July 31, 2020

Submitted by:
Renewable Fuels Association
Geoff Cooper
gcooper@ethanolrfa.org
(636) 594-2284
16024 Manchester Road
Ellisville, MO 63011

U.S. Department of Agriculture
Office of Research, Education, and Economics
Submitted via portal: http://www.regulations.gov

RE: Response to Request for Information (RFI)

The Renewable Fuels Association (RFA) appreciates the opportunity to provide these comments in response to the Office of Research, Education, and Economics' (REE) "Solicitation of Input from Stakeholders on Agricultural Innovation." [Docket No. USDA-2020-0003]

First organized in 1981, RFA serves as the prominent voice of advocacy for the renewable fuels industry. Its mission is to drive expanded demand for American-made renewable fuels and bioproducts worldwide. RFA's 300-plus members produce billions of gallons of renewable fuel and millions of tons of valuable co-products each year and are working to help America become cleaner, safer, more energy secure, and more economically vibrant.

As an initial matter, RFA strongly supports the United States Department of Agriculture's (USDA) Agriculture Innovation Agenda (AIA) initiative and encourages USDA to continue applying appropriate resources and attention to this important initiative.

American growers and renewable fuel producers have a long history of rising to meet ambitious goals and taking on daunting challenges, and we are excited and eager to work with the Administration to make this new vision a reality. Not only will the AIA initiative's Renewable Energy benchmarks, if achieved, stimulate long-term economic growth in rural America, it will also enhance sustainability, improve environmental quality, and provide lower costs and greater consumer choice at the pump. The AIA's Renewable Energy goals are proactive and ambitious, and the USDA should be applauded for undertaking such a forward-looking initiative that provides clear benefits to American consumers.

RFA has worked had to build a bold, sustainability-driven vision for the future of agriculture and transportation, and through our membership, we have positioned ourselves to lead that effort as advocates. On behalf of the nation's ethanol producers, we are fully committed to collaborating with USDA to sustainably increase the production and availability of renewable fuels to achieve nationwide average blend rates of E15 in 2030 and E30 in 2050.
The following answers are provided in response to the specific questions posed in the RFI.

1. **What agricultural commodity, group of commodities, or customer base does your response pertain to or would benefit?**

RFA's member companies are engaged in the production and distribution of renewable fuels and related co-products. Today, ethanol is the primary renewable fuel produced and marketed by our member companies. However, RFA member companies are also engaged in the production of biodiesel and renewable diesel from corn distillers oil, and other member companies are working to scale up production of biobutanol.

Corn and grain sorghum are the main commodity feedstocks processed into renewable fuel by our member companies, but our members also use food and beverage waste, cellulosic crop residue, and waste sugars to produce renewable fuels. Our member companies also produce and market millions of tons each year of co-products like distillers grains (animal feed), corn distillers oil (animal feed/biodiesel feedstock, and captured carbon dioxide (used in food/beverage, wastewater treatment, medical, and many other applications).

Thus, our responses primarily represent the perspectives of fuel ethanol producers and marketers/distributors, as well corn and sorghum farmers who sell their feedstock to the ethanol industry.

In the comments to follow, we offer perspective on the potential barriers to a nation-wide blend rate of E15 in 2030 and E30 in 2050.

2. **What are the biggest challenges and opportunities to increase productivity and/or decrease environmental footprint that should be addressed in the next 10- to 30-year timeframe?**

    I. **Increasing Productivity in Crop and Ethanol to Meet Volume Requirements Sustainably**

U.S. ethanol production increased tenfold between calendar year 2000 and 2019, from 1.6 billion gallons to 15.8 billion gallons. Today, the ethanol industry has the installed capacity to produce approximately 17.3 billion gallons per year. To achieve a nationwide blend rate of E15 in 2030 could require roughly 19 billion gallons of ethanol, and domestic consumption could need to expand to 35 billion gallons to meet an E30 blend nationwide in 2050. Additionally, the U.S. is a net exporter of ethanol.

Corn has been the dominant feedstock for ethanol production to date, though the feedstock mix could diversify in the future, especially by 2050. The expansion of corn usage to date has occurred in a sustainable manner, due significantly to the remarkable increase that has occurred in agricultural productivity.

Between crop-marketing year 2000/01 and 2018/19 (the last complete marketing year), the amount of corn used for fuel ethanol production increased from 630 million bushels to 5.4 billion bushels. However, accounting for the nearly one-third of each bushel that is returned to the market in the form of coproducts—primarily distillers grains—that are used for livestock feed, the net amount of corn used to produce ethanol rose from 437 million bushels to 3.8 billion bushels. Over the same period, the

ethanol conversion rate rose from approximately 2.6 gallons per bushel to 2.9 gallons per bushel (12%), while corn yields increased from 136.9 bushels per acre to 176.4 bushels per acre (29%).

The agriculture sector was able to accommodate this significant growth while planted corn area remained significantly below the historical levels of 100-113 million acres experienced in the early and mid-1930s. The incremental acreage needed generally came from other crops, as total cropland declined from 434 million acres in 2002 to 396 million acres in 2017 according to the *Census of Agriculture*. This proves that the increased corn supply needed to satisfy growing ethanol demand has been met entirely through intensification—not extensification—of crop production (i.e., yield increases and crop switching). [1]

More specifically, the number of acres needed to grow the corn used in ethanol production has been stable over the last decade. On a gross basis, the planted area needed to support ethanol production was 35.6 million aces in 2010/11 but had receded to 33.3 million aces by 2018/19. Accounting for the return of coproducts to the market, the net area required declined from 24.9 million aces in 2010/11 to 23.6 million aces in 2018/19. Crop yields increased 16% over this period, essentially offsetting the expansion in the number of bushels processed.

II. Stimulate More Demand and Reduce More Emissions from Current Policy: Renewable Fuel Standard (RFS)

Currently, the RFS is the only federal statute that requires a lower-carbon transportation fuel supply. According to the U.S. Department of Energy and USDA, corn ethanol from a typical biorefinery reduces overall greenhouse gas emissions by 40-45% compared to an energy-equivalent amount of gasoline.[2] Today, the United States leads the world in renewable fuel production, yet the transportation sector is also the country's largest source of global warming pollution, mainly due to the combustion of gasoline and diesel fuel. The clear successes of the RFS program present an obvious existing policy platform to build upon.

The RFS has resulted in aggregate GHG emissions reductions from the use of biofuels, which exceed the original projections from the Environmental Protection Agency's (EPA) final rule for the first 10 years of its implementation. The RFS has resulted in significant GHG reductions, with cumulative GHG savings of nearly 600 million metric tons over the period of implementation.[3] The GHG reductions are due to the greater than expected carbon savings from ethanol and other renewable fuels. These emissions savings occur despite cellulosic biofuels having not met the Renewable Fuel Standard's ambitious production targets. In addition, EPA woefully underestimated the carbon intensity of the petroleum baseline against which biofuels are compared. Studies by Life Cycle Associates and the Carnegie Institute have shown that the GHG emissions from U.S. petroleum are much higher than the EPA anticipated when it

---

[1] *See* Babcock and Iqbal (2014). "Using Recent Land Use Changes to Validate Land Use Change Models." Center for Agricultural and Rural Development (CARD). Staff Report 14-SR 109. Research sponsored by Renewable Fuels Foundation and the Bioindustry Industry Center

[2] The greenhouse gas benefits of corn ethanol – assessing recent evidence, Lewandrowski, Rosenfeld, Pape, Hendrickson, Jaglo, & Moffroid, 2019.

[3] GHG Emissions Reductions Due to the RFS: A 2018 Update, Prepared for the Renewable Fuels Association by Lifecycle Associates, February 19, 2019

conducted lifecycle analysis for the RFS (Boland, 2014; Gordon, 2012, 2015).[4] A recent study estimated the GHG intensity of the actual mix of renewable fuels used to meet the RFS2 over the past 11 years,

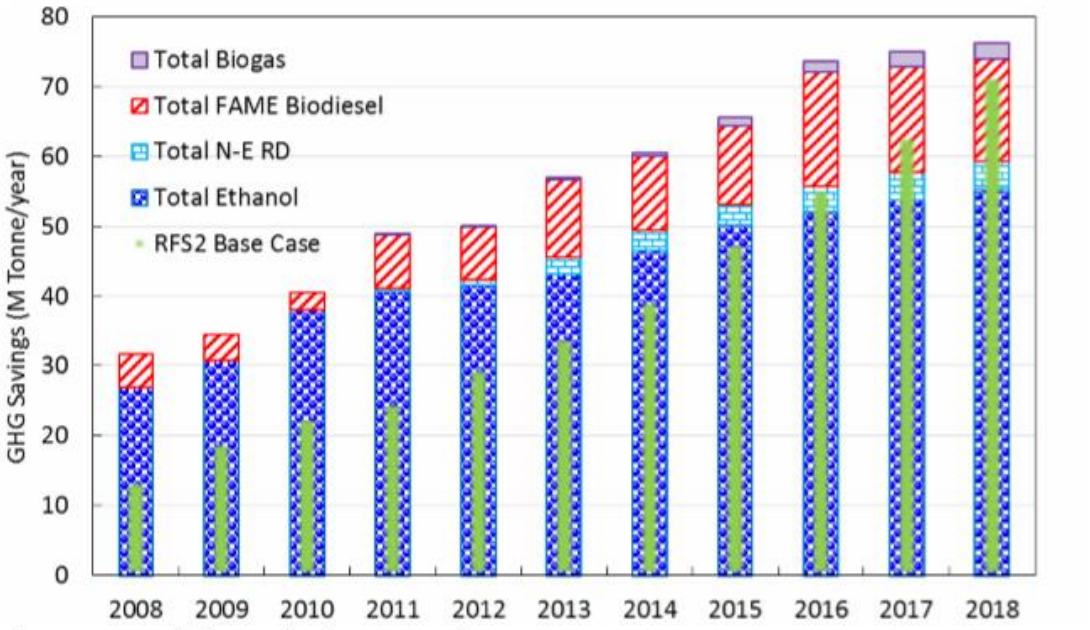


Figure 1. GHG Emissions Reductions Due to the RFS2.

then determined the aggregate GHG reduction attributable to the RFS2.

Figure 1 shows the total emissions reductions from the RFS2 compared with the GHG reductions projected from the rule.[5]

The success of USDA's stated goals depends critically on the proper implementation, according to statute and Congressional intent, of the RFS. Historically, EPA's mismanagement of the RFS, both in the current Administration and in the previous Administration, has undermined expansion of clean, home grown renewable fuels. Due to EPA's mismanagement of the RFS, U.S. ethanol production fell in 2019 for the first time in more than 20 years. At 15.8 billion gallons, last year's output was down 300 million gallons from the record achieved in 2018—and even below 2017's production volume.

Simply put, the ongoing legal matters stemming from EPA's negligence on the RFS were the main culprit for the decrease in renewable fuel demand. In ruling on a petition filed by the Renewable Fuels Association, National Corn Growers Association, National Farmers Union, and American Coalition for Ethanol, a panel of Tenth Circuit Court judges unanimously found on January 24 that EPA had exceeded its authority in granting certain exemptions.[6] The court ruled that EPA may only consider granting waivers to refiners who have received continuous extensions of their exemptions each compliance year. The judges also said EPA may only grant waivers to refiners who demonstrate the RFS itself is the cause

[4] Carbon Intensity of Marginal Petroleum and Corn Ethanol Fuels, Boland & Unnasch, 2014

[5] GHG Emissions Reductions Due to the RFS: A 2018 Update, Prepared for the Renewable Fuels Association by Lifecycle Associates, February 19, 2019

[6] 948 F.3d 1206 (10th Cir. 2020).

of "hardship," not some other factor, and noted that EPA's own analysis shows that refiners pass compliance costs on to their customers. EPA's own data show that no more than seven small refineries could have possibly received continuous extensions of their exemptions. Yet, EPA has recently granted as many as 35 exemptions in a single year.

Now, in a brazen attempt to circumvent the decision rendered by the court, refiners are requesting exemptions for past years so that they may claim they are eligible for future waivers because their exemption was "continuously extended" by EPA. These petitions for past compliance years are no more than a thinly veiled attempt to circumvent the Tenth Circuit's decision in *Renewable Fuels Association v. EPA*. RFA urges USDA to clarify with EPA that small refinery exemption extension petitions for past compliance years are inconsistent with the RFS and will not be entertained by EPA. We also urge USDA to encourage EPA to expeditiously deny any petitions that have already been submitted. Clearly, a change in practice to allow petitions for past compliance years would completely disrupt and undermine the RFS program and further destabilize RIN markets. The endless uncertainty of small refinery exemptions being available for any compliance year since the program's inception, whenever a refinery chooses to petition – be it five, 10, or more years later – would be devastating to farmers and the ethanol industry.

The recent surge in small refinery exemptions has already caused substantial demand loss and economic hardship for U.S. ethanol producers. Granting exemptions for past compliance years would result in further losses to renewable fuel volume requirements, in addition to the more than four billion gallons lost due to unlawfully issued waivers for compliance years 2016-2018. This would exacerbate the economic harm that the ethanol industry is already experiencing due to EPA's issuance of unlawful small refinery exemptions.

EPA should immediately reject these gap-year waivers and should take steps to enforce the 10th Circuit Court ruling limiting waivers from the Renewable Fuel Standard nationally. If EPA makes these announcements in a timely manner, EPA will send a positive market signal that RFS demand will not be undermined in the future.

III. Approaches to Facilitating Greater Demand from Future Policy

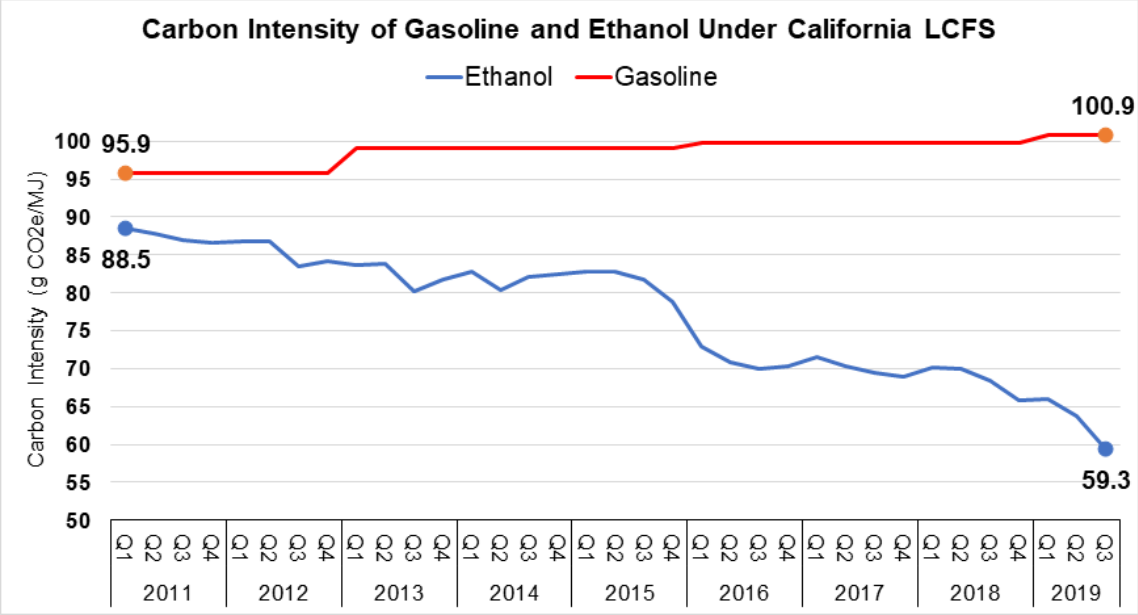
From a legislative standpoint, RFA believes building upon the success of the RFS with a Low Carbon Octane Standard (LCOS) would be the most effective means of maximizing carbon reductions from transportation in the near- and mid-term and would minimize impacts to low- and middle-income families, create family sustaining jobs, and advance environmental justice. Ethanol is the lowest cost liquid fuel on the market, creates good jobs across many economic sectors, and provides a solution that is available immediately to significantly reduce GHG emissions and harmful tailpipe pollution today.

The California Low Carbon Fuel Standard (or LCFS), part of California's Global Warming Solutions Act of 2006, has already shown that carbon pricing can drive technology innovation and emissions reductions. The LCFS is a statewide policy designed to reduce the lifecycle carbon intensity (or CI) of transportation fuels—that is, the total greenhouse gas emissions from production to consumption, including raw materials, transportation, and processing. It achieves this goal by setting a regulatory target for fuel carbon intensity. Market forces then determine the most efficient way to meet or exceed the annual CI

reduction targets. It is designed to help clean the air, protect the environment, and drive the development of clean, low-carbon fuels.

The LCFS program's credit trading mechanism allows market forces to drive carbon reduction in the manner that is most economically efficient. Fuel producers and suppliers who exceed CI reduction requirements are rewarded, while other market participants may choose to meet the standards by purchasing surplus credits from others. Midwest ethanol plants have responded to the signal sent by the LCFS credit market and invested billions of dollars in technologies that significantly reduce the CI of ethanol.

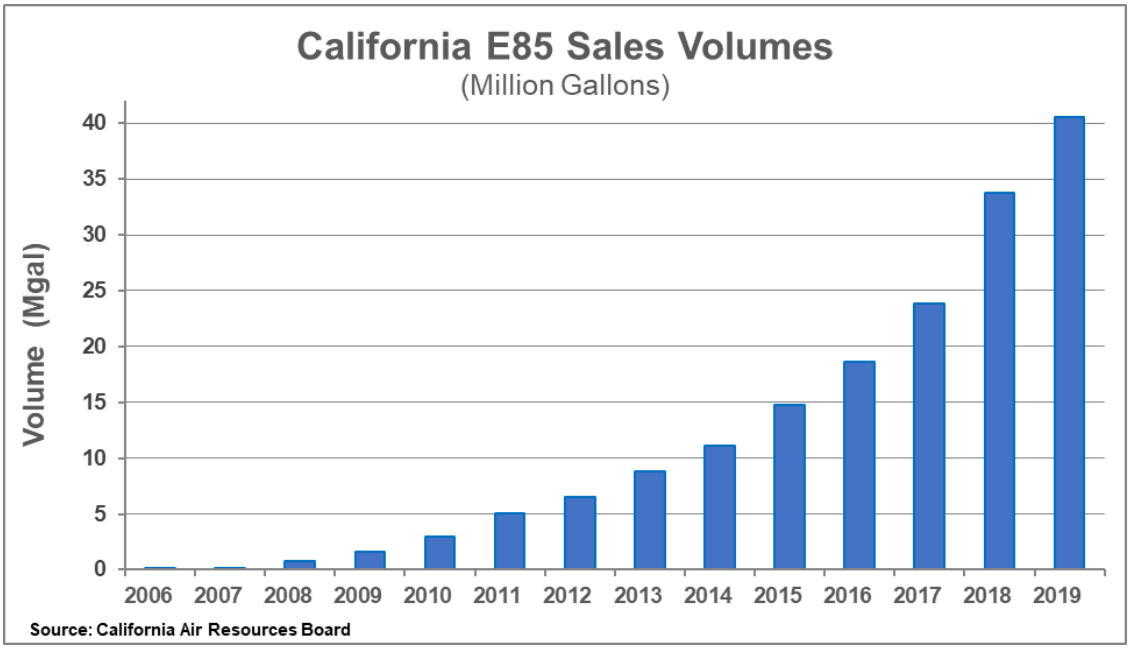
As shown in the chart below, creating an economic incentive for carbon reduction has resulted in a significant improvement in the lifecycle carbon performance of ethanol consumed in California under the LCFS. According to data from the California Air Resources Board, the average carbon intensity of ethanol has fallen nearly 30% since the program began in 2011. Meanwhile, the petroleum portion of gasoline in California has become 5% more carbon intensive over the same time period. In the most recent quarter for which data is available, the average CI of ethanol used in California was 37% lower than the CI of California gasoline.



Since the beginning of the LCFS, ethanol use has resulted in cumulative 24 MMT of CO2 equivalent reduction in the state, meaning ethanol has contributed more GHG reduction under the LCFS than any other fuel. In fact, the GHG reductions attributable to ethanol are roughly five times larger than the GHG reductions resulting to date from electrification of the California on-road fleet.

The value of LCFS credits generated by ethanol since 2011 is estimated to be more than $1.5 billion which equates to roughly 12 cents per gallon of ethanol. Some of this value is captured by the ethanol producer, while some is shared with the supply chain and consumers to encourage increased use of ethanol blended fuels. For example, E85 consumption has increased dramatically in California, as carbon

pricing has allowed E85 suppliers and retailers to share the value of carbon credits with consumers (in the form of deeply discounted fuel).



Clearly, the California LCFS has provided incentives to reduce the carbon intensity of ethanol and reinvest in technologies that increase efficiency. RFA has always prioritized the inclusion of approaches that would reward farmers and producers for reducing the carbon intensity of production practices and we look forward to continuing engagement and interaction with policymakers as the next steps are taken legislatively and at the executive level.

IV. Continue USDA's Infrastructure Investments that Expand Biofuel Deployment and Sell Higher Biofuel Blends

RFA appreciates USDA's great interest in working with retailers, marketers, terminal operators, farmers, and ethanol producers in expanding the infrastructure needed to increase higher blends of ethanol sales. Unlike previously targeted funding programs, which largely focused on retail only, with the new Higher Blends Infrastructure Incentive Program (HBIIP), USDA has broadened its scope to a wide range of infrastructure options, such as retail fueling stations, convenience stores, hypermarket fueling stations, fleet facilities, and similar entities; equipment providers, equipment installers, certification entities and other stakeholder/manufacturers (both upstream and down); fuel distribution centers, including terminals and depots; and those performing innovative research, and/or developing enabling platforms and applications in manufacturing, energy production, and agriculture. Already, RFA has held a series of seminars for potential applicants for the program and stands ready to continue partnering with USDA to make sure this program is a success.

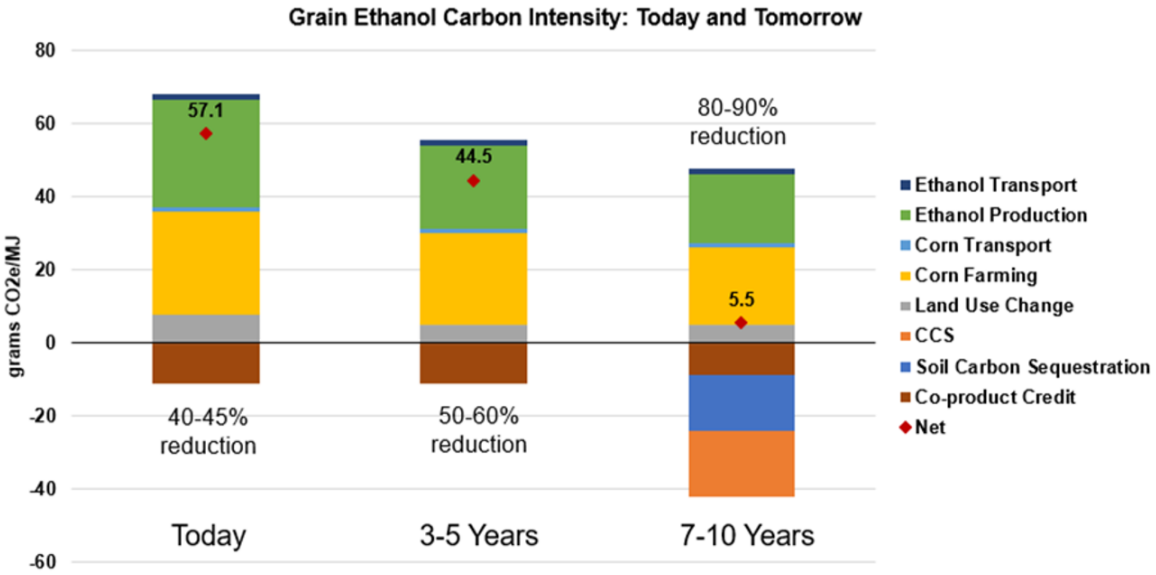
USDA should also be lauded for its March commitment to use more ethanol in its own fleet of vehicles. RFA was supportive when USDA made the announcement and that its own analysis predicted that this move could increase E15 use by 9 million gallons and E85 by 10 million gallons.

V. One way in which the renewable fuels industry has been working to further reduce carbon emissions, particularly from the ethanol production process, is through the adoption of carbon capture, sequestration (CCS) and utilization technologies.

There is vast potential for CCS technologies to permanently sequester or recycle biogenic carbon dioxide emissions associated with the fermentation process for ethanol. At today's current level of production, the U.S. ethanol industry generates roughly 40-50 million tons of biogenic carbon dioxide annually from the fermentation step of the production process. This represents one-third of the total lifecycle biogenic carbon dioxide emissions from ethanol production and use, with the remaining two-thirds coming equally from consumption and conversion of animal feed coproducts into GHG emissions and combustion of fuel ethanol in light duty vehicles.

While roughly 15-20 percent of the industry's carbon dioxide emissions from fermentation are today being captured and sold into industrial markets for bottling, dry ice and other uses, there continues to remain a significant amount of biogenic carbon dioxide that is ultimately vented back into the atmosphere. It is this remainder of carbon dioxide that the ethanol industry seeks to eliminate or reduce, or otherwise permanently sequester, through utilization of new and future technologies. These technologies include using the carbon dioxide emissions to extract other forms of energy from the ground, such as through enhanced oil recovery, or otherwise being converted into a litany of other useful products sourced from carbon dioxide.

Today, the ability of ethanol plants to sequester carbon dioxide emissions from fermentation is limited to a small number of areas with a particular geological profile that allows for sequestration to occur through direct injection in the ground. Moreover, only a handful of plants are capable of supplying carbon dioxide for enhanced oil recovery efforts given their location with respect to EOR activity. However, the RFA and its members have been committed to expanding the utilization of carbon dioxide emissions in an effort to continue to reduce the carbon intensity of ethanol production and has joined the Carbon Capture Coalition, to help support and promote policies designed to allow and incentivize greater sequestration, use and utilization of biogenic carbon emissions from ethanol production. As shown below, a typical ethanol plant that sequesters its CO2 emissions from fermentation and uses grain feedstock from fields employing practices to enable soil carbon sequestration could produce ethanol that has total lifecycle GHG emissions of less than 10 grams/mega joule—an 80-90% reduction compared to gasoline.



Whether through the expanded eligibility of renewable fuel plants to use Section 45Q of the Internal Revenue Code, the development of infrastructure such as a carbon dioxide pipeline to connect areas where ethanol production occurs to other areas key to enhanced oil recovery, or greater research and investment into other use and utilization technologies, the members of the RFA believe that there is much more to be done in the area of carbon sequestration and use associated with the carbon emissions from ethanol production. And, we are committed to doing our part in furthering these efforts to improve air quality and help fight against increased carbon levels in the atmosphere and their impact on climate change.

RFA has been working with its membership to utilize current policy in place such as Section 45Q of the U.S. tax code which have made it easier for renewable fuel producers to take advantage of tax credits for capturing and storing CO2 emissions. Originally implemented in 2008, 45Q was expanded in the Bipartisan Budget Act of 2018 to increase the value of the tax credit for renewable fuel producers. This section of the tax code encourages renewable fuel producers to invest in carbon capture during the fermentation process when CO2 is emitted. The carbon dioxide is captured using a fan system and compressed and dehydrated (typically using glycol dehydration) as preparation for transport and storage. Capturing carbon dioxide from the fermenter unit is economical because the value of the 45Q tax credits can offset other expenses. To qualify for the tax benefit, the carbon must then be stored underground or utilized in another project that sequesters the CO2.

In addition, legislation has already been introduced in both Chambers of Congress which would expand on 45Q by supporting the development and demonstration of carbon capture technologies. Introduced last February, the USE IT Act would authorize $35 million in competitive prize funding for direct air capture technology and allocate $50 million toward research and development of technologies that transform captured CO2 into commercial products. H.R. 1166 and its companion bill in the Senate, S. 383 also facilitates the construction and development of carbon capture, utilization and sequestration (CCUS) infrastructure projects. The Renewable Fuels Association, through its Chairman Neil Koehler, was proud to support the legislation and has continued to advocate for its passage.

3. For each opportunity identified, answer the following supplemental questions:

a. What might be the outcome for the innovation solution (e.g., the physical or tangible product(s) or novel approach) from each of the four innovation clusters?

Genome Design: Maintaining productivity growth is key to meeting the E15 and E30 targets in a sustainable manner. Improved enzymes and yeasts have been important contributors to the increase in the number of gallons of ethanol produced per bushel of corn. Biotechnology has been important to the sustained increase in crop yields over the last two decades, and new breeding techniques, such as genome editing, have tremendous potential to sustain and possibly accelerate this upward momentum.

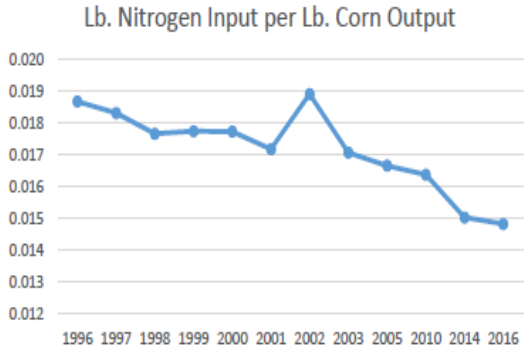
Digital Automation: The renewable fuels industry is no stranger to digital automation. The enactment of the RFS was a catalyst that drove innovation and continues to do so to this day. Innovation is at the heart of our industry, and the industry has always prided itself on its ability to be ready for the next innovative technology. In addition to advancements in biotechnology, digital farming can be utilized to optimize resource usage, improve decision-making and respond to field conditions. Over time, the use of sensors will likely be increasingly integrated into digital farming, in order to monitor soil and crop conditions, and they could eventually be used to demonstrate carbon-sequestering practices that can lower the carbon intensity of renewable fuels and be monetized by growers.

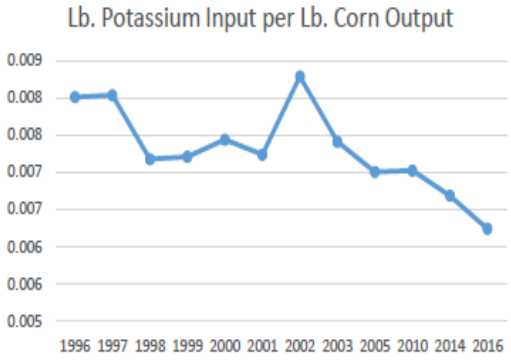
From the onset, digital automation has been gaining a stronger foothold in our facilities as more and more plants embrace the benefits of technology in efficiency solutions and other capacities. Digital innovations are changing the underlying hardware and software at plants. At the heart of every facility is the powerful control system where data integration is key. Data is constantly being processed and in real time being recorded for human decision-making. With the advent of the cloud, plants have been moving data storage to the cloud allowing for more up-to-speed accurate information in real time.

Digitalized improvements will continue to increase operational efficiencies, improve reliability, enhance yield, improve carbon scores, and reduce operating costs. Policymakers can accelerate this digitalization automation with the correct policy signals that will continue to shift the market.

Prescriptive Intervention: As noted above, adoption of new technologies has already benefited producers' energy efficiency but, without proper modeling that accounts for updated statistics such as greater yields and energy efficiency, the improper data could create misinformation that is being disseminated to consumers, producers, and policymakers. For example, EPA classifies starch-based ethanol as having a 20 percent reduction in GHG emissions on average, but that data is from when the RFS was first implemented. The data EPA uses is over 12 years old and EPA has not been able to update it, which makes the benefits derived from renewable fuels as inaccurate.

Nonetheless, biorefineries have been tapping into new digital technologies that collects farm-level and producer data. This data can then be plugged into the GREET model which in turn determines the carbon intensity of each gallon. Currently, the GREET model uses national averages for yield and inputs such as fuel, fertilizer and pesticides to calculate corn ethanol's upstream emissions from feedstock production. Developed by U.S. DOE's Argonne National Laboratory, the GREET model is used by California and other states that have adopted low-carbon fuel standards. Updated models are capable of capturing improvements on the farm, like lower nitrogen and potassium inputs as shown below.





To provide consistency, RFA recommends aligning (to the maximum extent possible) existing methodologies and models that capture better statistics. To date, the EPA has demonstrated an inability to keep pace with state-of-the-art analysis techniques and new data in this sector. The Department of Energy should be delegated responsibility for this function and in the case of agriculture-based biofuels, the Department of Agriculture should have a defined role in quantifying agriculture emissions reductions. Other solutions may include citing specific models (i.e., GREET) or requiring consideration or reliance on existing state analyses (i.e., Oregon).

b. What are the specific research gaps, regulatory barriers, or other hurdles that need to be addressed to enable eventual application, or further application, of the innovation solution produced from each of the four innovation clusters?

Many of the barriers that discourage broader expansion of higher ethanol blends are regulatory in nature and under the jurisdiction of EPA. Thus, we ask that USDA encourage and work with EPA to address key regulatory barriers and impediments.

- The Administration finally achieved a long-standing regulatory objective for the industry in 2019, by granting RVP parity for E15 and the ability for retailers to sell E15 during the summer months. For years now, RFA had been advocating regulatory parity for blends of gasoline and fifteen percent ethanol ("E15") and blends of gasoline and ten percent ethanol ("E10"). This victory was made possible because the Administration recognized it was long overdue to revise an outdated 1990 regulation. Already the marketplace is responding. E15 sales set a record of 500 million gallons in 2019 which were more than double the volume sold during the summer of 2018. **In the future, to achieve a higher national blend rate, EPA will need to provide all ethanol blends RVP parity.**

- **Remove or substantially revise the existing fuel survey requirement for E15.** While we are pleased to see EPA's recent proposal to consolidate of the existing fuel compliance surveys into one National Survey Program, more should be done to alleviate this burden. RFA has been working for years to reduce the costs and burdens associated with the E15 survey, which is the only survey program that is currently mandatory. Ethanol manufacturers have incurred unnecessarily large costs to fund the required survey and testing of ethanol content, summer RVP and compliance with mandatory labeling requirements. While we continue to question the

need for an E15 survey program moving forward, we are encouraged that EPA is at least taking steps to reduce the cost and administrative burden.

- **Remove or substantially revise the E15 labeling requirement that is currently viewed as a warning label and deterrent.** In the fall of 2019, President Trump committed that EPA would begin a rulemaking to streamline labeling requirements for E15 and eliminate other marketplace and regulatory barriers to the sale of E15.

- **Reform the petition process in 40 CFR 1065 for new certification fuels (e.g., high octane mid-level blends like E25 or E30) and eliminate unreasonable criteria for approval**.

- **Eliminate unnecessarily burdensome and costly requirements related to the registration process for new fuels and additives as required under 40 CFR 79.**

- **Revise the "R-factor" for fuel economy (CAFE) compliance calculations to 1.0** to better represent modern engines and fuels, as recommended by the Department of Energy and automakers.

- **Level the playing field for credit generation for *all* alternative fuel vehicles**, including flexible fuel vehicles (FFV), under the 2017-2025 fuel economy and light-duty vehicle greenhouse gas program (CAFE/GHG).

- **Reject the results of the EPAct/V2/E-89 Fuel Effects Study and suspend further use or development of the MOVES2014 model** until a new emissions study based on appropriate test fuels is conducted.

- Reduce EPA's workload and eliminate a costly administrative burden by **revising the Agency's outdated lifecycle greenhouse gas (GHG) analysis of corn ethanol.**

- **Eliminate unnecessary registration and pathway certification barriers to cellulosic ethanol production from corn kernel fiber**.

4. Conclusion

In closing, RFA thanks USDA for the opportunity to share our perspective. We stand ready to assist USDA through the development and execution of these important goals and we thank you for the opportunity to comment.

Sincerely,

Geoff Cooper
President & CEO