



VIA ELECTRONIC FILING

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Dr. Seth Meyer
Chief Economist
U.S. Department of Agriculture
1400 Independence Avenue, SW
Washington, DC 20250

Docket Number: USDA–2021–0003

Re: Notice of Request for Public Comment on the Executive Order on Tackling the Climate Crisis at Home and Abroad

Dr. Seth Meyer,

The National Biodiesel Board (NBB) appreciates the opportunity to provide our comments to the U.S. Department of Agriculture (USDA) on the Executive Order on Tackling the Climate Crisis at Home and Abroad (Executive Order).¹ NBB is pleased to provide input on how to best utilize USDA's programs, funding and financing capacities, and other authorities to encourage the voluntary adoption of climate-smart agricultural.²

Climate-Smart Agriculture and Forestry

NBB recommends that USDA leverage existing programs to encourage voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resilience to climate change. One way that this can be achieved is through the development of pilot programs within existing programs. Existing programs where a pilot program to encourage the adoption of climate-smart agricultural practices on working farms include Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP). Additionally, USDA can support emerging markets for carbon and greenhouse gases by monetizing carbon at the farm level. Supporting producers in understanding the value of the carbon they hold and where to best market it will not only have great climate benefits, but the financial benefits will also accrue to the producer.

¹ Executive Order on Tackling the Climate Crisis at Home and Abroad, (January 27, 2021), available at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>

² U.S. Department of Agriculture, Notice of Request for Public Comment on the Executive Order on Tackling the Climate Crisis at Home and Abroad, USDA–2021–0003, 86 FR 14403 (March 16, 2021), available at <https://www.federalregister.gov/d/2021-05287>

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Natural Resources Conservation Services (NRCS)

Through programs under the Natural Resources Conservation Services, USDA is positioned to incentivize the adoption of climate smart agriculture practices which will also generate additional supplies of low carbon intensity feedstock for biofuels production.

The Environmental Quality Incentives Program (EQIP) is already set up to provide financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits. Under the EQIP program, USDA could incentivize voluntary adoption of agricultural practices that sequester carbon, reduce greenhouse gas emissions, and ensure resilience to climate change that go beyond the standard improvements around water quality and soil health.

Due to the NRCS Cover Crop Standard (340) excluding the harvesting of cover crops for seeds from participating in current programs, we recommend that USDA create a pilot program through EQIP (or similar program) that would allow for the harvesting of oilseed cover crops that produce low carbon intensity feedstocks. The pilot would work to quantify soil health benefits of cover crops when harvested for advanced biofuel feedstock. While we understand it is possible not all the benefits of cover crops would be achieved if the cover crop is harvested, it would still provide soil health benefits and produce a low carbon intensity feedstock for advanced biofuels production. As a result, even receiving half of a typical NRCS per-acre incentive payment could catalyze the production of additional feedstock supplies and provide benefits to both the producer and the environment.

Cover crops that provide carbon and sustainability benefits that also have an economic oilseed component to them would allow producers to generate additional farm income and low carbon intensity feedstocks while delivering the environmental benefits of cover crops. If producers can capture value from the cover crop, they reap not only the sustainability benefits, but also more potential profit. The idea of sustainable agriculture intensification is that producers use the same amount of land for more output — and oilseed cover crops can help achieve just that. Oilseed cover crops can also play a role in restoring soil biodiversity on the farm and are one of the farming practices which removes carbon dioxide from the atmosphere and stores it as soil organic carbon.

Through the Conservation Stewardship Program, USDA could encourage producers who have already adopted climate-smart agricultural practices but need the incentive to do even more to help reach the goals of the Executive Order. The priority concern here is the climate crisis, and allowing this group of participants to earn CSP payments will demonstrate that there is not only a benefit, but an appreciation and value correlated with continued improvement. Acknowledging that many producers are already addressing climate, it would be beneficial for USDA to utilize these existing programs and allow producers to continue to improve their land and practices. Allowing producers who may have maxed out under the current CSP program limitations to re-enter to participate and benefit from additional climate activities would encourage all producers to strive for continuous improvement. Having programs for only those producers just now starting to take part in climate-smart agriculture would put those who have already started to work to address climate change on the farm at a competitive disadvantage.

Carbon Markets

A new strategy to encourage the adoption of climate-smart agricultural practices should allow for the monetization of carbon at the farm level. This can be achieved by connecting producers that are sequestering carbon to the low-carbon fuel markets that pay for carbon reductions versus the voluntary offset carbon market. In order to do so, USDA must empower producers to decide who they market

their carbon credits to by standardizing and reducing transaction costs. A standardized measurement of carbon storage to be used by producers would provide certainty and fairness as producers enter these carbon markets.

USDA can support emerging markets for carbon and greenhouse gases where agriculture can supply carbon benefits by helping producers become more profitable. Emerging carbon markets aim to reduce greenhouse gas emissions by enabling the trading of emission units. Climate gains through financial incentives empower producers and rural America to join this effort.

Research and Development

We request that USDA dedicate research and development funding and activity to increase productivity from existing oilseed crops in addition to new feedstocks such as oilseed cover crops through flagship research programs like the Agriculture and Food Research Initiative (AFRI). USDA should prioritize foundational as well as applied research programs to advance regional oilseed opportunities, biotechnology solutions for increased lipid productivity, and conservation practices that will further decrease carbon intensity scores for biofuels such as biodiesel and renewable diesel. Significant dollars have historically been invested in cellulosic feedstock sources intended for biofuels production. USDA should consider increased investment in technologies and crops that could increase lipid and protein production.

Industry has significantly de-risked the conversion of lipids to renewable fuels, including hydrocarbons such as renewable diesel and sustainable aviation fuel. This is evident by the number of existing and announced biodiesel and renewable diesel production plants. At the same time, U.S. Department of Energy predicts that the demand for diesel, kerosene, and fuel oil will continue to grow as the transportation of goods continues to increase. This forecasted increase in demand demonstrates the lack of near-term electrification alternatives for key modes of transit including freight rail, marine vessels and aviation. USDA can help spur the deployment of additional drop-in fuel production by supporting the development of new lipid pathways.

Another way in which USDA can assist in incentivizing climate-smart agriculture practices is by collecting data on levels of soil organic matter nationally. While this is often done for purposes of individual research projects, a more transparent and robust public dataset will help accelerate widespread deployment of agricultural practices and new crops that can increase levels of soil organic matter, and thus soil organic carbon storage. In anticipation of policies such as The Growing Climate Solutions Act, which proposes to increase levels of soil organic carbon on American farms, USDA must undertake a baseline-setting effort to help establish current levels of soil organic matter and soil organic carbon nationally. This will allow state, federal, and voluntary frameworks to better incent and reward farmers for incremental improvements on farms which have historically adopted practices that increase levels of soil organic carbon.

We also encourage USDA to create a standardized method which allows for regular evaluation of soil organic carbon levels nationally, allowing other agencies such as Department of Energy and Environmental Protection Agency to determine the lifecycle emission reduction of many biofuels more accurately, including biodiesel and renewable diesel. Additionally, we ask USDA to consider the development of methods to assign changes in soil organic carbon to specific practices and crop rotations, rather than the current approach which tends to evaluate a single crop's impact on changes in soil organic carbon.

Finally, we encourage USDA to consider how accurate measurements of soil organic carbon could be used to support our Paris Accord Nationally Determined Contributions (NDCs). We ask that USDA collect this data as it can be one of the most efficient ways to sequester carbon.³

Biofuels, Wood and Other Bioproducts, and Renewable Energy

NBB appreciates the recognition that biofuels are part of the solution to address the climate crisis, and with the right incentives and market demand biodiesel is ready now to achieve the goals laid out in the Executive Order.

Updated Lifecycle Analyses

USDA can encourage greater use of biofuels by ensuring that biodiesel and renewable diesel (biomass-based diesel) remain a part of the effort to decarbonize fuels for transportation. To be successful, it is critical that lifecycle greenhouse gas assessments of biofuels be based on the best available science. We request that USDA conduct a literature review on the direct and significant indirect emissions associated with the production of soybean-oil-based biomass-based diesel. This updated information will be critically important as other agencies, both federal and state, rely on the expertise of USDA when considering the use of biomass-based diesel as a solution in achieving their climate and clean air goals.

In 2019, USDA updated its lifecycle assessment for corn ethanol through a similar literature review. However, an accompanying analysis has not yet been conducted for biomass-based diesel, denying a timely opportunity for a federally directed study to further inform the ongoing discussion about biofuels and their lifecycle emission reductions.

As part of this review, USDA should consider the most recent direct emissions estimates conducted by the Department of Energy's Argonne National Lab's Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation (GREET) model, and the indirect land use change assessment conducted by Purdue University.⁴ We believe an updated assessment will show significant reductions in the overall lifecycle emissions of biodiesel when produced from soybean oil.

For example, in 2018, Argonne National Lab conducted a lifecycle assessment of soybean-oil-based biodiesel's direct and significant indirect greenhouse gas emissions. They calculated a carbon intensity 33 percent lower than EPA's outdated 2010 analysis.⁵ Without an update to EPA's soybean oil analysis, which would be influenced by new USDA data, the agency will continue to leave over 3 million metric tons of CO₂ emission reductions uncredited every year due to continued reliance on outdated science. These additional reductions will add to the over 25 million metric tons of emissions already avoided annually by domestic biodiesel producers.

Additionally, since EPA generally benchmarks new Renewable Fuel Standard pathway petitions against soybean oil, their reliance on an outdated 2010 analysis has limited the ability of industry to bring to market new pathways and products. Examples include the burgeoning areas of winter oilseed cover

³ Paris Agreement to the United Nations Framework Convention on Climate Change. (December 12, 2015).

⁴ <https://www.purdue.edu/newsroom/releases/2020/Q1/dont-blame-u.s.-biofuels-for-indonesia-and-malaysia-deforestation,-study-shows.html>

⁵ <https://www.sciencedirect.com/science/article/pii/S0960852417321648?via%3Dihub>

crops and new uses for existing feedstocks like renewable gasoline (naphtha) and liquid propane gas (LPG) produced from soybean oil.

Biodiesel Fuel Education Program

We request that USDA provide permanent funding to the Biodiesel Fuel Education Program. The goals of the Biodiesel Fuel Education Program, as originally established in Sec. 9004 of the Farm Security Investment Act of 2002, are to stimulate consumption and investment in biodiesel, an advanced, low-carbon biofuel derived from a variety of vegetable oils, including soybean oil, as well as animal fats and used cooking oil. Information and outreach activities funded under this program have raised awareness of the benefits of biodiesel fuel use and complemented incentives Congress provided in 2005 when it enacted the Renewable Fuel Standard and biodiesel tax incentive.

The National Biodiesel Board (NBB) has leveraged \$3.6 million dollars from the Biodiesel Fuel Education Program to raise an additional \$17 million non-federal dollars over a period of five years. NBB utilizes the funds to promote biodiesel's sustainability attributes, provide technical assistance to original equipment manufacturers, develop fuel quality assurance programs, and promote biodiesel blending in home heating oil.

The U.S. market for biodiesel, renewable diesel, bioheat® and sustainable aviation fuels reached 3 billion gallons in 2020 – with 79% produced domestically. Continued investment in biodiesel education and ultimately biodiesel production and use will allow for the benefits of the program to accrue to the producer. Specifically, biodiesel and renewable diesel support economic opportunities in rural sectors as biodiesel production supports 13% of the value of every U.S. soybean bushel.

From 2002 to 2018, the Biodiesel Fuel Education Program received mandatory funding of a modest \$1 million per year via Farm Bill legislation. However, Section 9006 of the Agriculture Improvement Act of 2018 only authorized discretionary funding for this and other USDA energy programs, making them subject to annual appropriations. USDA should fund this program permanently to stimulate consumption and investment in biodiesel growth.

Higher Blends Infrastructure Incentive Program (HBIIIP)

The Higher Blends Infrastructure Incentive Program (HBIIIP) significantly increases the sales and use of higher blends of ethanol and biodiesel by expanding the infrastructure for renewable fuels derived from U.S. agricultural products. Infrastructure support and incentives will be needed to continue to build and retrofit traditional and/or pipeline terminals to blend more biodiesel. Additionally, increased rail capabilities will be needed to move increased volumes of biodiesel as USDA continues to support the effort to increase biofuel feedstock production and biofuel production efficiency. Additional funding through programs such as the Higher Blends Infrastructure Incentive Program are necessary to increase the availability of higher blends of biodiesel. By continuing to encourage the comprehensive approach undertaken by the HBIIIP program, USDA will allow for building out biofuel-related infrastructure needed to support demand for higher blends of biodiesel. Providing permanence to this successful grant program will expand consumers' access to cleaner, better transportation and heating fuels, such as biodiesel.

Low-carbon policies on the West Coast and in the Northeast are currently driving significant demand of biodiesel, renewable diesel, and Bioheat® fuel that will require bulk transportation infrastructure investments to help meet their GHG reduction goals.

In California, biodiesel is driving the state's clean-energy growth and emissions reductions. California's total biodiesel and renewable diesel volume grew 46% from 536 million gallons in 2018 to 830 million gallons in 2019 and achieving a 57-fold increase since 2011. Biodiesel and renewable diesel have grown from less than 1% to the point where they comprised nearly 22% of California's total diesel supply in 2019. In total, biodiesel has displaced more than 3 billion gallons of petroleum diesel since the LCFS began in 2011 and reduced the state's greenhouse gas emissions by 56.6 billion pounds.

In the Northeast, biodiesel and Bioheat® fuel will be required to meet the states' carbon reduction goals. Currently, one in five existing homes in the Northeast (around 4.5 million) rely on oil heat, using more than 2.5 billion gallons yearly. However, the region's biodiesel and Bioheat® fuel use annually avoids more than 1.5 million tons of CO2 emissions, equivalent to removing 320,000 vehicles from the road or the emissions from annual energy use by 180,000 homes. Additional infrastructure will be required as the coastal states work to meet their near term GHG reduction goals utilizing readily deployable biodiesel and Bioheat® fuel.

Advanced Biofuel Payment Program

NBB supports the reinstatement of funding to USDA's Advanced Biofuel Payment Program. This existing program helps increase American energy independence by increasing the private sector supply of advanced biofuels, such as biodiesel, while decreasing the demand for fossil fuels. Continued support of biofuel producers will ensure expanded production of advanced biofuels by paying advanced biofuel producers for finished advanced biofuel products. USDA's Rural Development Agency made \$7 million available for FY 2021 through the Advanced Biofuel Payment Program. Previously, funds available for advanced biofuel producers, including biodiesel, was upwards of \$14 million. Making additional funds available to support and incentivize biodiesel production would increase the use of biodiesel.

The Renewable Fuel Standard

The Renewable Fuel Standard (RFS) is a key policy in ensuring that consumers have the option of purchasing low-carbon fuels. Without effective policies such as the RFS in place to incentivize petroleum distributors to offer renewable fuels, consumers simply will not have the option to reduce GHG emissions from their liquid transportation fuels.

The biodiesel industry continues to rely on the RFS to incentivize growth. Producers therefore rely on a positive signal and support from federal programs to continue opening the transportation market to higher volumes.

The industry's growth over the past decade-and-a-half was supported by the success of the RFS. However, instability in the program is forcing businesses to reduce investments and shutter production facilities. Uncertainty is the largest challenge to making meaningful carbon and pollution reductions. Producers need clear signals from the federal government in order to continue producing biodiesel and reduce carbon and pollution.

Consistent implementation of the RFS as intended by Congress is essential for increasing production and use of clean, renewable fuels in the United States. EPA knows that RFS deadlines are important to all program stakeholders throughout the supply chain. Biodiesel and renewable diesel producers particularly rely on market signals from annual rules. We ask that USDA support sustained growth of biofuels under the RFS to meet the goals of the Administration as it directly supports climate-smart agriculture.

Support for Rural Economies and Green Jobs

Increasing the use of biodiesel has a direct impact on the rural economy. The biodiesel industry supports more than 65,600 jobs, \$2.5 billion in wages, and \$17 billion in total economic impact in the United States throughout the supply chain, based on 2018 data.⁶ Any increases in the BBD volume will add additional jobs and economic impact. LMC International estimated that, assuming a consistent rate of domestic production, the 3 billion gallons of BBD utilized in the United States in 2020 supports over 79,000 U.S. jobs, \$3 billion in wages paid, and \$20.4 billion in total domestic economic impact.

Biodiesel is a key source of demand for soybean oil; it also provides support to U.S. producers. And because biodiesel feedstocks are co-products of the meal portion of crops used for food, increased production of biodiesel lowers the input prices for food production by increasing value for the vegetable oil fraction. Encouraging the use of biodiesel while providing additional infrastructure would enhance each of these benefits to U.S. employment, agriculture, and rural development.

Moreover, the overproduction of oils relative to other components of crops is not unique to soybeans. Food crops, in general, store large quantities of solar energy in seeds in the form of vegetable oils. When we collect seeds to satisfy the protein needs of the food supply, we harvest more oils than we can consume as food. Because proper nutrition demands that calories be consumed in certain ratio between protein, carbohydrates, and fats, vegetable oils remain in surplus, and those surpluses will grow as global population and affluence increase. Advanced biofuels such as biodiesel can reduce the cost of protein by providing value for the excess oil.

Environmental Justice and Disadvantaged Communities

The elimination of internal combustion engines has become a regular topic as climate change efforts and the popularity of electric vehicles gain momentum. However, while electric vehicles can play an active role in reducing emissions in some applications, they are not the only way to address the climate crisis. Biodiesel has one of the lowest carbon intensities of any liquid fuel; and in the majority of diesel end-uses, biodiesel reduces far more greenhouse gases than an electric solution. Importantly, biodiesel significantly reduces criteria pollutants from diesel transportation, which can have direct benefits for disadvantaged communities.

Promoting the use of biodiesel and incentivizing infrastructure for use of higher volumes will result in immediate benefits to disadvantaged communities. Major trucking corridors, warehouse distribution centers and other diesel hot spots close to major population sectors inflict serious harms to human health and often highlight disparities in the impacts of transportation pollution burdens as a result of emissions from petroleum fuel. Using biodiesel lowers net lifecycle carbon emissions up to 86 percent compared to petroleum fuel and particulate matter by 45 percent.

According to the Diesel Technology Forum, “diesel remains the dominant technology in long-haul trucking, powering 97 percent of Class 8 big-rig trucks in the United States.”⁷ And in their most recent national report from 2011, Diesel Technology Forum found that “diesel-powered trucks, trains, ships and intermodal systems moved approximately 90 percent of the nation’s freight tonnage. Diesel

⁶ LMC International, The Economic Impact of the Biodiesel Industry on the U.S. Economy (Aug. 2019).

⁷ Diesel Technology Forum, <https://www.dieselforum.org/about-clean-diesel/trucking>

technology moves more than 80 percent of all cargo in the United States and more than 90 percent throughout the world. As such, diesel is the prime mover of the global economy whether by truck, train, boat or barge”.⁸ Biodiesel is the solution and has the capability to reduce carbon and greenhouse gas emissions immediately from the heavy-duty and long-haul diesel sectors. The fact is biodiesel can make a difference now in reducing harmful tailpipe emissions that have an adverse impact on populations living in congested areas or traffic corridors and those areas affected by drifting pollution levels.

USDA has the opportunity to ensure disadvantaged communities are benefiting from these climate policies by funding the programs outlined above. Specifically, the Biodiesel Fuel Education Program could assist disadvantaged communities to raise awareness of the benefits of biodiesel fuel use. Additionally, continued investment in biodiesel infrastructure under the Higher Blends Infrastructure Incentive Program will drive demand for higher blends of biodiesel resulting in direct public health benefits.

A new study, conducted by Trinity Consultants, shows that converting from petroleum-based diesel to 100 percent biodiesel (B100) results in a multitude of health benefits at the neighborhood level, including lowering cancer risk, reducing premature deaths, and decreasing asthma attacks.⁹ The study quantifies public health benefits and corresponding economic savings of converting from petroleum-based diesel to B100 for 13 disadvantaged communities in the United States currently exposed to some of the highest rates of petroleum diesel pollution.

The study found that switching to B100 in the home heating oil and transportation sectors would provide immediate community health improvements that can be measured in reduced medical costs and health care benefits, including approximately 50,000 fewer sick days in the study demographics.

In the transportation sector, benefits included a potential 44 percent reduction in cancer risk when heavy-duty trucks such as semis use B100, resulting in 203,000 fewer or lessened asthma attacks for the communities studied. When biodiesel is used for home heating oil, the study found an 86 percent reduced cancer risk and 17,000 fewer lung problems for the communities studied. B100 can achieve these benefits by reducing pollution from some of the hardest to decarbonize sectors, heavy-duty transportation, and home heating.

The immediacy of these potential health benefits, especially for disadvantaged communities, is even more critical when one considers the years, possibly decades, it will take for states to pursue deep electrification and other decarbonization strategies.

This study proves and quantifies the major benefits a simple transition to biodiesel can have on disadvantaged communities that adopt it and we ask that USDA assist in facilitating and incentivizing biodiesel as part of the solution on tackling the climate crisis.

As USDA works to determine how agriculture can contribute to tackling the climate crisis, we want to remind you that biodiesel is a solution that reduces carbon now. Specifically, when compared to electric

⁸ Diesel Technology Forum, <https://www.dieselforum.org/policy/powering-the-u-s-economy>

⁹ Trinity Consultants. (March 2021). Assessment of Health Benefits from Using Biodiesel as Residential Heating Oil. <https://www.biodiesel.org/news-resources/health-benefits-study>.

vehicles (EVs), utilizing biodiesel now will allow the United States to meet our carbon reductions goals earlier than if we were to rely on EVs alone. It has been shown that the immediate investment in a mature, currently commercialized biodiesel fuel yields higher annual greenhouse gas emissions reductions than waiting for a technology that is still considered immature such as EVs.¹⁰ The benefits of using and increasing the use of biodiesel now will not only provide immediate greenhouse gas reductions, but it will also have a positive impact on health of disadvantaged communities.

NBB is looking forward to continued partnership with USDA as you continue to support the advancement and development of biodiesel and biofuel feedstocks while combating the climate crisis. We appreciate the opportunity to provide feedback on this important issue and welcome continued dialogue during the implementation process.

Sincerely,

A handwritten signature in black ink that reads "Kurt A. Kovarik". The signature is written in a cursive, slightly slanted style.

Kurt Kovarik
Vice President, Federal Affairs
National Biodiesel Board (NBB)

¹⁰ Frank, Jenny & Brown, Tristan & Haverly, Martin & Slade, Dave & Malmsheimer, Robert. (2020). Quantifying the comparative value of carbon abatement scenarios over different investment timing scenarios.