



February 4, 2022

**By ELECTRONIC FILING**

**Docket No. EPA-HQ-OAR-2021-0324**

EPA Docket Center, Air Docket  
Mail Code 28221T  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

Dear Sir or Madam:

The National Retail Federation (NRF) appreciates this opportunity to comment on the Environmental Protection Agency's (hereinafter EPA or Agency) proposed rule setting biofuel volumes for the Renewable Fuel Standard (RFS) program for years 2020, 2021, and 2022, and introducing regulatory changes intended to enhance the program's objectives. Within the proposed rule, EPA has requested comment on these proposed volume requirements.<sup>1</sup> More specifically, EPA has requested comment on the impact of advanced biofuel production on statutory factors<sup>2</sup>, and on the volume of renewable fuel and feedstock use that would occur.<sup>3</sup>

By way of background, the National Retail Federation, the world's largest retail trade association, passionately advocates for the people, brands, policies, and ideas that help retail thrive. From its headquarters in Washington, D.C., NRF empowers the industry that powers the economy. Retail is the nation's largest private-sector employer, contributing \$3.9 trillion to annual GDP and supporting one in four U.S. jobs — 52 million working Americans. For over a century, NRF has been a voice for every retailer and every retail job, educating, inspiring, and communicating the powerful impact retail has on local communities and global economies.

Included in our membership are scores of foodservice and food retail companies that will be adversely affected by the Agency's proposed volume requirements, including numerous chain restaurant companies and grocery stores. Agency officials no doubt know by now of the current situation in the U.S. vegetable oils market – it has been characterized by sharp price increases and scarcity of supply. This situation began over a year ago and is continuing today. The EPA's proposed volume requirements will make this current situation even worse.

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<sup>1</sup> <https://www.govinfo.gov/content/pkg/FR-2021-12-21/pdf/2021-26839.pdf>, page 17

<sup>2</sup> <https://www.govinfo.gov/content/pkg/FR-2021-12-21/pdf/2021-26839.pdf>, page 12

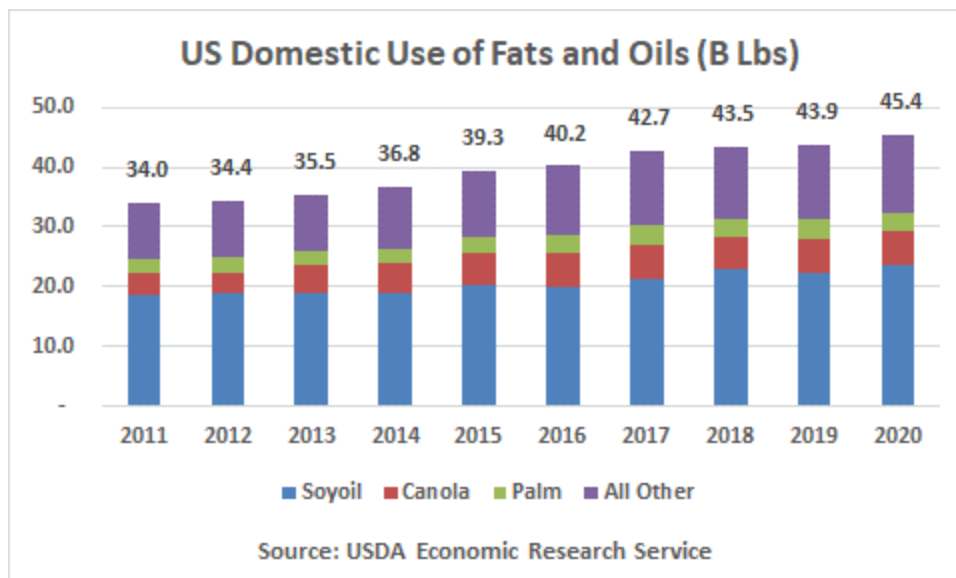
<sup>3</sup> <https://www.govinfo.gov/content/pkg/FR-2021-12-21/pdf/2021-26839.pdf>, page 18

In order to mitigate the adverse impact upon our members and the foodservice, food retail and food manufacturing industries, we recommend EPA reduce the 2022 renewable volume obligations (RVOs) to the same levels that were proposed for 2020 (total 17.13 B and advanced 4.63 B) and defer implementation of the 250-million-gallon supplemental requirement until a later year. We explain our rationale below.

1. Biofuel Policy Leading to Sharp Increases in Vegetable Oil Usage and Prices

Fats and oils (primarily soybean oil) are key ingredients in the U.S. food system (Figure 1). The U.S. Department of Agriculture (USDA) estimates that U.S. consumption of fats and oils during (Oct-Sept) 2020/21 totaled 45.4 B pounds, including an estimated 31.9 B pounds consumed for food.<sup>4</sup> The remainder is classified by USDA as “industrial,” used largely in the production of biofuel. Soybean oil is the largest category of edible oil used in the U.S., totaling 23.4 B pounds or 52% of total usage.

Figure 1.

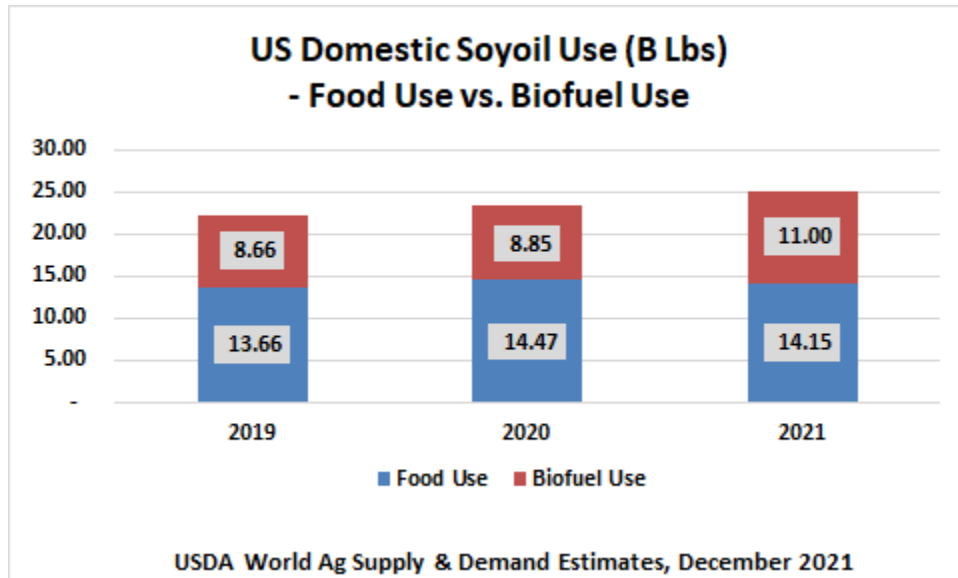


The combination of an increase in soybean oil usage for biofuel production, a reduction in the use of soybean oil for food usage, and higher soybean oil prices (see below), indicates that food use is being crowded out by the biofuel market (Figure 2). During 2021/22, USDA is forecasting a 2% decline in food use of soybean oil to 14.2 B pounds, while the use of soybean oil to produce biofuel is forecast to increase by 24% to 11.0 B pounds. The share of soybean oil

<sup>4</sup> USDA Economic Research Service (<https://www.ers.usda.gov/data-products/oil-crops-yearbook/oil-crops-yearbook/>), USDA Foreign Agricultural Service Production, Supply and Distribution (<https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>), Advanced Economic Solutions

dedicated to biofuel production has increased rapidly and is now forecast to total 44% of total domestic use.<sup>5</sup>

Figure 2.



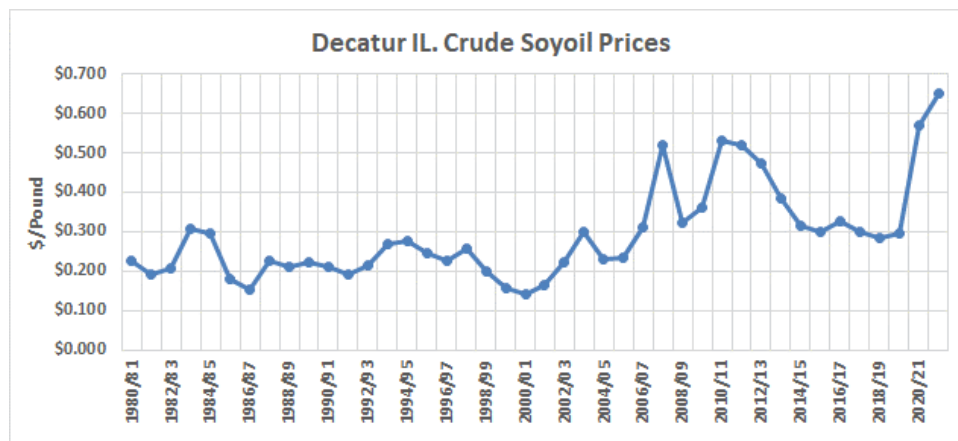
The price of fats and oils has risen dramatically during the past year. In December 2021, the USDA World Agricultural Outlook Board (WAOB) indicated that the average price of crude soybean oil had risen from \$.297 per pound during (Oct-Sept) 2019/20, to \$.569 per pound during 2020/21.<sup>6</sup> The average price of crude soybean oil is forecast by USDA to increase by an additional \$.081 per pound during 2021/22 to \$.650 per pound (Figure 3). In other words, the price of soybean oil will have experienced a 119% increase over the past two years to the highest level in at least 40 years.<sup>7</sup>

<sup>5</sup> USDA World Ag Outlook Board, World Ag Supply and Demand Estimates, December 2021

<sup>6</sup> USDA World Agricultural Outlook Board, World Ag Supply and Demand Estimates, December 2021

<sup>7</sup> USDA Economic Research Service (<https://www.ers.usda.gov/data-products/oil-crops-yearbook/oil-crops-yearbook/>)

Figure 3.



2. EPA Analysis Understates Impact of Higher Soybean Oil Usage and Prices

As indicated in Figure 3, soybean oil prices are forecast by USDA to average \$.650 per pound during 2021/22, a gain of 124% from 2019/20. This contrasts sharply with the EPA assessments made in its “Draft Regulatory Impact Analysis,”<sup>8</sup> where EPA utilized USDA price forecasts developed and published in February 2021, which was prior to the surge in vegetable oil prices (Figure 4).

Figure 4.

**USDA Soyoil Price Forecasts (\$ per pound) – EPA Assumptions in Red**

<u>2019/20</u>	<u>2020/21</u>	<u>2020/21</u>	<u>2021/22</u>	<u>2021/22</u>
Actual	(Feb 2021)	(Dec 2021)	(Feb 2021)	(Dec 2021)
\$.297	<b>\$.325</b>	\$.569	<b>\$.340</b>	\$.650

The consequence of this is that EPA dramatically understated the impact of rising soybean oil prices upon consumer outlays. The updated prices significantly alter the EPA’s estimated change in food expenditures (relative to 2020), which are outlined in the Draft Regulatory Impact Analysis in Table 7.5-1 (page 214). Figure 5 below compares the impact of biofuel policies upon soybean oil expenditures, comparing the initial EPA analysis (with lower soybean oil price assumptions) to analysis by Advanced Economic Solutions (AES)<sup>9</sup>, with updated soybean oil price assumptions.

<sup>8</sup> <https://www.epa.gov/sites/default/files/2021-12/documents/420d21002.pdf>

<sup>9</sup> Advanced Economic Solutions, LLC, an Omaha Nebraska private economic and commodity consulting firm

Figure 5.

**Change in Food Expenditures on Soybean Oil Relative to 2020 (Million \$)**

<u>EPA 2021</u>	<u>AES 2021</u>	<u>EPA 2022</u>	<u>AES 2022</u>
(Feb 2021)	(Dec 2021)	(Feb 2021)	(Dec 2021)
\$572	\$4227	\$2473	\$7003

With updated price estimates, AES estimates the change in soybean oil expenditures during 2021 and 2022 (vs. 2020) would total \$11.23 billion, nearly three times the EPA estimated impact of \$3.0 billion<sup>10</sup>

3. Renewable Diesel and the Contribution of California’s LCFS to the Soybean Oil Shortage

Two key drivers of increased soybean oil usage in biofuel production in recent years have been the federal renewable volume obligations (RVOs), as well as the dramatic increase in renewable diesel capacity requiring refined (RBD) soybean oil. As stated by USDA in its October FAS Oilseed circular,

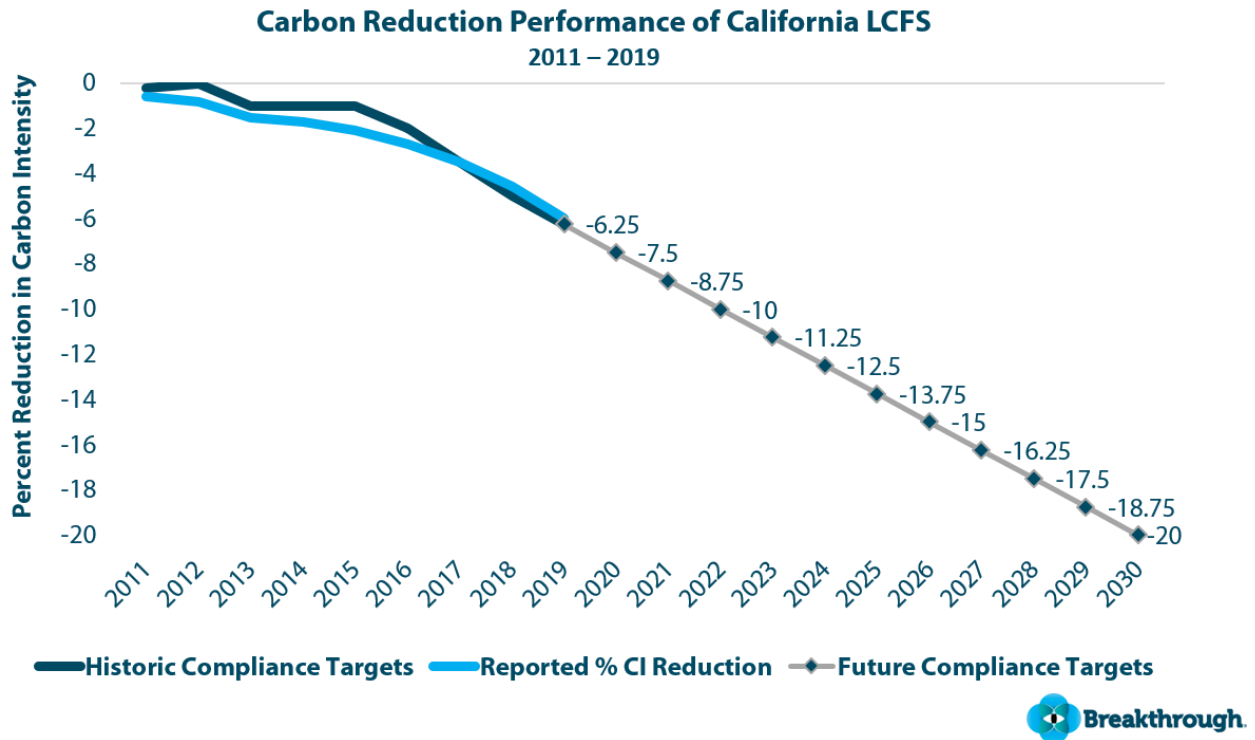
*“Much of the rise in U.S. soybean oil Gulf prices (relative to those in South America) was rooted in expected dramatic growth in demand from planned renewable diesel plants. U.S. supplies were already tight and required demand rationing via higher prices to get expected demand in line with anticipated supply.”<sup>11</sup>*

Renewable diesel production capacity has and will continue to surge in response to California’s Low-Carbon Fuel Standard (LCFS). The growth is in response to “sticks” – the LCFS requires a reduction of the carbon intensity in transportation fuel of 6.25% by 2019, and a reduction of 20% by 2030 and beyond (Figure 6).

<sup>10</sup> Analysis by Advanced Economic Solutions (AES), December 2021

<sup>11</sup> <https://downloads.usda.library.cornell.edu/usda-esmis/files/tx31qh68h/m302160c/ft849q23p/oilseeds.pdf>

Figure 6.



The state of California has also established “carrots” to incentivize investment in technology to reach the LCFS goals. Notably, renewable diesel producers receive the benefit of tax credits and RIN value more than \$4 per gallon.<sup>12</sup>

Both the RVOs established by the EPA, as well as California’s Low Carbon Fuel Standard, have contributed to a sharp increase in the use of soybean oil (and other fats and oils) to produce biomass-based diesel. Normal market forces such as weather have had little to do with the surge in soybean oil prices over the past year. However, over the past two years the EPA has played a meaningful role in creating the shortage in U.S. soybean oil. Fortunately, the EPA can adjust the 2022 annual RVOs downward and reduce the \$11 B impact upon U.S. consumers. Without a change in the proposal, food inflation pressures from EPA biofuel policy should be expected to be as large or greater in 2022 and beyond.

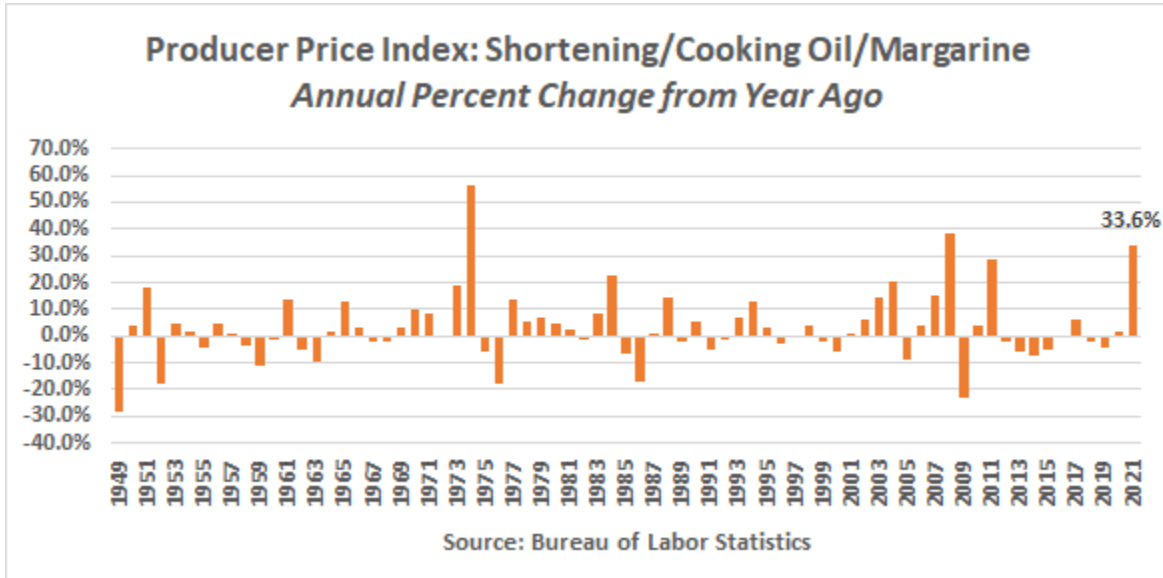
#### 4. BLS Inflation Data Reveal Inflationary Pressures in Vegetable Oil Markets

The inflationary pressures facing both food manufacturers and consumers are already dramatic, as reflected in the Bureau of Labor Statistics (BLS) Producer Price Index (PPI) and Consumer Price Index (CPI).

<sup>12</sup> Advanced Economic Solutions estimates renewable diesel producer credits as of December 10, 2021 totaled \$4.33 per gallon for soybean oil-based renewable diesel (biodiesel blender credit, RIN value, and LCFS carbon credits)

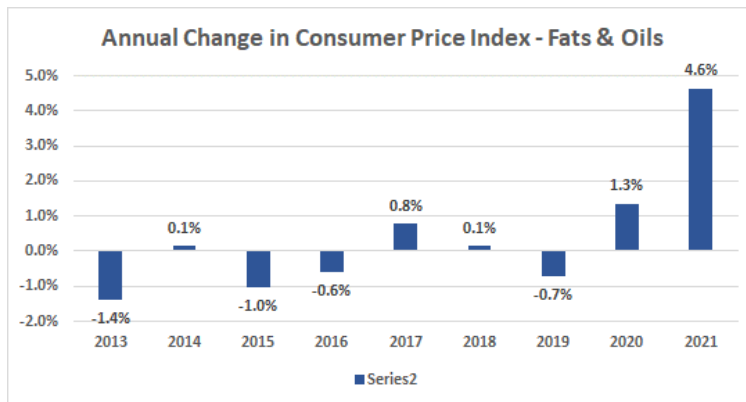
During 2021, the BLS reported that the annual average producer price index (PPI) of shortening/cooking oil/margarine rose by 33.6% from a year earlier – the fourth largest increase in the PPI for shortening/cooking oil/margarine during the 74 years that the BLS has been tracking vegetable oil prices (Figure 7).

Figure 7.



Consumers have likely not felt the full brunt of higher vegetable oil prices, as it appears only a portion of the increased costs have been passed on to consumers. The annual CPI for fats and oils gained 4.6% during 2021, although consumer vegetable oil prices were up 8.8% during December 2021 from a year earlier (Figure 8).

Figure 8.



Ultimately, as stated by the EPA in its Draft Regulatory Impact Analysis<sup>13</sup>, consumers will bear the brunt of higher vegetable oil costs, which will contribute to the rapid escalation in consumer food prices. The Bureau of Labor Statistics reported that during December 2021, the overall gain in consumer food inflation (CPI-Food) compared to a year earlier was 6.3%, matching the highest rate of gain recorded during the past 28 years.<sup>14</sup>

We and our members are concerned about the rising cost of fats and oils. As a result of the increase in the price of soybean oil, U.S. consumers faced an increase in outlays for soybean oil for food use of \$11.23 B over the past two years; including other fats and oils consumed in the U.S., Advanced Economic Solutions estimates a total two-year cost increase for consumers at \$20-24 B.<sup>15</sup> We ask EPA to take the sharp increase in consumer outlays for fats and oils into consideration in establishing its 2022 RVOs, and to reduce mandated usage levels to ease the inflationary pressures caused by federal and state mandates.

5. EPA Proposal Raises Required Biofuel Demand, Leading to Surge in Soybean Oil Usage

EPA is proposing a 2022 total renewable volume obligation of 20.77 B gallons (vs. 18.52 B during 2021), including 5.77 B gallons of advanced biofuels (vs. 5.20 B during 2021). This implies an additional 15.00 B gallons consisting of either conventional biofuel (ethanol) or biomass-based diesel during 2022. Additionally, the EPA also proposes to add a 250-million-gallon supplemental obligation (Figure 9).

Figure 9

	2020	2021	2022
<b>Cellulosic Biofuel</b>	0.51	0.62	0.77
<b>Biomass-Based Diesel</b>	2.43**	2.43**	2.76
<b>Advanced Biofuel</b>	4.63	5.20	5.77
<b>Total Renewable Fuel</b>	17.13	18.52	20.77
<b>Supplemental Standard</b>	n/a	n/a	0.25

<sup>13</sup> <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1013KOG.pdf>, page 213

<sup>14</sup> <https://www.bls.gov/news.release/cpi.t02.htm>

<sup>15</sup> Based upon analysis by Advanced Economic Solutions, December 2021



On page 185 of the “Draft Regulatory Impact Analysis,”<sup>16</sup> EPA provides its working assumption of total corn-based ethanol consumption during 2022 of 13.79 B gallons. This volume falls roughly 1.2 B gallons short of the 15.00 B gallons of conventional biofuel proposed. EPA acknowledges this shortfall on page 72451 of the proposed rule:

*“While we expect that conventional ethanol use will fall short of the implied 15-billion-gallon volume in 2022 by roughly 1.2 billion gallons, we project that greater volumes of biodiesel and renewable diesel could be produced and imported to offset this shortfall.”*<sup>17</sup>

These figures do not include EPA’s proposed 250-million-gallon supplemental biofuel requirement. Assuming this additional shortfall would be made up with biomass-based diesel, the supplemental requirement would lead to the need for roughly 160 million gallons of additional biodiesel or renewable diesel during 2022.<sup>18</sup>

Analysis by AES<sup>19</sup> indicates that the EPA proposal would lead to an increase in biomass-based diesel (biodiesel and renewable diesel) production of between 752 mm and 1113 mm gallons (Figure 10). This reflects three factors contained in the EPA’s proposal:

- The proposed increase in the advanced biofuel mandate from 5.20 B to 5.77 B gallons between 2021 and 2022
- The shortfall in availability of D6 (conventional or ethanol) RINs, estimated by EPA at 1.2 B gallons, and
- The proposed 250 mm supplemental gallons required in 2022, which presumably will be made up through additional biomass-based diesel

The implication of the EPA proposal is that soybean oil usage for the production of biomass-based diesel will rise from 9.1 B pounds during 2021, to 12.0-13.0 B pounds during 2022. The increase in soybean oil use for the production of biomass-based diesel, 2.9-3.9 B pounds, *is larger than the entire forecast inventory of soybean oil at the end of the 2021/22 year (1.9 B pounds).*<sup>20</sup>

With an already tight supply situation for soybean oil (and other fats/oils), no other conclusion can be drawn but that the proposed rule, if not changed before finalized, will further exacerbate the soybean oil supply shortage. Market forces will likely respond with further increases in soybean oil prices and rationing of soybean oil for food use. Consumers will pay the price.

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<sup>16</sup> <https://www.epa.gov/sites/default/files/2021-12/documents/420d21002.pdf>

<sup>17</sup> <https://www.govinfo.gov/content/pkg/FR-2021-12-21/pdf/2021-26839.pdf>

<sup>18</sup> Renewable diesel is a hydrocarbon produced by hydrotreating, while biodiesel is an ester produced via transesterification. An in-depth explanation of the differences in these fuels can be found at: [https://afdc.energy.gov/fuels/emerging\\_hydrocarbon.html#:~:text=Renewable%20diesel%20and%20biodiesel%20are%20not%20the%20same%20fuel.&text=Biodiesel%20is%20a%20mono%20Dalkyl,for%20use%20in%20diesel%20Engines.](https://afdc.energy.gov/fuels/emerging_hydrocarbon.html#:~:text=Renewable%20diesel%20and%20biodiesel%20are%20not%20the%20same%20fuel.&text=Biodiesel%20is%20a%20mono%20Dalkyl,for%20use%20in%20diesel%20Engines.)

<sup>19</sup> Based upon analysis by Advanced Economic Solutions, December 2021

<sup>20</sup> USDA World Ag Outlook Board, World Ag Supply and Demand Estimates, December 2021

Figure 10.

Estimated Impact of EPA'S 2022 Proposed Renewable Volume Obligations						
		2021	2022A*	2022B**	2022A vs. 21	2022B vs. 21
Total Advanced RVO	MM RINS	5,200	5,770	5,770	570	570
Cellulosic	MM RINS	620	770	770	150	150
Other	MM RINS	250	250	250	-	-
Total ADV from RD/BD	MM RINS	4,330	4,750	4,750	420	420
D6 Shortfall	MM RINS	-	640	1,200	640	1,200
Supplemental	MM RINS		250	250	250	250
Conversion to Wet Gallons	Factor	1.50	1.55	1.55		
<b>Total ADV from RD/BD</b>	<b>MM Gal</b>	<b>2,887</b>	<b>3,639</b>	<b>4,000</b>	<b>752</b>	<b>1,113</b>
Foreign BD	MM Gal	170	170	170	-	-
Foreign RD	MM Gal	300	300	300	-	-
Domestic RD/BD	MM Gal	2,417	3,169	3,530	752	1,113
AES Estimated BD Production	MM Gal	1,672	1,600	1,600	(72)	(72)
Yield (Lbs/Gallon)		7.50	7.50	7.50		
Feedstock for BD	MM Lbs	12,540	12,000	12,000	(540)	(540)
SBO Share of Feedstock	%	60.0%	62.0%	62.0%		
Soyoil Use for BD		7,524	7,440	7,440	(84)	(84)
AES Estimated RD Production	MM Gal	745	1,569	1,930	824	1,185
Yield (Lbs/Gallon)		8.30	8.30	8.30		
Feedstock for RD	MM Lbs	6,181	13,020	16,019	6,840	9,838
SBO Share of Feedstock	%	25.0%	35.0%	35.0%		
Soyoil Use for RD		1,545	4,557	5,607	3,012	4,061
Total Feedstock for RD/BD	MM Lbs	18,721	25,020	28,019	6,300	9,298
<b>Total Soyoil for RD/BD</b>	<b>MM Lbs</b>	<b>9,069</b>	<b>11,997</b>	<b>13,047</b>	<b>2,928</b>	<b>3,977</b>
Soyoil Share of Total RD/BD	%	48.4%	47.9%	46.6%		
* The 2022A scenario assumes a smaller conventional ethanol use shortfall (640 mm gallons) than EPA suggests in their proposal						
** The 2022B scenario assumes a conventional ethanol use shortfall of 1200 mm gallon, as stated by EPA in their proposal (page 72451)						
Source: AES, EPA, EIA						

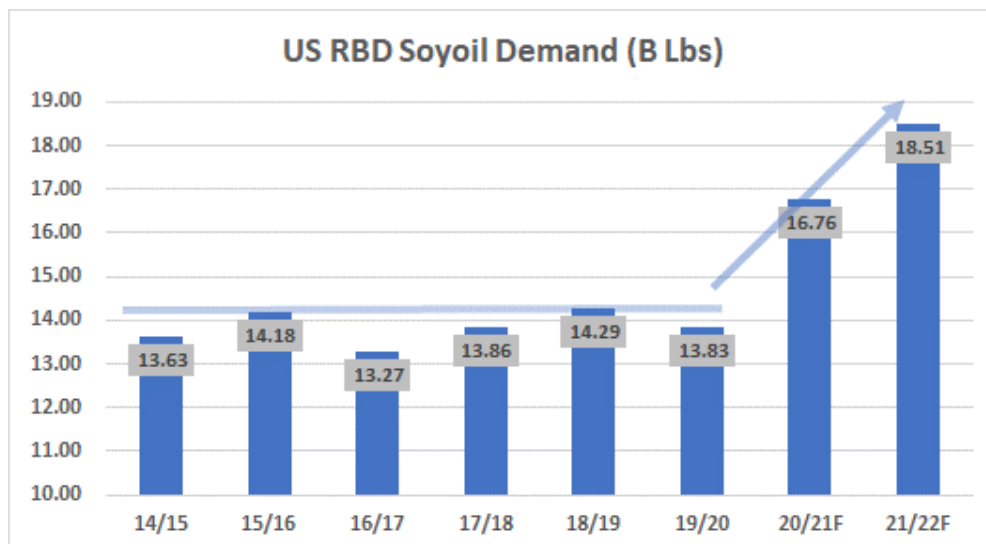
During 2021 the U.S. fats and oils market became much tighter, with prices doubling over the year. The EPA RVO proposal implies that during 2022, food users of soybean oil will face an increase of 2.9-3.9 B pounds (+32% to +44%). The consequences of this dramatic increase in usage are that there will be further gains in soybean oil prices from near record levels, but also increased availability concerns specifically for refined soybean oil.

Virtually all soybean oil consumed by humans is refined (as opposed to crude) before being used. Food use of soybean oil has been stable over time, implying that refining capacity has also been steady. Food use of soybean oil during 2021/22 is estimated to total 14.1 B pounds.

The stable demand for refined soybean oil changed in recent years due to the building of renewable diesel capacity that requires refined soybean oil to operate. An estimated 32% of current renewable diesel operating capacity currently requires the use of refined soybean oil to operate<sup>21</sup>, equal to nearly 4 B pounds. Thus, over the past year, the market has been called upon to produce significantly more refined soybean oil to meet the demand of both food users and renewable diesel users.

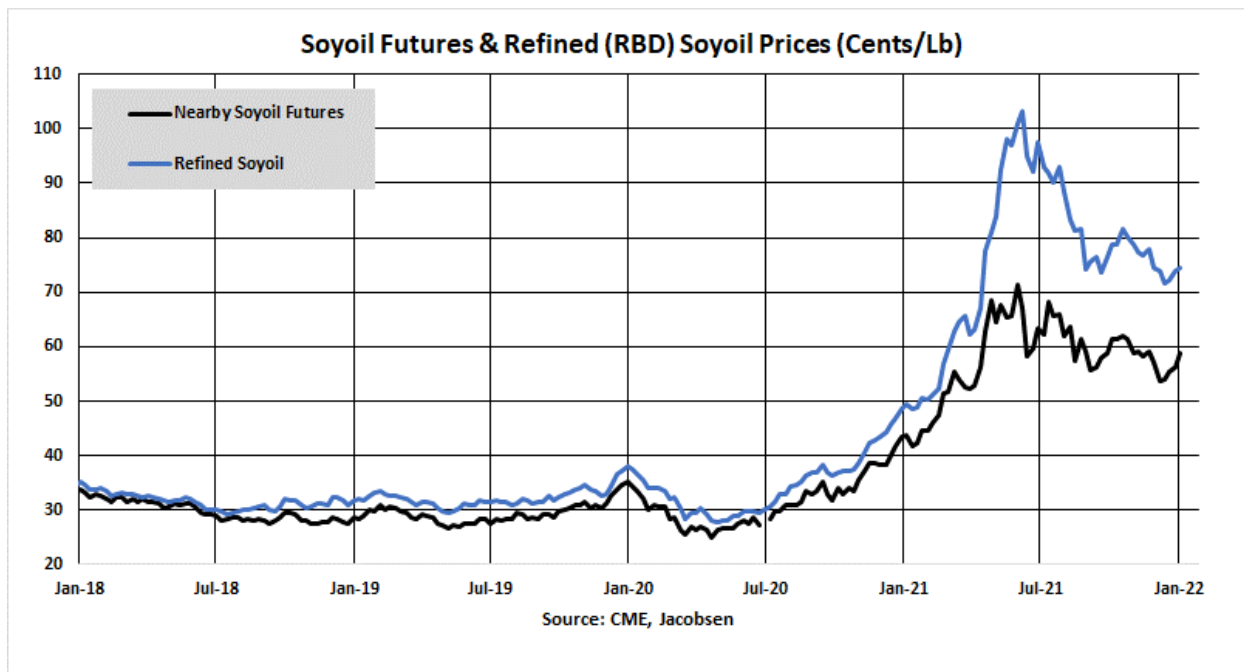
Based on AES analysis, annual demand for RBD soybean oil was steady prior to 2020/21 at around 14 B pounds. During 2020/21 it is estimated to have risen to 16.8 B pounds and is expected to rise to 18.5 B pounds during the 2021/22 year (Figure 11). *The entire increase in demand during the latest two years is attributable to state and federal laws encouraging the use of refined soybean oil to produce biomass-based diesel.*

Figure 11.



The consequence of the increases in the total demand base for refined soybean oil has been a sharp increase – to record levels – in the premium paid for refined soybean oil in excess of futures (“the basis”). Not only has the premium for refined soybean oil risen, but our members have expressed concern about availability of adequate supplies in the coming year. To repeat, foodservice and food retail companies, not to mention the food manufacturing companies that actually make the products used by foodservice and food retail, are extremely concerned not only about the sharp increase in price of soybean oil over the last two years, but now they are alarmed about even being able to source – at any price – soybean oil altogether.

<sup>21</sup> Estimate by Advanced Economic Solutions, as of December 2021



## 6. NRF Recommends Setting 2022 RVOs at 2020 Levels

Fats and oils, led by soybean oil, are a key ingredient in the U.S. food system. In recent years, there has been an alarming increase in the share of soybean oil devoted to the production of biomass-based diesel, rising to an estimated 44% of total usage during the current year.

During the 2019/20 (October-September) year, the average price of (crude) soybean oil was \$.30 per pound. In that year, not only were prices near historically normal levels, availability of soybean oil and other vegetable oils for use in the food industry was adequate.

Over the past two years, the price of soybean oil and other vegetable oils has risen dramatically, and availability of a critical ingredient has come into question. Because of increasing soybean oil usage for the production of biomass-based diesel, soybean oil prices have doubled during the past two years to a record \$.65 per pound. Higher prices for soybean oil are contributing the inflationary pressures in the U.S. – the Producer Price Index for vegetable oils rose by 34% during 2021.

The increase in U.S. vegetable oil prices is being driven by the state and federal rules that are incentivizing the use of soybean oil for non-food related purposes, specifically biofuel production. Policy designed to divert an ever-growing share of U.S. soybean oil supplies for the production of biofuels has resulted in an historic jump in the price of vegetable oil for food manufacturers and consumers.

The EPA proposal would lead to further increases in soybean oil usage to meet the federal RFS standard, rising from 9.1 B pounds in 2021 to 12.0-13.0 pounds during 2022. The consequence of the proposal is that there will be further gains in soybean oil prices from near record levels during 2022, but also increased availability concerns specifically for refined soybean oil.

We understand that the market is likely to adjust to the current vegetable oil supply-demand imbalance, perhaps over the next 2-3 years. However, during at least the next year, state and federal policies have created a vegetable oil shortage that is driving up prices and increasing the risk of a lack of availability for food companies.

The EPA has the opportunity to begin to undo some of the damage inflicted upon food manufacturers and consumers caused by the increased use of vegetable oils to produce biofuel during 2021, and importantly, avoid doing further harm during 2022.

Given the crisis situation the food system now finds itself in regarding availability of soybean oil for food production, we recommend EPA reduce the 2022 renewable volume obligations (RVOs) to the level that was proposed for 2020 (total 17.13 B and advanced 4.63 B) and, additionally, defer implementation of the 250-million-gallon supplemental requirement until a later year.

Sincerely,

A handwritten signature in black ink, appearing to read "David French".

David French  
Senior Vice President  
Government Relations