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Comments of the
Empire State Energy Association, Inc.

On the
New York State Climate Action Council
December 30, 2021 Draft Scoping Plan

Submitted By: Kris DeLair
Executive Director

June 29, 2022

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On the CAC 12/30/21 Draft Scoping Plan

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New York State Climate Action Council

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I. Introduction

These comments are filed on behalf of the Empire State Energy Association, Inc. (ESEA) in response to the Draft Scoping Plan (DSP or Draft Plan) issued by the Climate Action Council (CAC or Council). This submission will present the benefits of biomass-based renewable liquid fuels including their emission reduction attributes, affordability, availability, proven track record, mitigation of demand on the electric grid, and more. These advantages demonstrate that renewable liquid fuels (RLFs) should be included in the state's energy future to help New York meet the deep decarbonization targets contained in the Climate Leadership and Community Protection Act (CLCPA).

RLFs are also a timely solution given the present state of the economy. As the Council assembles its Final Scoping Plan, it does so during a time of severe economic distress. The COVID pandemic, supply chain disruptions, the war in the Ukraine, and other factors have caused price increases the country has not seen for years and may possibly lead to a recession. Therefore, it is vital that the Council search for cost-effective solutions that do not burden the energy consumer while simultaneously not sacrificing efforts to address climate change. We strongly believe that the greenhouse gas (GHG) reducing attributes of affordable biomass-based RLFs provide a viable economic solution and be included among the recommendations in the Council's Final Scoping Plan for the state's building sector as well as in the transportation field.

II. Executive Summary

These comments will touch upon the following points regarding the use of biomass-based renewable liquid fuels (biodiesel and renewable diesel):

- Biodiesel provides an immediate reduction in greenhouse gas (GHG) emissions of up to 80% from petroleum heating oil. That GHG decrease will climb higher once the power and transportation sectors become renewable as well.
- As a drop-in replacement fuel for petroleum heating fuel, biodiesel works seamlessly in current home heating appliances, even at high blend volumes, enabling consumers to avoid high capital costs of converting to alternate heating systems.
- According to New York State Energy Research & Development Authority (NYSERDA) pricing data, the biodiesel does not cost consumers more.
- Biodiesel production and supply is abundant and can satisfy space heating sector needs in New York State.
- The two largest home liquid heating appliance equipment manufacturers, Beckett Corporation and Carlin Corporation, are expected to produce B100 UL-rated components in 2023.
- As renewable replacements for diesel fuel, biodiesel and renewable diesel are made from used cooking oil, animal fats, brown grease, and agricultural byproducts and co-products; there is no food- for-fuel issue.
- Preliminary results of a health benefits study demonstrate that using RLFs reduce health risks.
- The use of biodiesel and renewable diesel in motor fuel can contribute to GHG reductions and has been tremendously successful in other states like California.

III. Interest of Our Industry, Our History, and Our Net- Zero GHG Commitment

A. Identification and Interest of Our Industry

ESEA is a New York State trade association representing independent liquid heating and transportation fuels marketers throughout New York State. Our members operate in, live in, and hire employees from the local communities they serve and support. This is why we have always had a vested interest in improving our products and equipment for our customers, localities, and the environment.

Approximately 1.4 million homes in New York State use heating oil or a biodiesel-blended heating fuel known as Bioheat® to keep their homes warm in cold weather and to provide hot water. These homes use one billion gallons of heating oil per year. Consumers are supplied by a distribution industry made up of mostly small family-owned businesses that employ some 8,900 residents of this state, representing $462 million in annual payroll. We are an integral part of the state's existing energy sector and we financially contribute to the state through our tax payments, employment, and local community support.

B. History of Liquid Fuel Marketers

Long before the enactment of the CLCPA, the liquid fuels industry began improving its fuel and equipment to reduce GHG emissions in a cost-effective manner without burdening the customer. Since 2000, the industry has invested over $20 million in research and development to enhance heating appliance efficiency and to develop the blending of biodiesel with heating oil to achieve a cleaner burning home heating fuel. These industry initiatives have helped consumers decrease their consumption of heating oil by 40%, reducing average household use from 1,200 to 700 gallons per year. We have also provided residential home energy efficiency rebate programs making home heating systems 16.5% more energy efficient through state-of-the-art technology, burning 164 gallons less per home/per year

The home heating fuel industry has been a partner with the state and NYC in lowering the carbon and particulate matter emissions of its fuel for over a decade. In 2010, we championed reducing the sulfur content of heating oil from 2000ppm to 15ppm. In 2012, we led the initial effort in New York City to blend biodiesel, a clean burning, sustainable, and renewable fuel into heating oil to lower its carbon emissions. In 2016, we advocated for increasing that blend level to 5% in the NYC Metropolitan area, including Nassau, Suffolk, and Westchester counties (Chapter 315 of 2017). In 2021, we succeeded in expanding the standard statewide requiring a blend level of 20% by 2030 (Chapter 750 of 2021). This will eliminate 200 million gallons of heating oil from use in New York State by 2030.

These advancements were achieved due to our own initiatives and not in reaction to government policies or laws. Consistent with our commitment to achieving a net zero carbon emissions goal by 2050, we are not content with these incremental successes. The industry is currently advocating for 50% biomass-based biodiesel (biodiesel and renewable diesel) by 2035 and 100% by 2050.

It should be noted that the home heating fuel industries in Connecticut and Rhode Island successfully

attained 50% biomass-based diesel blending statutes in their states. The Connecticut law (Public Act 21-181) requires a 50% blend by 2035, and the Rhode Island laws (Chapters 347 & 348) require a 50% blend by 2030. These states and others have recognized the value of biomass-bases RLFs and we urge New York to do the same.

C. RLF Marketer Net-Zero Emissions Pledge

Building on our previous accomplishments, ESEA and its members endorsed the liquid fuel industry's *Net-Zero Providence Resolution* and are committed to transforming the industry from supplying petroleum-based fuels to clean burning, non-fossil biomass-based RLFs such as biodiesel and renewable diesel by 2050.

In September 2019, at a heating oil industry summit held in Providence, RI, the liquid heating fuels industries from all the northeast states unanimously pledged to move to cleaner burning fuels and transition away from conventional heating oil. By replacing liquid fossil fuels with RLFs in the building sector, the *Providence Resolution*[1] reflects our commitment to reducing the carbon emissions of home heating fuels consistent with the CLCPA's GHG reduction goals of 40% by 2030 and net-zero by 2050. The resolution also directs industry associations and other groups to work with each other to achieve these emissions reductions.

IV. Environmental/Emission Benefits of Biomass-Based RLFs

Biodiesel and renewable diesel themselves are 100% cleaner than petroleum diesel, except for the fuel used to power the production faculties and to transport the fuel, thus the 20% loss in scoring. As the power production and on-road sectors become renewable, the 73% - 80% cleaner GHG savings with these biofuels will continue to climb higher.

A. RLFs Provide Immediate and Continuing GHG Emission Reductions

Biodiesel results in an immediate reduction of GHG emissions that will continue over the next 30 years. Biodiesel and renewable diesel are 73% - 80% cleaner across the entire CO2e GHG spectrum than heating oil, according to Argonne National Laboratory, the U.S. Department of Agriculture and Purdue University, and are a gallon-for-gallon replacement for petroleum diesel fuel and heating oil.[2] Our

[1] https://nefi.com/news-publications/recent-news/heating-oil-industry-commits-net-zero-emissions-2050/

[2] CHEN 2018 – Life cycle energy and greenhouse gas emission effects of biodiesel the United States with induced land use change impacts by:
- Systems Assessment Group, Energy Systems Division, Argonne National Laboratory, 9700 S. Cass Avenue, Lemont, IL 60439, United States

industry has the ability to further improve both our fuel and equipment to assist the state in attaining a carbon-free energy future.

As a sign of our continuing progress to decarbonizing our fuel and products, the two largest home liquid heating appliance equipment manufacturers, Beckett Corporation and Carlin Corporation, are currently working with Underwriters Laboratories (UL) on a B100 UL-rated home heating appliance protocol and expect to produce B100 UL-rated components in 2023.

A simple change in state heating fuel requirements to require biodiesel and renewable diesel would result in the state benefitting from cleaner burning home heating systems for the 1.4 million homes (18% of the housing stock in New York) that currently consume one billion gallons of heating fuel annually.

B. There is Ample Supply for New York's Building Sector

There is a plentiful supply of RLFs to meet the current and future demand of the state's building sector, even at high blend volumes. Biodiesel production and supply will be able to satisfy the space heating sector needs in New York State with over 3.2 billion gallons of biodiesel domestically-produced each year, with an estimated 6 billion gallons to be produced by 2030 and 15 billion gallons by 2050.

It must be noted that biodiesel and renewable diesel are made from used cooking oil, animal fats, brown grease, and agricultural byproducts and co-products. The feedstocks used to produce U.S. biodiesel have become increasingly diversified with waste products making up an increasing volume of feedstock used to produce fuel. There is no food-for-fuel issue. Palm oil is also not eligible for the U.S EPA Renewable Fuel Standard, thus deforestation is not an issue for biodiesel fuel used in the United States under this program. We also note that domestically-produced biodiesel meets all federal standards. In fact, US produced soybeans are so sustainable, they are approved under stringent, EU RED II Compliance scheme.[3]

Contributing to RLF supplies is a new production facility that commenced operations in 2022. NetZero Biofuels is a premier biodiesel producer and a key stakeholder in our net-zero emissions strategy. With

- Department of Agricultural Economics, Purdue University, 403 West State Street, West Lafayette, IN 47907, United States
- (S&T) 2 Consultants Inc., 11657 Summit Crescent, Delta, BC V4E 2Z2, Canada
- Office of the Chief Economist, United States Department of Agriculture, United States

[3] https://ussec.org/european-union-recognizes-ssap-red/

an annual production capacity of 10 million gallons, the state-of-the-art 20,000-square foot production facility is located in New Windsor, NY. NetZero Biofuels supplies New York state liquid fuels marketers with biodiesel that is produce from feedstocks that are sourced from local farms in Syracuse. This is a real world environmental and economic success that the state should be encouraging, promoting, and incentivizing.

V. Biomass-based RLFs are a Sensible and Needed Contributor to the CLCPA's Goals for Reasons Other Than Immediate GHG Reductions

In addition to their immediate contribution to reducing GHG emissions, biomass-based RLFs have additional advantages.

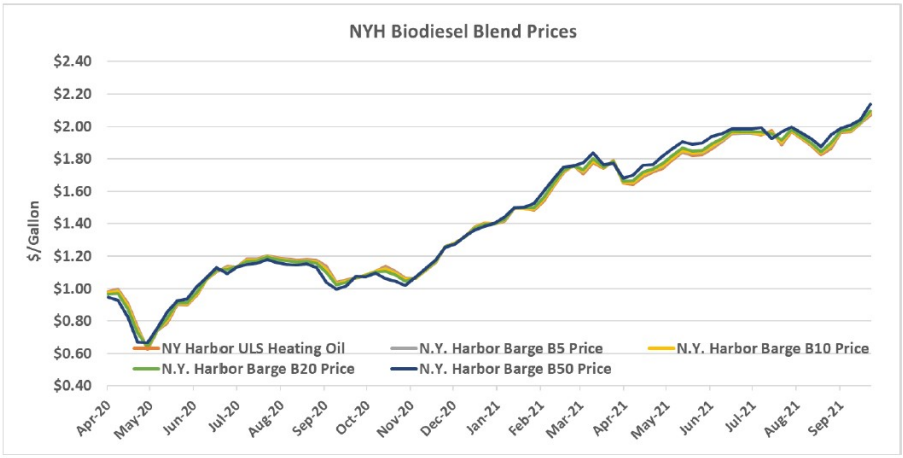
A. RLFs Are Seamless to the Consumer

RLFs such as biodiesel and renewable diesel are currently serving and will continue to serve the public as a "drop in" fuel in the residential and commercial building sectors. There is no need for consumers to spend money on appliance upgrades or on expensive equipment conversions to alternate heating systems. As a drop-in replacement fuel for petroleum heating fuel, biodiesel works seamlessly in current home heating appliances, even at high blend volumes.

B. Biomass-based RLFs are Affordable

According to New York State Energy Research & Development Authority (NYSERDA) pricing data, the use of biodiesel is at no extra cost to consumers. At the October 28, 2021New York State Winter Fuels Outlook Meeting, NYSERDA displayed the chart below (excerpted from its PowerPoint Presentation) which depicts its tracking of biodiesel pricing.[4] The Authority's data shows that biodiesel prices track those of diesel fuel, thus demonstrating biodiesel to be an economic and affordable fuel for current heating oil customers. NYSERDA's Weekly Heating Fuels Report and Dashboard tracks retail pricing and an examination of historical data also shows no discernable price differential in the areas of the state where biodiesel is required versus where it is not.

[4] NYSERDA New York State Winter Fuels Outlook Meeting on October 29, 2020: FINAL-WinterFuels2020-Master Slide Deck.pdf.



> After accounting for the value of the associated RIN (D4) and the biodiesel tax credit, biodiesel prices are competitive with ultra-low sulfur heating oil, with just slightly higher prices.
  - B5 +$0.01/gal
  - B20 +$0.03/gal
  - B50 +$0.07/gal
> B100 biodiesel prices are affected by the price of soybeans as the primary feedstock as well as the value of the D4 RIN

Thus, biodiesel is affordable and does not burden consumers with increased fuel costs, an economic advantage that is significant to all customers including low and moderate income (LMI) households. RLF use also saves the consumer the capital costs of converting to other heating systems such as all-electric. The availability of an affordable, renewable, drop-in heating fuel is especially important since it will not financially harm the consumer during this difficult economic period. From a financial standpoint, the use of biomass-based RLFs is a solution for achieving carbon reduction, especially at a time when consumers do not have the funds to purchase new heating systems.

C. RLFs Have a Proven Track Record

RLFs such as biodiesel and renewable diesel are not a future possibility, they are in use today and have been in use for over 20 years by consumers across the state and nation.

At present, heating oil is being delivered in New York at blends as high as 35% (B35) and in Massachusetts at blends as high as 50% (B50), with pilot programs at 100% (B100) in both states. These blend levels have not required any change out of the heating system with only minor technical adjustments to oxygen mix and flame sensors. This field experience shows that biodiesel is a proven GHG reduction strategy with a seamless transition for liquid heating fuel customers. Biodiesel-blended heating fuel has a proven real-world track record.

D. R&D Will Result in Fuel and Equipment Improvements and Other Zero Emission Fuels

Improving liquid heating fuels and associated appliances has been the subject of research and development (R&D) for years on Long Island at the Brookhaven National Laboratories in Upton and the NORA Laboratory in Plainview. R&D had been performed to enhance the industry's fuel product and

equipment. Currently, the R&D activities taking place at the NORA lab are focused on analyzing heating equipment that would use B100 as well as other liquid fuels such as renewable diesel and ethyl levulinate, a biofuel derived from wood waste. As noted above, liquid fuels heating equipment manufacturers are expected to approve appliances compatible with the use of B100 biodiesel by next year, 2023. This will enable us to meet our commitment to attaining a net-zero carbon emission goal by 2050 or earlier if possible.

E. Health Benefits

There are immediate and annually recurring health benefits of using biodiesel versus petroleum diesel for home heating. A census tract-based study by Trinity Consulting, a multi-national air dispersion modeling company with offices in 69 countries, demonstrates that 100% biodiesel use reduced health risks and restricted activity days and lost workdays.[5]

Since biodiesel is a drop-in fuel for home heating, these public health benefits begin accruing immediately upon the use of biodiesel in place of petroleum heating fuel. For disadvantaged and environmental justice communities that are heavily reliant on petroleum heating fuels, switching to biodiesel can provide health improvements in of those communities.

F. Use in Motor Fuels

ESEA believes that the use of biodiesel and renewable diesel would be beneficial in the transportation sector. As with its use in the building sector, biodiesel use in as a transportation fuel is not a proposal, it is already being used today in other parts of the nation and in New York.

While requiring biodiesel use in NYC homes since 2012, the City has also embraced its use in its municipal fleets. NYC has steadily ramped up the blend levels in its vehicles to as much as 20% in the summer and scaled back to 10% in the winter. The agencies include the FDNY, and the Departments of Sanitation, Parks and Recreation, and Education. In addition to biodiesel, the City recently began a pilot program using an 80% renewable diesel/20% biodiesel blend in their fleets, fully replacing petroleum diesel use in heavy duty trucks. In addition, some upstate municipal fleets are being supplied with biodiesel blended motor fuels.

[5] https://cleanfuels.org/resources/health-benefits-study

RLF use in other states such as California and Oregon (as part of their Low Carbon Fuel Standard programs) demonstrate that they have a proven track record as motor fuels and can assist New York State in reducing GHG emissions without having to electrify the entire transportation sector. This would not only moderate the demand upon the electric grid, but also would allow some fleet operators to avoid the tremendous expenditures associated with purchasing all-electric fleets especially in the trucking industry.

VI. RLFs Will Diversify the State's Energy Sector and Increase the Reliability and Security of the Electric Grid

One pathway contained in the DSP and urged by electrification advocates is the conversion of every energy sector to electricity. While our industry is not opposed to increased electrification, we believe that choosing a single energy source for all sectors would be catastrophic for the state for reasons of reliability and security.

There is some apprehension that it will be difficult to meet the CLCPA's 2040 target of having 100% of the state's electricity generated by renewables. This is shared by the NYISO that has expressed its concern that the, "question of how to maintain system reliability on the road to meeting the state's decarbonization goals has become a central issue."[6] The use of RLFs would reduce the need for electricity across the state thereby decreasing the demand on the state's electric grid.

The diversity of fuel improves the reliability and security of all the state's energy sources. An all-electric energy future is unwise and dangerous since the state's population will be left vulnerable to brownouts, blackouts, and prolonged power outages. In contrast, the use of biomass-based RLFs would serve as an indispensable buffer to counter strains on the electric system such as peak demand periods and weather-related calamities. RLFs would also serve to mitigate unlikely but potentially disastrous events such as equipment outages and cyber-attacks.

The use of RLFs would also provide the state with a renewable backup fuel for power generation, for heating, and for transportation during crisis periods. However, it must be noted that the liquid fuels industry cannot build or maintain an RLF industry on an "emergency backup" basis. It would be

[6] Power Trends 2022 -- The Path to a Reliable, Greener Grid for New York https://www.nyiso.com/documents/20142/2223020/2022-Power-Trends-Report.pdf/d1f9eca5-b278-c445-2f3f-edd959611903?t=1654689893527

impossible to support the necessary supply and distribution infrastructure to operate on an occasional or sporadic basis.

Finally, having a diverse energy sector also preserves the consumer's freedom of choice in selecting an energy provider. A one-energy-fits-all approach is irrational and perilous.

VII. RLF Use Does Not Increase Fossil Fuel Use

Some opposition to RLFs is based on the incorrect belief that their use will encourage the burning of fossil fuels and that all combustion should be banned. These arguments are incorrect and hypocritical.

With regard to the erroneous argument that RLF use promotes increased fossil fuel use, the opposite is true. It is the stated pledge of the liquid fuels industry to transition from petroleum-based fuels to renewable fuels. We are committed to using and improving RLFs and we are not working to preserve fossil fuel use. This is not a mere promise in response to recent climate laws and policies but is a commitment supported by existing accomplishments, present day use, R&D, and plans for the future that are already in place.

To exclude RLFs from the state's future energy mix is to deny the RLF industry time to achieve net-zero carbon emissions. This is hypocritical because all of the energy sectors that are being transformed are not currently 100% renewable including electricity. An industry such as ours should be given the same time to achieve our objectives especially since they are consistent with and complementary to the state's CLCPA goals.

VIII. Requests

As mentioned above, New York already has a B20 by 2030 law in place. In other states, the home heating fuel industry has successfully achieved a biodiesel blending requirement of 50% by 2030 in Rhode Island, 50% by 2035 in Connecticut, on-road diesel fuel currently at 2%, in Pennsylvania, and the 2008 Clean Energy Biofuels Act in Massachusetts. We are seeking to grow on these achievements and do the more in New York. It would be short-sighted if New York were to abandon years of progress made toward net-zero RLFs while surrounding states reap their benefits.

Therefore, ESEA respectfully requests that the Council include in its Final Scoping Plan:

-- A recommendation that renewable liquid fuels such as biodiesel, renewable diesel, and other renewable liquid fuels be recognized, promoted, and incorporated into the state's solution to achieving its GHG reduction targets and carbon free future in the building sector;
-- A recommendation for a statewide biofuels standard of higher blends for liquid heating fuels and all types of RLFs (Biodiesel, RD, EL, etc.) to assist in reaching the CLCPA's targets;
-- A recommendation that the state offer incentives for the construction of infrastructure to facilitate the transition from petroleum to renewable liquid fuels;
-- A recommendation that incentives be offered to further the research and development of renewable liquid fuels and related equipment; and
-- A recommendation that RLFs be part of the State's GHG reducing future for transportation fuels.

IX. Conclusion

New York State's building sector can achieve carbon reductions by simply requiring a switch from petroleum diesel to biomass-based RLFs. This would result in an immediate and continuing decrease of GHG emissions in the building sector and not require a conversion all buildings to electricity.

Biodiesel is no-to low-cost solution for the 1.4 million households that currently use liquid heating fuels versus the potential for spending large sums of money to install electric equipment. RLFs are a gallon-for-gallon replacement that is readily produced and available to replace the full volume of fuel currently in use. RLFs are affordable, would ensure energy reliability and security through diversity, would have immediate and continuing health benefits, are being improved through ongoing R&D, and give consumers a choice of renewable energy sources

For over 100 years our members have served the state of New York by supplying essential liquid fuels. We have taken affirmative steps even before being mandated to do so to continue our long-term status as responsible purveyors of liquid fuels in the state. From every possible perspective it is sensible, and indeed vital, to include and promote the use of biomass-based renewable liquid fuels as part of the

state's energy future.

Respectfully submitted,

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