_EDF_BottomBarrel_Ch3.pdf at 5. Studies cited showed PM reduction proportional to biodiesel content (e.g., 20% reduction for B20 blend, 50% reduction for B50 blend). To be conservative, NBB estimates the PM reduction from using B100 would be approximately 86%

Low carbon does not mean less polluting (Pg. 13).

We cannot think of an instance in which this is true. Regardless, what can be said with certainty is that virtually all low carbon fossil fuel replacements have reduced carbon and criteria pollutant emissions.

For example, in the case of biodiesel, it reduces carbon by an average of 73%, particulate matter is also reduced by up to 86%. And, as shown in the data of a study conducted by Trinity Consulting, an international leader in air dispersion modeling, those particulate matter reductions are especially beneficial for residents in environmental justice (EJ) communities.

The Trinity work studied census tract areas and the surrounding 5- to 8-mile radius, so these results are granular and neighborhood specific. The Trinity Study shows the use of biodiesel in space heating reduces cancer rates by 85% and by 45% for transportation use, as well as providing dramatic reductions in cases of asthma, premature deaths, and lost workdays.

Links to the Trinity study:

- <https://cleanfuels.org/resources/health-benefits-study>
- https://www.biodiesel.org/docs/default-source/trinity-study/trinity-v2-final-report-.pdf?sfvrsn=5d3a35c3_12

Since biodiesel is a drop-in fuel for transportation and space heating, these public health benefits begin accruing immediately upon the use of biodiesel in place of petroleum diesel. This means the asthma attacks, premature deaths avoided, and workloss days can be reduced every year starting today and for the next 10, 20, 30 or more years it will take the state to deploy deep electrification in either sector. For poor and disadvantaged communities that are heavily reliant on petroleum heating fuels or have numerous commercial depots and heavy-duty truck traffic, switching to biodiesel can provide substantial improvements in the health of those communities.

Four communities in New York State were studied: The Bronx, Albany and Buffalo for space heating, and the Port Elizabeth – Port of New York / New Jersey for transportation. The data below represents the results for the transportation site of Port Elizabeth:

Port Elizabeth – Port of New York / New Jersey

- Reduced cancer burden by over 2,500 cases (86% less)
- About 175 premature deaths avoided per year
- Nearly 75,000 asthma attacks avoided or reduced annually
- Over 33,000 fewer lost workdays each year
- More than 193,000 fewer minor restricted-activity days annually
- Equates to avoided health care costs exceeding \$1.43 billion dollars annually.

If the NY Renew report succeeds in derailing efforts to clean up transportation fuels as much as possible while the state pursues its deep electrification and decarbonization program, the residents in these disadvantaged communities are the ones who would continue to be exposed to high PM emissions -- because petroleum fuels are the only commercially available alternatives to electricity besides biofuels.

Biofuels pollute communities (Pg. 16).

All fuels have pollutants. Even production and use of electric vehicles results in point source pollution. The key point is that biofuels and electric vehicles emit materially less pollution than conventional petroleum fuels.

For example, a mixture of 20% biodiesel and 80% renewable diesel would reduce emissions by the following amounts relative to petroleum diesel:

- Carbon Dioxide (CO₂): -73%
- Particulate Matter (PM): -29%
- Aromatic Compounds: -39%
- Carbon Monoxide (CO): -23%
- Nitrous Oxide (NO_x): -9%.

Reducing pollutants, even to a relatively modest degree, is important because these emissions have been shown to lead to chronic health effects, especially in urban communities. More importantly, biodiesel blends achieve those reductions immediately upon use, not several decades away, so the public health benefits achievable through substantial and immediate reductions in PM and other pollutants in EJ communities would be tremendous.

In the case of space heating applications, the Trinity Study results for using biodiesel as a replacement for petroleum diesel in the Sotomayor housing development in the Bronx, New York yields an estimated reduction in lifetime cancer burden from 12 to 2 cases (85% reduction), which along with the annual avoided 16 premature deaths, nearly 11,000 asthma attacks, and over 2,000 lost workdays, equates to a valuation of about \$137 million in avoided health costs. And that's just one site; there are, of course, many similar sites in New York and elsewhere that would benefit from a switch to biodiesel.

Biofuels (ethanol) is not carbon neutral when accounting for indirect land use change and has a food-for-fuel issue with crop growth (Pg. 8).

Biodiesel and renewable diesel are not ethanol. The feedstocks used and production technologies are completely different with zero overlap. Biodiesel and renewable diesel are made from feedstocks that include used cooking oil, animal fats, brown (sewer) grease, and agricultural byproducts and co-products as listed in the federal table 1 of 40 C.F.R 80.1426. These are waste and surplus plant oils that do not contribute to the food for fuel issue.

Biodiesel derived from vegetable oil and animal fats are better than other biofuels (Pg. 9).

We are pleased the authors seem to recognize the value of biodiesel. However, we believe all renewable alternatives to petroleum offer valuable contributions to emissions reductions. In short, all renewables available at commercial scale in the U.S. are better than all petroleum fuels.

Regarding the authors' point, under the California Low Carbon Fuel Standard (LCFS), the three lowest carbon intensity fuels are, in order, electricity, biodiesel and renewable diesel. Biodiesel and renewable diesel have become the fuel of choice for carbon reductions in the medium- and heavy-duty transportation sector, accounting for 45% of the current carbon reductions and credits in the California LCFS program. Indeed, producers in California and elsewhere have innovated in their carbon reduction efforts to the point where the carbon intensity of their biodiesel and renewable diesel is effectively on par with that state's electricity used for transportation.

Under the California LCFS, biodiesel and renewable diesel use has grown from 14 million gallons in 2011 to 1.23 billion gallons in 2021. In fact, biodiesel and renewable diesel have displaced over 3 billion gallons of petroleum diesel since 2011 and now comprise fully one-third of each gallon of diesel fuel used in the state. That substantial displacement of petroleum diesel is due primarily to the strong market signal that the LCFS provides.

Biofuels are not friendly to environmental justice, they are not commercially viable and have little to no impact on improving air quality in truck-logged communities and high exposure workplaces (Pg. 10).

This statement is factually erroneous and wholly without basis. Since biodiesel and renewable diesel are petroleum diesel replacement fuels, and since petroleum diesel is a key source of pollutants in environmental justice areas, we strongly disagree with this statement.

As noted previously, replacing all petroleum diesel in environmentally sensitive neighborhoods would reduce incidences of cancer by up to 85%. Reduced emissions equate to fewer health problems. It is just that simple.

The U.S. biofuels industry produces over 20 billion gallons of clean fuel on an annual basis, with over 3 billion gallons a year just from biodiesel and renewable diesel alone. We believe this demonstrates commercial viability. Furthermore, LMC International estimated in 2019 that the biodiesel industry supports 3,100 jobs for every 100 million gallons produced, with each job supporting \$245,000 of economic activity.

Biofuel production in NYS is very small and the market cannot support itself (pg. 12).

The biofuel production industry in New York is, in fact, quite small and the electric vehicle industry, by the way, is non-existent, but that does not mean it has to stay that way.

The inception of the California Low Carbon Fuel Standard sent market signals to producers of biodiesel and renewable diesel (collectively called "biomass-based diesel") that the state is open for the renewable liquid fuels business. Under California's LCFS, biomass-based diesel volumes grew from 14 million gallons in 2011 to over 1.23 billion gallons in 2021, an 87-fold increase in the span of a decade.

These sustainable diesel replacements currently comprise fully a third (33.3%) of the California diesel fuel pool. They have generated about 45% of the carbon reductions in the CA LCFS program for the past four years and 42% overall to date.

Since its adoption of the LCFS, California has seen the development of nine biodiesel facilities and one renewable diesel production plant, supporting 4,400 full-time jobs and \$156 million in wages. Overall, the CA LCFS has created 38,000 jobs and billions of dollars in investments directly benefitting the state. And the CA LCFS has been cited as directly contributing to recent announcements by several petroleum refiners to convert a number of traditional refineries to renewable diesel production.

To illustrate the importance of an aggressive climate strategy like the LCFS as an environmental and economic driver, the recent expansion of North America's largest producer of sustainable aviation fuel (SAF) at the World Energy facility in Paramount, California, is tied directly to the LCFS and will increase production of SAF by 700%, generate over \$19 billion to the U.S. economy, and support more than 18,000 jobs between now and 2024.⁶

A Clean Fuels Standard would incentivize production and use of clean fuels in New York as it has in California under that state's Low Carbon Fuel Standard. New York is actually quite rich in feedstocks such as used cooking

⁶ See <https://www.prnewswire.com/news-releases/world-energy-secures-permits-will-completely-convert-its-southern-calif-refinery-to-create-north-americas-largest-worlds-most-advanced-sustainable-aviation-fuel-hub-301531135.html>.

oil with more than 27,000 restaurants in New York City alone and would be an ideal place to locate production capacity. Establishing such an industry would place New York at the forefront of a growing trend of sustainable, circular bio-economies that make environmentally and economically valuable products from what would otherwise be waste materials.

Conclusion

Clean Fuels Alliance America and its members have worked alongside energy marketers to help phase out the use of petroleum diesel. We have been present in British Columbia CAN, and the states of California, Oregon and Washington, working with government policy makers on carbon reduction policies that have produced measurable results. These programs are comprehensive in scope and have not been single fuel oriented; they take into consideration all low carbon emitting fuels that can assist in meeting climate goals of these entities.

It is Clean Fuels' hope that New York State will look at the successful programs instituted by sister governments in North America and base their decision making on proven scientific data and field experience, and not rely upon rhetoric from organizations that are single focused on a policy path that will ultimately be to the detriment of New York achieving its climate goals.

Thank you for your consideration of the facts based upon science, not rhetoric.

Sincerely,

A handwritten signature in blue ink, appearing to read "Floyd Vergara". The signature is fluid and cursive, with a long horizontal stroke at the end.

Floyd Vergara, Esq., P.E.

Director of State Governmental Affairs