

# **Attachment 2**

COMMENTS OF THE NATIONAL BIODIESEL BOARD  
ON  
RENEWABLE FUEL STANDARD PROGRAM:  
STANDARDS FOR 2018 AND BIOMASS-BASED DIESEL VOLUME FOR 2019

Proposed Rule, 82 Fed. Reg. 34,206 (July 21, 2017)  
Dkt No. EPA-HQ-OAR-2017-0091

**RFS BIODIESEL VOLUMES:  
RESPONSE TO EPA'S PROPOSED RULE FOR 2018/2019**

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August 31, 2017

I have been asked by the National Biodiesel Board (NBB) to review and respond to certain statements in the EPA's proposed rule, published on July 21, 2017, establishing the required volumes of biofuels under the Renewable Fuel Standard (RFS). The EPA proposes a volume requirement of 2.1 billion gallons for biomass-based diesel (BBD) in 2019, maintaining the same volume requirement as in 2018; and a volume requirement of 4.24 billion (ethanol-equivalent) gallons for advanced biofuels in 2018, which is 40 million gallons less than in 2017. In its proposal, the EPA requests comments on whether it should reduce the BBD volumes below the proposed level to address imports of BBD.<sup>1</sup> The EPA also raises the concern that the proposed RFS volumes for BBD and other advanced biofuels may result in "diversion of advanced feedstocks from other uses or diversion of foreign advanced biofuel from foreign markets."<sup>2</sup> The EPA emphasizes that one of the statutory purposes of the RFS is to promote U.S. energy security and independence by encouraging the domestic production of biofuels.

In summary, based on our most recent research, I come to the following conclusions:

1. RFS volumes for biodiesel and advanced biofuels are not "diverting" biofuel feedstocks away from alternative uses but rather are stimulating rapid growth in the use of new, low-cost, less carbon-intensive feedstocks.
2. Biodiesel imports are not being diverted from other markets by the RFS program; a reduction in RFS volumes would primarily affect U.S. domestic production, as the marginal source of biodiesel supply.
3. U.S. biodiesel capacity is well above current production levels, and it can readily accommodate much higher RFS volumes than EPA proposes.
4. RFS volume requirements for biodiesel have not increased diesel prices; on the contrary, biodiesel has had an important pro-competitive effect on U.S. transportation fuel markets.
5. All of the cost of U.S. biodiesel production represents domestic value-added activities that support rural economies, incomes, and employment, consistent with the statutory

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<sup>1</sup> EPA Proposed Rule, "Renewable Fuel Standard Program: Standards for 2018 and Biomass-Based Diesel Volume for 2019, 82 Fed. Reg. 342016 (July 21, 2017), ("EPA 2017 Proposal"), p. 34212.

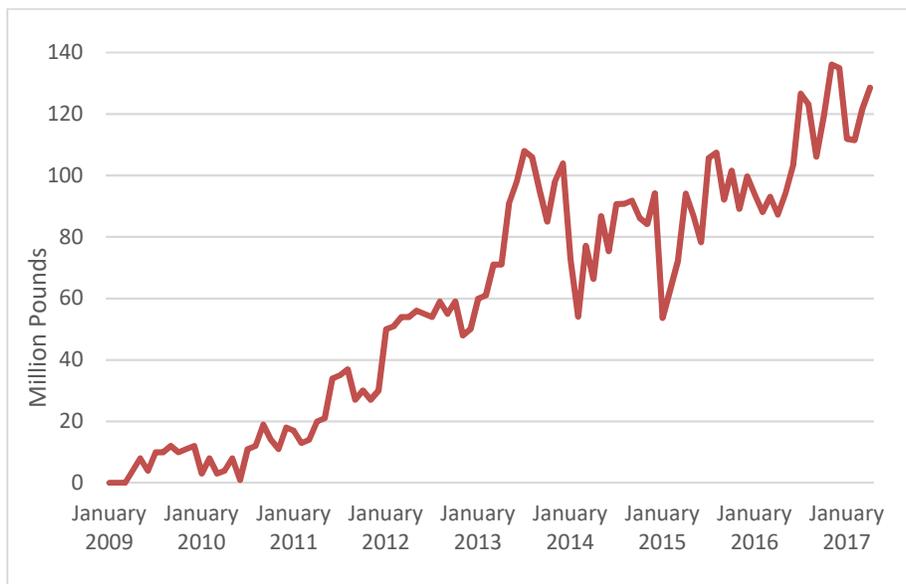
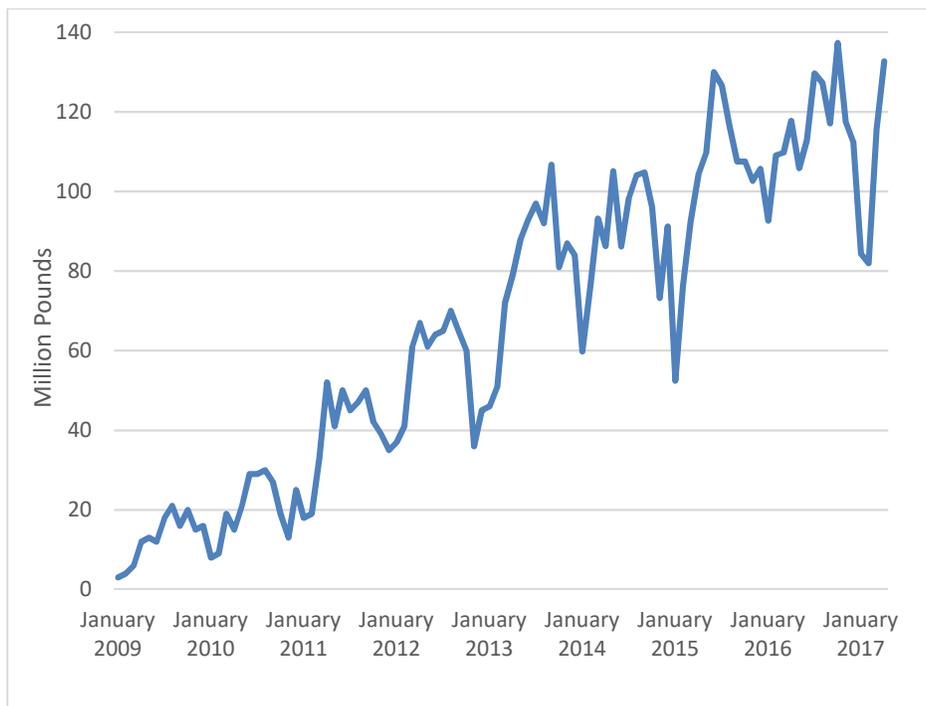
<sup>2</sup> Id., p. 34221.

objectives of the RFS program; the EPA's proposal would unnecessarily restrict the benefits that could be achieved by increasing the biodiesel and advanced biofuel volume requirements in 2019 and 2018, respectively.

## **I. RFS Volumes Are Not Diverting Feedstocks**

The RFS volumes established for BBD and advanced biofuels have not “diverted” advanced biofuel feedstocks away from alternative uses. On the contrary, the increased demand for biodiesel resulting from the RFS volume requirements (and certain state efforts) have stimulated the rapid growth and commercial availability of new biodiesel feedstocks, including non-vegetable oil feedstocks (used cooking oil, tallow, white grease, etc.) and distillers corn oil (DCO). There is not a single fixed stock of feedstocks, with biodiesel competing for its use, as the EPA's comments suggest; rather, the expansion of the biodiesel industry has led to both the growth of new sources of feedstocks, and the absorption of co-products or by-products from other commercial activities.

In recent years, the U.S. biodiesel industry has rapidly diversified both the types of feedstocks it uses and the geographic location of production. Over time, U.S. biodiesel production has increasingly expanded near major sources of demand, alternative feedstock sources, and cost-effective transportation routes. The production of DCO, for example, has expanded rapidly as a direct result of the demand for it as a feedstock from biodiesel facilities. As shown in Figure 1, while the use of DCO as a feedstock was negligible as recently as 2011, its use has grown rapidly to approximately 129 million pounds per month by 2017, accounting for 13% of U.S. biodiesel production (renewable diesel is also produced with DCO, which is not reflected in Figure 1). Similarly, as shown in Figure 2, the amount of yellow grease used in biodiesel production increased from 20 million pounds per month in 2010 to over 120 million pounds per month by 2017. Much of this growth in the use of yellow grease reflects the expansion of biodiesel production facilities closer to sources of supply, i.e., larger population centers, turning what was formerly a waste product – used cooking oil – into a valuable feedstock for advanced biofuels. An important additional benefit of the growth in these alternative feedstocks is that their carbon intensity is also considerably lower than traditional biodiesel feedstocks such as soybean and canola oil (which are themselves already 50% less carbon-intensive than petroleum diesel).

**Figure 1: Distillers Corn Oil Feedstock Used in Biodiesel Production<sup>3</sup>****Figure 2: Yellow Grease Used in Biodiesel Production<sup>4</sup>**

Further expansions of alternative biodiesel feedstocks (i.e., feedstocks other than soybean and canola oil) are likely to continue, particularly if U.S. biodiesel demand continues to grow.

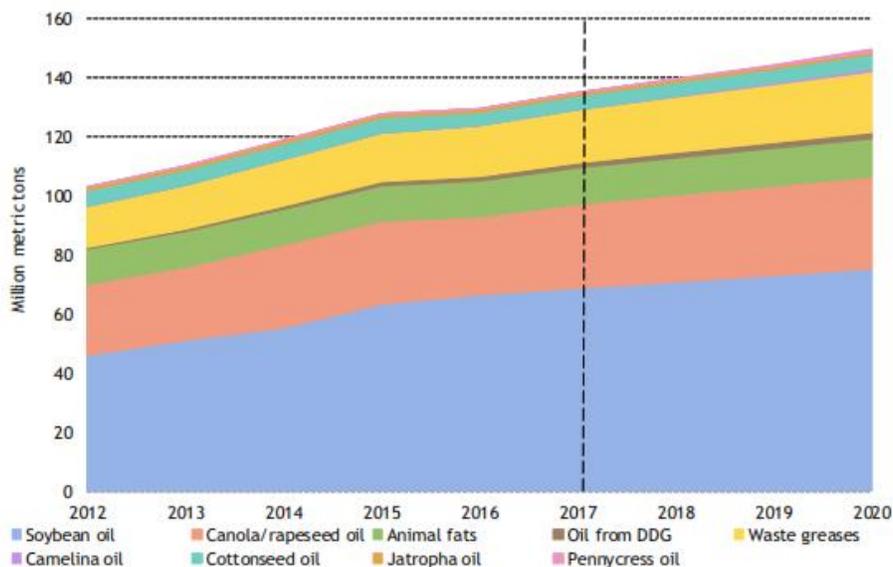
<sup>3</sup> EIA, Monthly Biodiesel Production Report, June 30, 2017, <https://www.eia.gov/biofuels/biodiesel/production/>

<sup>4</sup> Id.

According to a 2016 study by LMC International, as shown in Figure 3, global RFS-qualifying feedstocks are expected to grow from 127 million metric tons in 2015 to 149 million metric tons by 2020 – equivalent to 45 billion gallons of biodiesel.<sup>5</sup> Accounting for non-biodiesel uses of these feedstocks, there is currently sufficient residual feedstocks available to produce 8.6 billion gallons of biodiesel in 2017, rising to 9.8 billion gallons by 2020.<sup>6</sup> One-third of these global feedstocks originate in the U.S. and Canada. The supply of soybean oil alone is expected to grow by 3.2% annually, and restrictions on human consumption of trans fats may increase its availability for biodiesel production even further.<sup>7</sup>

The supply of DCO is also expected to continue to increase, from 1.15 million metric tons (MMT) in 2015, to 1.7 MMT in 2017, and to 2.2 MMT in 2020.<sup>8</sup> Almost all of the recent increase in DCO supply is attributable to investments by ethanol producers to extract DCO from defatting DDG, in response to demand for DCO from biodiesel producers. Nevertheless, currently only approximately 40% of DCO is used as a biodiesel feedstock (the remainder being used primarily for animal feed).<sup>9</sup> Thus, the use of DCO as a biodiesel feedstock is likely to continue to increase, as is the use of other biodiesel-specific feedstocks currently under development (such as pennycress and carinata). The recent expansion of biodiesel production near population centers and other sources of alternative feedstocks also suggests that the use of used cooking oil, waste greases, and animal fats will continue to grow as well.

**Figure 3: Projected Global Supply of RFS Qualifying Feedstocks to 2020 (LMC International)<sup>10</sup>**



<sup>5</sup> LMC International, “Current and Future Supply of Biodiesel Feedstocks,” Study for NBB, June 2016.

<sup>6</sup> Id. p. 4.

<sup>7</sup> Id., p. 3.

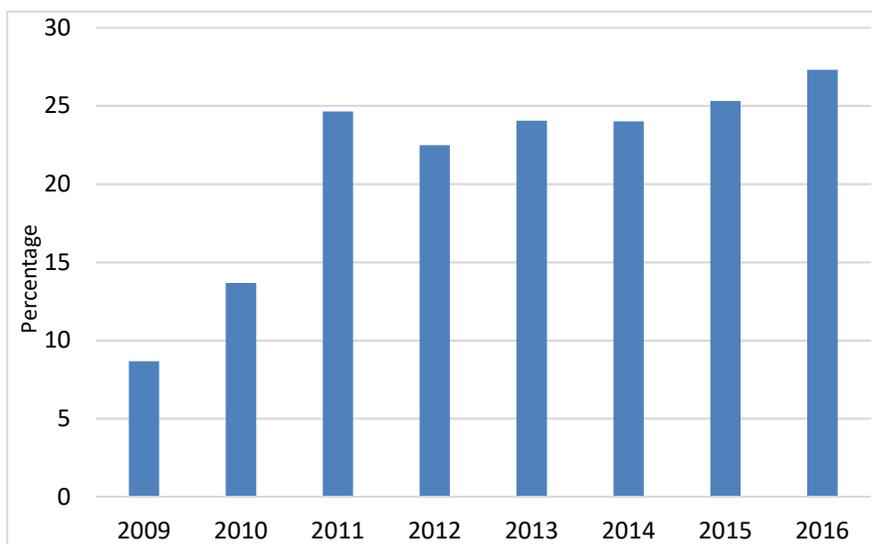
<sup>8</sup> Id.

<sup>9</sup> Id.

<sup>10</sup> Id., reproduced from Diagram 1, p. 2.

Even though U.S. biodiesel production increased by over 450% between 2010 and 2016, the share of soybean oil as a feedstock for BBD has remained relatively constant, accounting for approximately half of biodiesel feedstocks as of 2017. As shown in Figure 4, despite the large amount of soybean oil used in U.S. biodiesel production, biodiesel has accounted for a relatively constant 25% share of soybean oil use since 2011 – reflecting the fact that as the amount of soybean oil used as a biodiesel feedstock has grown, the total supply of soybean oil has grown as well.

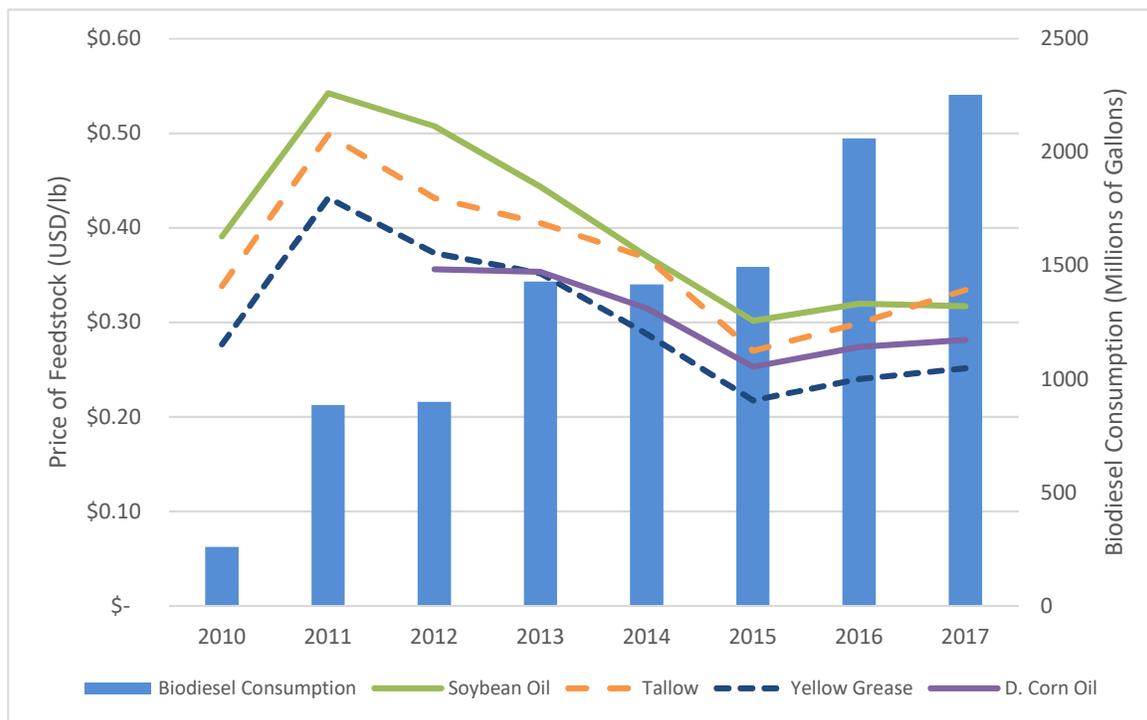
**Figure 4: Share of Soybean Oil Used for Biodiesel Production<sup>11</sup>**



Furthermore, as shown in Figure 5, even with the large increase in U.S. biodiesel consumption in recent years, the price of soybean oil – and other feedstocks – has fallen quite dramatically, particularly since 2011. This indicates that biodiesel does not significantly divert soybean oil from other high-value uses. On the contrary, the U.S. biodiesel industry provides a commercially valuable outlet for a co-product of soybean meal, which is the primary driver of soybean demand. U.S. biodiesel producers have become increasingly important to U.S. farmers and producers of soybean oil, as demand from other buyers, e.g., the U.S. food industry, has declined in response to increased concerns regarding human consumption of trans fats.<sup>12</sup>

<sup>11</sup> USDA Economic Research Service, Table 6 – Soybean Oil Supply, Disappearance, and share of Biodiesel use, June 6, 2017, <https://www.ers.usda.gov/data-products/us-bioenergy-statistics/>

<sup>12</sup> Between 2004 and 2017, U.S. soybean oil food use declined by 18%. Source: USDA.

**Figure 5: Prices of Vegetable Oil Feedstocks<sup>13</sup>**

One of the important features of the recent development of the U.S. biodiesel industry is that it has expanded rapidly outside the traditional soybean-producing areas of the Midwest. Currently, there are biodiesel production facilities in 34 states, over half of which are located outside the Midwest (PADD 2). This geographic expansion, in turn, has led to a diversification of the feedstocks used in biodiesel production, as well as other efficiency benefits, with production located close to sources of demand and an expanded transportation network.

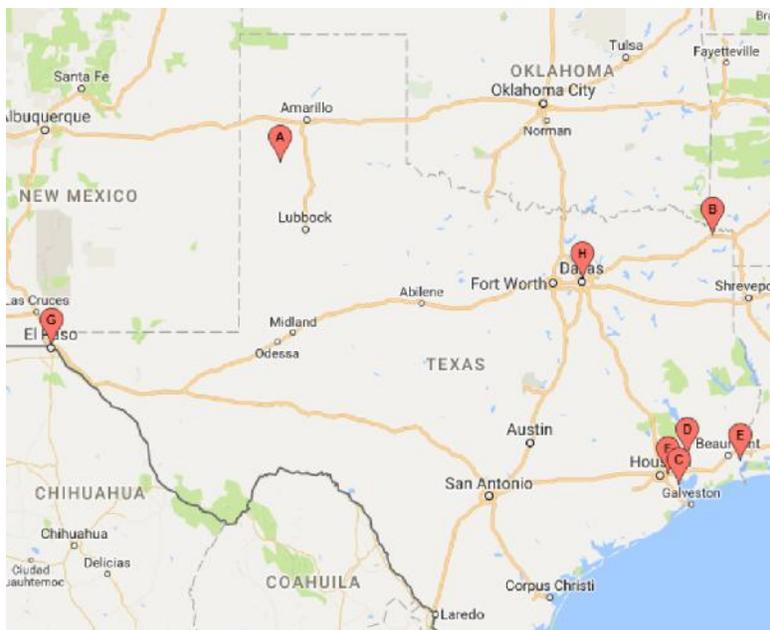
Texas, for example, is currently the largest producer of biodiesel in the United States – resulting not only from the demand stimulus provided by the RFS, but also from a state fuel tax exemption for biodiesel. Not coincidentally, Texas is also the largest consumer of diesel fuel in the United States. Texas has nine major producers of biodiesel and an annual production capacity of over 400 MMgy. However, Texas is a relatively small producer of soybeans. As a result, Texas biodiesel refiners rely primarily on a wide variety of feedstocks, including used cooking oil, canola oil, waste vegetable oil, and animal fats, as shown in Figure 6, below. Only 10% of biodiesel plant capacity in Texas reports using only soybean oil as a feedstock.

<sup>13</sup> USDA Economic Research Service, Table 7 – Oils and fats supply and prices, marketing year, June 6, 2017, <https://www.ers.usda.gov/data-products/us-bioenergy-statistics/>

Figure 6: Texas Biodiesel Production Plants<sup>14</sup>

Company	Capacity (MMgy)	Feedstock Used
Delek Renewables LLC	12	Animal Fats
Double Diamond Energy, Inc.	40	Canola Oil, Soybean Oil, Waste Vegetable Oil
REG New Boston	15	High/Low FFA <sup>15</sup>
REG Houston LLC	35	Low FFA
Agribiofuels LLC	12	Multifeedstock
RBF Port Neches LLC	180	Multifeedstock
World Energy Biox Biofuels	90	Multifeedstock
Global Alternative Fuels LLC	18	Used Cooking Oil
Texas BioTexh Inc.	3	Waste Vegetable Oil, Soybean Oil
Total Capacity	405 <sup>16</sup>	

As shown in Figure 7, Texas's biodiesel production plants are located near the major cities (Houston, Dallas, and El Paso) or on major transportation routes. The location of these plants shows the ability of U.S. biodiesel producers to expand closer to sources of alternative feedstocks, fuel demand, and relatively low-cost distribution and transportation networks, as the overall demand for biodiesel increases.

Figure 7: Map of Texas Biodiesel Production Plants<sup>17</sup>

<sup>14</sup> Biodiesel Magazine, U.S. Biodiesel Plants, May 11, 2017,

<http://www.biodieselmagazine.com/plants/listplants/USA/>

<sup>15</sup> High/Low FFA is an acronym for high or low free fatty acid oils.

<sup>16</sup> The EIA lists the total production capacity of Texas as 474 MMgy, see EIA, Monthly Biodiesel Production Report Table 4, June 30, 2017, <https://www.eia.gov/biofuels/biodiesel/production/>

<sup>17</sup> Biodiesel Magazine, U.S. Biodiesel Plants, May 11, 2017.

The diversification of feedstocks among biodiesel producers is not unique to Texas. California, the state with the second most petroleum consumption after Texas, has a significant amount of biodiesel production capacity, and no significant soybean acreage; as a consequence, none of the biodiesel plants in California rely on soybean oil as a primary feedstock. Even in major soybean-growing areas, there has been a substantial expansion of facilities that use alternative feedstocks, as well as investments in multi-feedstock capabilities. In Illinois, for example, the state with the most soybean acreage in the U.S., only 31% of biodiesel capacity uses soybean oil alone as a feedstock; similarly in Arkansas, only 35% of biodiesel capacity uses soybean oil alone. Indeed, across all of PADD 2, less than half of the biodiesel production facilities report using soybean oil only as a feedstock (19 facilities).

In addition, as the U.S. demand for biodiesel has grown, U.S. producers in all regions have made investments to increase their flexibility in responding to changes in relative feedstock prices. Currently, almost half of U.S. biodiesel facilities are capable of using different feedstocks, depending on the relative prices and local availability of different feedstocks.<sup>18</sup> This increased flexibility in the use of alternative feedstocks has allowed U.S. biodiesel producers not only to reduce CO<sub>2</sub> emissions even further, but also to reduce their production costs. One of the primary reasons why so many U.S. producers made investments to be able to use alternative feedstocks is that the cost of alternative feedstocks has generally been less than that of traditional feedstocks, such as soybean and canola oil. At times, the feedstock cost differential between soybean oil and DCO or yellow grease, for example, has been in the range of \$0.50 – \$1.00/gallon of biodiesel, which provides producers a major opportunity to reduce their feedstock costs, particularly if they are able to procure local feedstocks at reduced transportation costs. This diversification of feedstocks by U.S. biodiesel producers, and their investments in feedstock flexibility, demonstrates the limited risks associated with feedstock “diversions” from an expanded RFS BBD volume requirement.

## **II. RFS Volumes Do Not Divert Biodiesel Imports**

There is no evidence that RFS volumes for BBD have “diverted” imported biodiesel from alternative uses, as the EPA suggests. While imports of biodiesel have increased significantly in recent years, particularly in 2016, this has been the result of several factors other than the RFS program, including antidumping actions against Argentina by its other trading partners in Europe, which has shifted Argentina’s exports from Europe to the U.S. (almost in their entirety). Indeed, if the EPA were to reduce the RFS volume requirement for BBD below the proposed level, this would primarily have a negative effect on U.S. *domestic* production, not imports, since U.S. domestic production is the marginal source of biodiesel supply. A reduction in RFS

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<sup>18</sup> Of the 119 U.S. biodiesel plants listed in Biodiesel Magazine, 46 report “multi-feedstock” as their feedstock. Source: Biodiesel Magazine, U.S. Biodiesel Plants, May 11, 2017, <http://www.biodieselmagazine.com/plants/listplants/USA/>

volumes will put particular pressure on U.S. producers with low capacity utilization, increasing the risk of further market exits and asset liquidations.

Some of the EPA's comments suggest that it is concerned that there may not be sufficient biodiesel that could be produced cost-effectively by U.S. production facilities to fully supply the amount of the RFS requirements, if U.S. imports were to decline substantially. There is no foundation for this concern. There is a large amount of unused U.S. production capacity available to supply BBD far in excess of the EPA's proposed volume requirement, even if imports were to drastically decline. U.S. biodiesel production is currently operating at less than 50% of available registered capacity of 4.2 billion gallons.<sup>19</sup> As discussed above, there are also ample feedstocks to support expanded U.S. production, both from traditional vegetable oil feedstocks, as well as from alternative feedstocks.<sup>20</sup> Soybean oil remains the largest feedstock for U.S. biodiesel, and as a co-product, its supply is determined by the increased demand for soybean meal used in animal production – which in turn is driven by the increasing global demand for meat. As the EPA also appears to recognize, there are no significant distribution barriers that would prevent the U.S. from increasing the amount of biodiesel consumption far in excess of the EPA's proposed requirements,<sup>21</sup> an issue we analyzed in depth in response to the EPA's 2016 proposed RFS volumes.<sup>22</sup>

This indicates that there is a substantial unexploited opportunity to increase further the penetration of biodiesel in the U.S., regardless of what occurs with imports. Indeed, the greater danger is that EPA's proposed 2019 volume requirement of 2.1 billion gallons for BBD is far too low, as it may lead to the shuttering of existing unused U.S. capacity, or reduced investments in capacity, feedstock flexibility, production efficiency, and distribution infrastructure. EPA's failure to increase the BBD volume requirement in 2018 to an amount commensurate with the U.S. industry's ability to produce BBD – and the ability of fuel markets to absorb BBD – is thus contrary to Congress' statutory objectives of the RFS to promote energy independence and increase rural employment.

### **III. Biodiesel Has a Pro-Competitive Effect on Retail Fuel Prices**

There is no evidence that increased U.S. consumption of biodiesel resulting from the RFS has led to higher wholesale or retail fuel prices. Changes in fuel prices are caused primarily by changes in the price of crude oil (as well as changes in demand for fuel and taxes). The U.S. EIA estimates that a \$1/barrel change in the price of crude results in a \$1/barrel (or \$0.024/gallon)

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<sup>19</sup> EPA 2017 Proposal, p. 34234, fn. 100.

<sup>20</sup> LMC International, "Current and Future Supply of Biodiesel Feedstocks," Study for National Biodiesel Board, June 2016.

<sup>21</sup> EPA 2017 Proposal, p. 34224.

<sup>22</sup> See report by David W. DeRamus, Ph.D. and Collin Cain, M.Sc. "Biodiesel Distribution in the U.S. and Implications for RFS2 Volume Mandates," July 11, 2016.

change in the price of retail gasoline within 2 weeks.<sup>23</sup> Figure 8 demonstrates this nearly lock-step relationship between crude oil prices and diesel prices. The dramatic fall in crude oil prices in the second half of 2014 led to a corresponding decline in U.S. diesel prices, which have remained low ever since.

**Figure 8: Crude Oil and Wholesale Diesel Prices<sup>24</sup>**



Refinery outages also cause periodic spikes in fuel prices, as demonstrated most recently by Hurricane Harvey and the resulting shutdown of more than 15% of the nation’s refining capacity on the Gulf Coast.<sup>25</sup> While the situation is still unfolding as of the date of this report, some analysts estimate that petroleum refinery shutdowns caused by Hurricane Harvey may result in increased fuel prices of \$0.25/gallon or more in certain regions.<sup>26</sup> As the Joint Committee of the

<sup>23</sup> U.S. EIA, “What Drives U.S. Gasoline Prices?” October 2014, p. 5, available at: <https://www.eia.gov/analysis/studies/gasoline/pdf/gasolinepricestudy.pdf>.

<sup>24</sup> Source: Rack diesel prices from Laredo, TX reported in RACKV7N PY0 SL6 T1 Index and Brent crude oil prices reported in CO1 Comdty, via Bloomberg LP, accessed August 30<sup>th</sup>, 2017.

<sup>25</sup> Wall Street Journal, “Gasoline Rises After Harvey Shuts U.S. Refiners,” Aug. 28, 2017, available at: <https://www.wsj.com/articles/gasoline-prices-surge-after-hurricane-harvey-1503911874>.

<sup>26</sup> Chicago Tribune, “Harvey is Pushing Gasoline Prices Higher, Even as Oil Remains Cheap,” Aug. 30, 2017, available at: <http://www.chicagotribune.com/business/ct-harvey-us-gas-prices-20170830-story.html>.

U.S. Congress has noted in analyzing prior price spikes caused by petroleum refinery disruptions, the economic cost of such refinery disruptions can be substantial.<sup>27</sup>

In contrast, the RFS program has not resulted in any measurable increase in retail fuel prices, and there is no evidence to suggest that further increases in biodiesel or advanced biofuel volumes are likely to do so, either. Over the past several years, prices for D4 RINs (and other RINs) have fluctuated significantly at certain times. Despite periodic fluctuations in D4 RIN prices, however, average wholesale and retail prices of diesel have not changed in response to these RIN price changes, as shown in Figure 9. While some of this may be attributable to the low average blend percentage of biodiesel in retail sales, there is a similar lack of any measurable effect of ethanol RIN prices (D6) on gasoline prices, despite its considerably higher level of penetration.

**Figure 9: RINs and Retail Diesel Prices**



Indeed, with 2.5 billion gallons of biodiesel added to the U.S. fuel supply in 2016 (in addition to over 14 billion gallons of ethanol), it is reasonable to expect that the biodiesel industry provides a procompetitive presence in U.S. fuel markets – i.e., a price suppressing effect. The procompetitive effect of biodiesel (and other biofuels) on U.S. fuel markets is likely amplified by the fact that it is produced by a relatively large number of producers in many different geographic locations. Such increased geographic diversity of supply has led to reduced price

<sup>27</sup> Joint Economic Committee (U.S. Congress), “Gasoline Price Spikes and Their Impact on the Economy,” May 2014, available at: [https://www.jec.senate.gov/public/\\_cache/files/ee359eda-aba4-403d-be49-692e71c96c34/klobuchar-report-on-gasoline-price-spikes.pdf](https://www.jec.senate.gov/public/_cache/files/ee359eda-aba4-403d-be49-692e71c96c34/klobuchar-report-on-gasoline-price-spikes.pdf).

volatility for other fuels. For example, increased production of natural gas from shale formations in different parts of the country has led to both lower natural gas price levels, and lower price *volatility* resulting from disruptions caused by hurricanes (unlike gasoline and diesel prices, which are highly sensitive to Gulf Coast refinery disruptions, as noted above).<sup>28</sup> Directionally, as the volume and share of biodiesel (and other biofuels) in U.S. transportation fuels increases, it is reasonable to expect similar reductions in retail price volatility for transportation fuels.

Despite its relatively small level of overall penetration, biodiesel already appears to have had a significant procompetitive effect at the retail distribution level. As demonstrated in Figure 10, higher biodiesel blends are now available on almost all of the primary truck transportation routes in the U.S., even in areas that are far from production locations or major distribution terminals. As described in our 2016 report on biodiesel distribution, several of the largest truck stop retailers, and many other smaller retailers, have invested in extensive blending infrastructure – including not only “splash” blending, but also retail-level blending operations – in order to take advantage of the blenders’ tax credit and the RIN value of purchased biodiesel.<sup>29</sup> These efforts of many large U.S. truck retailers to blend, distribute, and sell higher biodiesel blends reflect the competitive advantage that higher biodiesel blends provide them. It would be economically irrational for these retailers to increase voluntarily the amount of biodiesel sold in their diesel blends if they were forced to increase prices to consumers as a result. To the contrary, the reason retailers are offering these higher biodiesel blends is precisely because they enable them to compete more effectively in terms of prices, relative to other retailers selling diesel with lower amounts of biodiesel.

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<sup>28</sup> Liam Denning, “Katrina, Rita and Harvey Tell Shale’s Story,” BloombergGadfly, Aug. 28, 2017; available at: [https://www.bloomberg.com/gadfly/articles/2017-08-28/hurricane-harvey-energy-impact-dulled-by-shale-rise?utm\\_content=gadfly&utm\\_campaign=socialflow-organic&utm\\_source=twitter&utm\\_medium=social&cmpid%3D=socialflow-twitter-gadfly](https://www.bloomberg.com/gadfly/articles/2017-08-28/hurricane-harvey-energy-impact-dulled-by-shale-rise?utm_content=gadfly&utm_campaign=socialflow-organic&utm_source=twitter&utm_medium=social&cmpid%3D=socialflow-twitter-gadfly).

<sup>29</sup> Report by David W. DeRamus, Ph.D. and Collin Cain, M.Sc. “Biodiesel Distribution in the U.S. and Implications for RFS2 Volume Mandates,” July 11, 2016, pp. 17 – 21.

**Figure 10: U.S. Retailers Selling Biodiesel Blends of B10 to B20<sup>30</sup>**



#### **IV. The U.S. Biodiesel Industry Supports Rural Economies, Income, and Employment**

Since a primary objective of the RFS program is to increase U.S. rural employment and incomes, it is important to note that all of the cost of U.S. biodiesel production represents U.S. value-added activities: a gallon of soybean oil, distillers corn oil, tallow, or used cooking oil purchased by a biodiesel producer represents a valuable additional income stream to U.S. farmers, processing plants, and restaurants. Feedstocks currently account for approximately \$2.12 of the cost of a gallon of biodiesel (on average in 2016), while crude oil accounts for \$1.10 of the cost of a gallon of diesel (given the current historically low crude oil prices). However, the U.S. still imports approximately 50% of the crude oil it consumes, while almost all of the feedstocks used to produce U.S. biodiesel are sourced in the U.S. – from an increasingly diverse range of producers spread over a wide geographic area.

Minnesota provides an important case study to assess the contribution of biodiesel to local value-added activities and rural employment. It also provides an important indicator of the ability of the U.S. to increase biodiesel consumption above 5% of total diesel consumption, even in cold-weather climates, and even in areas with a relatively limited distribution and blending infrastructure for biodiesel (e.g., in rural areas of Minnesota relatively far from the Minneapolis-St. Paul metropolitan area). According to Minnesota’s biodiesel blend mandate, during April through September, diesel fuel sold in the state must contain at least 10% biodiesel, increasing to 20% in 2018; during the remainder of the year, diesel fuel must contain at least 5% biodiesel.

<sup>30</sup> Source: NBB; Company websites.

Minnesota is the 10th largest producer of biodiesel in the U.S., producing over 74 million gallons annually, of which 33 million gallons is from soybean oil, and 41 million gallons is from animal fats, greases, and other oil feedstocks. According to a Minnesota Department of Agriculture study,<sup>31</sup> the state's economic benefits of biodiesel include:

- ) a total economic impact (direct, indirect, and induced) of approximately \$1.7 billion (in terms of increased economic output);
- ) the creation of 5,397 jobs in the state – including farm and non-farm jobs in the manufacturing, trade, service, and transportation sectors;
- ) an expanded range of value-added activities for Minnesota's top two crops, instead of simply marketing them as raw commodities (12% of its total soybean oil and 29% of its distillers corn oil is processed into biodiesel); and
- ) a 60% increase in Minnesota's rendering output of fats, oils, and grease since 2010.

The last statistic is particularly notable, as it demonstrates how the recent growth in biodiesel demand has encouraged the development of alternative feedstocks, even in areas of the country with large volumes of available soybean oil and DCO feedstocks.

As noted above, the development of alternative feedstocks has occurred in concert with the increased geographic diversity of biodiesel production, as well as with the rapid extension of wholesale and retail distribution networks to meet demand nationwide. Economic stimulus provided by the range of related value-added activities – from farming and production to local distribution – now extends to communities well beyond the Midwest corn and soybean belts. This broad distribution of economic benefits, resulting from competitive market participants responding to RFS volumes, is a key indicator of the success of the RFS program.

## V. **Summary and Conclusions**

In summary, there is no basis for EPA's concerns regarding the potential "diversion" of advanced feedstocks by the U.S. biodiesel industry away from other higher-value uses. On the contrary, biodiesel producers provide a valuable market for a wide range of U.S. feedstock producers. The expansion of the U.S. biodiesel industry, supported by past increases in RFS volume requirements, has led to the development of new sources of feedstocks, as well as the expansion of existing sources. Indeed, the substantial increase in domestic value-added activities resulting from expanded U.S. biodiesel production is a central statutory objective of the RFS. The EPA's current proposed RFS volumes of 2.1 billion gallons of biodiesel in 2019 and 4.24 billion (ethanol-equivalent) gallons of advanced biofuels in 2018 are far below the amounts that the U.S. industry can produce, and that the U.S. economy can absorb, without any economic disruption. If the EPA fails to increase the RFS volumes for biodiesel and advanced biofuels, it

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<sup>31</sup> Minnesota Department of Agriculture, "Economic Impact of the Minnesota Biodiesel Industry," May 2017, <https://www.mda.state.mn.us/~media/Files/renewable/biodiesel/biodieselimpacrpt.pdf>

will be a missed opportunity to increase rural employment, increase farm and other incomes, promote domestic investment, and expand an important domestic industry – all while reducing CO2 emissions.