Biotechnology Industry Organization

April 5, 2013

The Honorable Fred Upton
Chairman
Energy and Commerce Committee
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Henry A. Waxman
Ranking Member
Energy and Commerce Committee
U.S. House of Representatives
2322A Rayburn House Office Building
Washington, DC 20515

via email at: rfs@mail.house.gov

Dear Chairman Upton and Ranking Member Waxman:

The Biotechnology Industry Organization (BIO) is pleased to comment on the U.S. House of Representatives Committee on Energy and Commerce's (Committee) first in a series of white papers[1] reviewing the Renewable Fuel Standard (RFS).

Introduction:

BIO is the world's largest biotechnology organization, with more than 1,100 member companies worldwide. BIO represents leading technology companies in the production of conventional and advanced biofuels and other sustainable solution to energy and climate change. BIO also represents the leaders in developing new crop technologies for food, feed, fiber, and fuel.

These companies are developing new and innovative ways to help fuel America and the world; providing more environmentally friendly energy crops, cleaner burning biofuels and renewable chemicals that help reduce greenhouse gas emissions and provide more sustainable sources of energy and materials. Achieving our nation's goals of less dependence of foreign sources of oil and cleaner fuels will require our economy to

[1] *RENEWABLE FUEL STANDARD ASSSESSMENT WHITE PAPER: Blend Wall/Fuel Compatibility Issues*, http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/analysis/20130320RFSWhitePaper1.pdf

1201 Maryland Avenue SW
Suite 900
Washington DC 20024
202.962.9200 P
202.488.6301 F
bio.org

transition to sustainable energy resources and higher levels of energy efficiency. The companies BIO represents are developing innovative biobased fuels, products, and processes that will enable our economy to achieve these objective.

Toward this end, federal policy, like the RFS, has played an important role in helping to drive the commercialization of these technologies. The importance of federal policy is particularly critical in the transportation fuel sector. The U.S. transportation system is overwhelmingly reliant on petroleum fuels, and these fuels are a large component of the U.S. greenhouse gas (GHG) emissions inventory and our overdependence on foreign sources of energy. Rapid transition to alternative transportation fuels is essential to reducing GHG emission and reducing our reliance on foreign sources of energy.

The federal RFS, enacted in 2005 and updated in 2007, is an important tool in achieving the objectives of energy independence and pollution reduction. The RFS is the single most important federal policy driving investment and commercialization of conventional and advanced biofuels. Biofuel production under the RFS has already displaced nearly 10 percent of gasoline consumption and will account for more than 20 percent of U.S. transportation fuel by 2022. Biofuel production under the RFS reduced the need for imported oil by more than 462 million barrels in 2012.

Investment spurred by the RFS has led to the development of facilities like INEOS Bio's in Vero Beach, Florida, and KiOR's in Columbus, Mississippi, which represent several hundred million dollars of investment in the United States and are poised to begin production of the next generation of renewable fuel from non-food feedstocks in 2013. Dozens more advanced biofuel projects are planned or under construction, as highlighted in Appendix I, illustrating the visible success the RFS has had in driving

development of high skilled well paying jobs in rural America. Biofuel production under the RFS has led to the employment of 380,000 Americans; an additional 800,000 employment opportunities could be created by 2022[2].

Unfortunately, the RFS is increasingly under attack not because it is unworkable, but because it is succeeding in opening access to alternatives in the existing transportation fuel monopoly. The RFS provides exactly the type of long-term regulatory stability needed to send a signal to investors to develop a biofuels industry that lessens our dependence on foreign fuels and creates jobs in America.

The single most important thing Congress can do to reduce our nation's dependence on foreign oil and cut pollution is to leave the RFS in place, as-is. We are just 1/3 of the way through the timeline Congress laid out in 2007 and we must stay the course or risk losing the progress we've made.

White Paper Response:

In this first paper, the Committee has requested comments on a list of questions regarding the so called "blend wall" and fuel compatibility issues with higher blends of biofuels in the gasoline supply. In order to properly address each question, this paper has each question italicized and listed below. BIO's response will directly follow each question.

Before addressing the questions it is important to note that BIO firmly believes that the blend wall represents a series of barriers contrived by obligated parties to prevent biofuels from gaining full access to the marketplace under the RFS. Multiple avenues exist for blending additional volumes into the nation's fuel supply. These

---

[2] Bio Economic research Associates, "U.S. Economic Impact of Advanced Biofuels Production: Perspectives to 2030." Washington, DC: February 2009

include E85 and E15 blends, which are approved and ready for use, and production of flex fuel vehicles. These options, combined with the potential future introduction of new "drop-in" fuel molecules, provide a suite of opportunities for RFS compliance. The true obstacle to increasing biofuel use in our transportation sector is the continued dilatory tactics of obligated parties.

Obligated parties have had more than five-years to begin establishing the infrastructure necessary to distribute RFS-mandated biofuel volumes, but have taken few steps to do so. Their assertions that the blend wall is prohibitive to distribution of greater volumes of biofuels only seek to undermine the development of homegrown biofuels that promote America's energy security, the biobased economy, and rural development.

As the Committee continues its examination of the RFS, BIO would encourage Members to look into efforts by obligated parties to stifle the development of the biofuels industry and explore ways for Congress and the government to help promote continued growth in domestic renewable fuels.

Energy and Commerce Committee, RENEWABLE FUEL STANDARD ASSESSMENT WHITE PAPER, Blend Wall/Fuel Compatibility Issues, Questions for Stakeholder Comment

1. ***To what extent was the blend wall anticipated in the debates over the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007?***

   In 2007, the targets were selected based on what Congress knew at the time. In debate on both the Energy Policy Act of 2005 (EPAct) and the 2007 Energy Independence and Security Act (EISA)[3,4] the Blend Wall did not appear to be part of the debate. In debating EISA, the House proposed a "Study of increased consumption of ethanol-blended gasoline with higher levels of ethanol," but this

[3] http://www.gpo.gov/fdsys/pkg/CREC-2007-12-13/pdf/CREC-2007-12-13-pt1-PgS15385.pdf
[4] http://www.gpo.gov/fdsys/pkg/CREC-2007-12-06/pdf/CREC-2007-12-06-pt1-PgH14270-4.pdf

was not included in the final law. However, in setting 2022 targets that represented more than 20 percent of projected fuel demand, it is clear that Congress intended the RFS to drive biofuel adoption well beyond the threshold of 10 percent of total fuel consumption. The system of Renewable Identification Numbers (RINs), credits, and compliance options articulated in the statute clearly also anticipated the role of RIN-driven market forces in achieving this broader adoption.

Following passage of EISA, EPA anticipated the blend wall when implementing the renewable fuels standard, stating "…Complete saturation of the gasoline market with E10 is referred to as the ethanol "blend wall." The height of the blend wall in any given year is directly related to gasoline demand.[5] This was also reflected in AEO 2009, where EIA projected that gasoline demand would peak around 2013 and then start to taper off due to vehicle fuel economy improvements. Based on the primary ethanol growth scenario, we're forecasting under today's RFS2 program, the nation is expected to hit the 14-15 billion gallon blend wall around 2014…although it could be sooner if gasoline demand is lower than expected. It could also be lower if projected volumes of non-ethanol renewable do not materialize and ethanol usage is higher than expected.

Estimates on fuel projections were also revised after the U.S. and world economy fell into a prolonged recession, reducing energy consumption. At the same time, automakers began implementing higher CAFE standards, further reducing U.S. domestic demand for fuel. As worldwide economic growth resumed, overseas demand for finished fuel products grew, while U.S. demand continued to decline, prompting petroleum refiners to focus on export markets. While this confluence of developments has hastened the transition across the ethanol blend threshold, the eventual transition was clearly anticipated in the law, and should have factored into fuel distribution plans of any obligated party intending to comply with the law. Indeed, some obligated parties have adequately anticipated the blend wall by incorporating greater distribution of E85 into their business models, or by investing in development of advanced drop-in biofuels. Unfortunately, other obligated parties have elected to resist compliance and instead challenge the law itself.

2. ***What are the benefits and risks of expanded use of E-15 to automakers, other gasoline powered equipment makers, refiners, fuel retailers, and others involved in the manufacture and sale of gasoline and gasoline-using equipment?***

Ethanol and other alcohol fuels (such as butanol) have higher octane ratings than gasoline. This increased octane could actually boost fuel economy in future car models, according to a 2009 report by Sandia National Labs, if automakers

[5] CFR, Vol 78, No. 58, p. 14759

concentrate on developing smaller engines with higher compression and turbocharging.[6]

Formula 1 and IndyCar race cars use ethanol to achieve high performance.[7] The IndyCar circuit today uses a fuel-injected, 2.2 liter V6 engine, which is smaller than previous engines. Between 2007 and 2011, IndyCars ran on pure denatured ethanol, but they currently use E85 because it is more widely available.

There already exists considerable variety in the blends and types of fuel available on the market. Automakers and engine manufacturers recommend the optimum grade for each car, since some run best on higher octane fuel blends, and ask owners to follow the recommendation in their manuals.

The RFS requires use of renewable fuels, but not all biofuels are ethanol or alcohols. New biofuels are being developed that are molecularly identical to gasoline and to jet fuels, and without impurities usually found in petroleum fuels. The energy content and fuel economy would be the same as petroleum fuels.

3. ***What are the risks of the introduction and sale of E-15 to the owners of pre-2001 motor vehicles, boats, motorcycles, and other gasoline-powered equipment not approved to use it? Are there risks to owners of post-2001 vehicles? How do these risks compare to the benefits of the RFS?***

Automakers, small engine manufacturers and fuel refiners established cooperative standards for fuel to allow engines to both maximize performance and meet Clean Air Act limits on emissions of air and water pollutants. Using any fuel other than that recommended by the engine manufacturer (even different grades of gasoline) can impact an engine's fuel flow, timing, operating temperature, and emission control equipment, reducing engine performance while increasing wear and potentially emissions.[8]

Small engines – because they're small – do not have the same emission control features as automobiles and are designed for maximum performance with straight gasoline – or gasoline and oil mixtures. The potential for misfueling a small engine is no greater with ethanol than any other fuel.

---

[6] Next Generation Biofuels and Advanced Engines for Tomorrow's Transportation Needs. November 17 and 18, 2009, San Ramon, CA. http://digitalcommons.unl.edu/usdoepub/82/

[7] Year 2 of homologation: An engine check system. http://www.indycar.com/News/2013/01/1-9-Second-season-of-homologation

[8] Philip Reed, "To Save Money on Gas, Stop Buying Premium." Edmunds.com, 03/02/2012, http://www.edmunds.com/fuel-economy/to-save-money-on-gas-stop-buying-premium.html. Frank Markus, "Regular or Premium?" Car and Driver, November 2001, http://www.caranddriver.com/features/regular-or-premium.

The potential for increased emissions of known health hazards is why the Clean Air Act prohibits selling any new fuel that is not "substantially similar" to the industry standard. This same potential for increased emissions is why EPA is currently considering rules that limit sulfur in gasoline. EPA approved sale of E15 for light duty automobiles built since 2001, and it long ago approved sale of fuel blends up to E85 for use in flex fuel vehicles.

4. ***What is the likely impact, if any, of the blend wall on retail gasoline prices?***

The growing use of biofuels for the nation's transportation fuel use has provided significant mitigation against rising gasoline prices, resulting in substantial savings to American consumers. [9,10,11] At the same time, the average family paid $240 more for gasoline in 2012 than in 2011[12] – while cutting back on driving and using fewer gallons. The 3.3 percent rise in gasoline outpaced American's increase in income for the year.[13]

In contrast, there is no evidence that the blend wall has resulted in any offsetting increase in gasoline prices. Domestic biofuel production capacity is more than sufficient to meet the volume obligations of the RFS. Obligated parties therefore have access to more than enough RINs to meet their obligations, should they choose to meet them. If the blendwall has any impact on retail gasoline prices it will be the result of barriers imposed by obligated parties to the market entrance of these biofuels. To blame the blend wall, which is a result of obligated parties' efforts to limit biofuels' access to the market, ignores all the realities of the cost of fuels. EIA reviewed the causes of higher than normal gas prices in the early months of 2013[14] and identified reduced oil refining capacity,[15] increased oil prices, and record high crack spread[16,17] as the leading causes – not RFS compliance.

---

[9] *Impact of Ethanol Production on the U.S. and Regional Gasoline Markets: An Update to 2012* http://www.card.iastate.edu/publications/synopsis.aspx?id=1166

[10] *The Impact of Ethanol Production on the U.S. Gasoline Market, http://www.ethanol.org/pdf/contentmgmt/The_Impact_of_Ethanol_Production_on_the_US_Gasoline_Market.pdf*

[11] *Global economic effects of US biofuel policy and the potential contribution from advanced biofuels, http://www.future-science.com/doi/abs/10.4155/bfs.12.60*

[12] Sure Enough, 2012 Will Go Down as Most Expensive Year Ever for Gas http://business.time.com/2012/12/05/sure-enough-2012-will-go-down-as-most-expensive-year-ever-for-gas/#ixzz2JsBkG348

[13] U.S. household expenditures for gasoline account for nearly 4% of pretax income, http://www.eia.gov/todayinenergy/detail.cfm?id=9831

[14] http://www.eia.gov/todayinenergy/detail.cfm?id=10111

[15] NYMEX October RBOB crack spread widens as USGC refineries slowly restart, http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Oil/6613396

[16] http://www.bloomberg.com/quote/CRKS321C:IND

[17] http://finance.yahoo.com/q?s=ZXYJ12.NYM

Rather than assume the blend wall negatively impact fuel prices at the pump, policy makers should be exploring ways to get more biofuels into the market, where they have historically kept fuels prices lower for consumers than competing petroleum based products.

5. ***What is the timing of the implementation challenges related to the blend wall? Will some entities face difficulties earlier than others?***

   BIO does not have any information on this issue at this time.

6. ***Could the blend wall be delayed or prevented with increased use of E-85 in flexible fuel vehicles? What are the impediments to increased E-85 use? Are there policies that can overcome these impediments?***

   One piece of the blend wall solution could be to facilitate greater consumer use of E85 fuel (a blend of 85 percent ethanol and 15 percent gasoline) through investment in downstream petroleum infrastructure (blender pumps, etc) and Flex Fuel Vehicles that can run on that type of fuel. E85 is approved for use in flex fuel vehicles and could go a long way toward meeting the renewable fuel requirements under the RFS, with the right investments.

   A flex-fuel vehicle overcomes potential differences in fuels with sensors that adjust the fuel injection and air mix as well as the timing. More than 90 percent of new cars sold today in Brazil are flex fuel vehicles, and about half of the country's entire fleet has changed over to flex fuel vehicles in less than a decade.[18] U.S. automakers previously made commitments to increase production and sales of flex-fuel vehicles, but at present are not seeing consumer demand.[19] About 5 percent (12 million out 240 million) of light-duty vehicles on the roads today are approved by manufacturers to use E15 gasoline, according to AAA.[20]

   On the petroleum downstream infrastructure side, there are a number of investments that would need to be made. A major impediment to consumers having the choice of E-85 is obligated parties blocking station owners from putting in blender pumps that would allow consumers to choose higher blends of ethanol in gasoline.[21] Blender pumps would allow consumers to modify upward the blend of biofuels they desire to purchase. In addition, marketing arrangements could incentivize the consumers to utilize the higher blends. Other

---

[18] UNICA, "Brazilian Transportation Fleet," Sugarcane.org, http://sugarcane.org/the-brazilian-experience/brazilian-transportation-fleet

[19] Beth Evans, "Automakers do not see big US demand for flex-fuel vehicles," Platts, 7 Feb. 2013. http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Oil/6131220

[20] http://newsroom.aaa.com/2012/11/new-e15-gasoline-may-damage-vehicles-and-cause-consumer-confusion/

[21] *Trade group requests U.S. probe of oil industry's efforts to impede renewable fuels, http://eenews.net/eenewspm/2013/03/19/archive/9?terms=RFA%2C+ConocoPhillips*

forms of investment to move towards higher blends could involve even greater investment in production and proposed ethanol pipelines to move large quantities of biofuels to high-population areas.

The automotive industry, while carrying out some low carbon fuels investment due to production credits in the 2007 RFS, has an equally important role to play. As discussed above, consumers need the opportunity to fuel their cars with higher volumes of biofuels like E85, but to do so they also need cars available and accessible to run on those blends. Flex fuel vehicles (FFVs) have the capacity to run on biofuels blends ranging from 0 percent to 85 percent. Thus, depending on the blend, consumers who drive one of the more than 14 million FFVs on the road today will have the opportunity to fuel their cars at retail stations that carry the higher blends. As E85 becomes a competitive fuel, demand for FFVs will presumably grow as it did in Brazil during the 2003 to 2006 time period.

7. ***Is E-15 misfueling unavoidable? Are there lessons from the labeling and dispensing of diesel, E-85 and other fuels that prevent their misfueling that can also be applied to E-15? What specific actions are companies taking to address potential misfueling concerns under MMPs?***

We have changed our nation's fuel supply and delivery system before, such as with the transition to unleaded gasoline. The greatest challenge in that transition was that unleaded fuels cost more than leaded fuels, discouraging consumers from switching. And there will likely be challenges and confusion amongst consumer with the introduction of E15, which could lead to misfueling, given the potential for lower prices. However, one significant difference this time is the oil industry does not make the alternative fuel and is working everyday to block new renewable entrants to the marketplace to protect its monopoly.

The oil companies have slowed infrastructure upgrades by using intimidation tactics to discourage station owners from investing, fabricating misfueling concerns, and opposing incentives. The oil industry has worked to slow the approval of higher blend and new fuels through regulatory action and litigation.[22]

8. ***Can blend wall implementation challenges be avoided without changes to the RFS? Is the existing EPA waiver process sufficient to address any concerns? If the RFS must be changed to avoid the blend wall, what should these changes entail? Should any changes include liability relief or additional consumer protections for addressing misfueling concerns?***

BIO strongly disputes the assertion that the existence of the ethanol blend wall argues for changes to the RFS program. Rather, continued consistent implementation and enforcement of the RFS is essential to ensuring a rapid,

---

[22] *Fill Up With Ethanol? One Obstacle is Big Oil*, http://online.wsj.com/article/SB117547886199856472.html

market-driven transition across the ethanol blend wall. Market economics associated with the value of conventional biofuel RINs are already making conventional and advanced biofuels increasingly attractive as less expensive alternatives to gasoline and diesel. Many independent fuel distributors are responding, seeking out opportunities to increase profits by expanding availability of low-cost biofuels to consumers. Thus, in fact, the blend wall is being overcome – to the benefit of consumers – without any change to – and due in large part to the market-driving force of – the RFS.

Thanks to the flexibility already provided by the RFS, any challenges encountered under the blend wall transition can be mitigated through the compliance mechanisms established in the law. Further, the RFS does not specifically require use of ethanol. Thus, if challenges do arise under the blend wall transition, other biofuels not subject to the ethanol blend wall, such as biobutanol or renewable hydrocarbons, will rapidly increase in market value. These market forces may hasten the commercial deployment of these alternatives, significantly mitigating blend wall pressure. As such, BIO believes no changes to the RFS are necessary. As for other policy dealing with liability relief or additional consumer protection, such as misfueling, these policy initiatives can be done without any changes to the RFS.

RINs

Under the RFS, obligated parties have many options to avoid the blend wall. One of these components is the Renewable Identification Number (RIN) program. By allowing refiners to purchase RINs rather than renewable fuel, they are given the option to opt out of blending biofuel, typically during times of low production or high prices, while incentivizing the further production of renewable fuel.

Higher Blends

As discussed above in Question 6, greater use of ethanol blends between fifteen and eighty-five percent is a solution to the blend wall that involve no new technological development or regulatory approval.

A recent Congressional Research Service report explains the desirability and challenges of E15 and other intermediate blends:

> For ethanol consumption to exceed the so-called blend wall and meet the RFS mandates, increased consumption at higher blending ratios is needed. For example, raising the blending limit from 10% to a higher ratio such as 15% or 20% would immediately expand the "blend wall" to somewhere in the range of 20 billion to 27 billion gallons. The U.S. ethanol industry is a strong proponent of raising the blending ratio. In response to industry concerns regarding the

> impending "blend wall," the EPA, after substantial vehicle testing, issued a partial waiver for gasoline that contains up to a 15% ethanol blend (E15) for use in model year 2001 or newer light-duty motor vehicles (i.e., passenger cars, light-duty trucks, and sport utility vehicles), but announced that no waiver would be granted for E15 use in model year 2000 and older light-duty motor vehicles, as well as in any motorcycles, heavy duty vehicles, or non-road engines. According to the Renewable Fuel Association (RFA), the approval of E15 use in model year 2001 and newer passenger vehicles expand[ed] eligibility to 62% of vehicles on U.S. roads at the end of 2010. In addition to the EPA waiver announcement, fuel producers will need to register the new fuel blends and submit health effects testing to EPA. Further, numerous other changes have to occur before gas stations will begin selling E15, including many approvals by states and potentially significant infrastructure changes (pumps, storage tanks, etc.). As a result, the vehicle limitation to newer models, coupled with infrastructure issues, are likely to limit rapid expansion of blending rates. Moreover, a group of engine and equipment manufacturers has challenged the partial waiver in court, arguing that EPA failed to estimate the likelihood of misfueling (using E15 in equipment denied a waiver), and the economic and environmental consequences of that misfueling..

Other forms of intermediate blends, ranging from 30 percent blends to 50 percent blends, have been discussed and promoted. Most of the regulatory approval issues attendant to the 15 percent blend likewise apply to these higher intermediate blends with one distinction - there would be a need for new infrastructure investment with these higher intermediate blends. Thus the challenge to achieve these higher, intermediate blends is more daunting than perhaps other pathways.

<u>Drop-Ins</u>

Drop-ins are a viable solution, which we discuss in more detail in Question 10.

9. ***Have the 2017 and Later Model Years Light Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy standards for cars and light trucks changed the implementation outlook of the RFS?***

   The prospective reductions in fuel consumption produced by the 2017 GHG rule coupled with the on-going reduction in VMT (vehicle miles traveled) reduces the usage of E10 fuel and thus the ethanol that is blended to make it. This requires that more renewable fuel be used as E85, biodiesel, renewable diesel or other renewable fuels to achieve the fixed targets of the RFS2.

10. ***What other methods, including the use of drop-in fuels, are available to industry to ease the challenge posed by the blend wall?***

    Economics will dictate the best solution to the blend wall, and a combination of many different ways for biofuels to enter the marketplace may be required. One potential way to address the blend wall is to increase investment in and development of "drop-in biofuels," which have the same properties and composition as petroleum-based fuels and may be used in existing infrastructure. Because of these factors, existing downstream petroleum infrastructure and engines can run on these fuels even at blends beyond 10 percent. These biofuels, including biobutanol, may be produced from any starch or sugar-based biomass and blended using existing infrastructure at blends much higher than 10 percent. Due to biobutanol's higher energy content this is equivalent to 21 percent ethanol. Biobutanol has been endorsed by the National Marine Manufacturers Association.

    The primary challenge for drop-in biofuels is scale, but this could be addressed with greater investment in this technology (which is driven by the stability of the RFS policy). Certainly as one option to address the blend wall, drop-ins have some very attractive features: they require no change in existing infrastructure and are feedstock flexible and may be produced from both starch and sugar-based biomass sources.

    In addition, existing ethanol facilities may be cost-effectively retrofit to produce biobutanol and other drop-in biofuels.

    The expansion of aviation biofuels as drop-ins would be another potential solution to the blend-wall. Currently, sustainable aviation biofuels, derived from biomass-based plant material and waste fats, are approved for use in jet engines in an up to 50 percent blend. This fuel is a drop-in substitute for fossil-based petroleum currently used in aviation. Some commercial airlines have flown test flights on blends of sustainable aviation fuel, and aviation is well-suited for rapid deployment of drop-in biofuels. The commercial aviation industry has system-wide advantages including the ability to use current infrastructure: drop-in biofuels utilize the same pipelines and tanks as petroleum. It also has highly concentrated nodes of supply and demand, where the largest 40 U.S. airports account for more than 90 percent of jet fuel used by commercial aviation. Thus, if sustainable aviation biofuel producer can deliver to the 40 large airports, in a

cost effective manner, they will have access to a large portion of the commercial jet-fuel market.

11. What are the impacts on renewable fuel producers if the RFS is changed to avoid the blend wall?

The RFS is the nation's only long term energy policy. The current RFS goals from the 2007 EISA have only been in place for five-years, just one-third of the Standard's 15 year ramp up. Unfortunately, implementation of the standard has been delayed and slowed down not just by the economic downturn beginning in 2008, but by a number of regulatory delays, including EPA's approval of new feedstocks for the cellulosic and advanced biofuels. Any changes to the RFS would create regulatory and financial uncertainty for the industry, destabilizing an industry which has spurred billions of dollars of investment and helped to create more than 400,000 jobs in the U.S.

Conclusion:

We hope BIO's comments are beneficial to the Committee as it begins its review of the RFS and how to address the challenges surrounding the blend wall. As explained in our answers above, there a number of solutions to the blend wall, including the use of higher blends of biofuels, greater distribution of biofuels, increased production of flex fuel vehicles, and greater use of drop-in fuels. Market economics under the RFS program are already driving investment in each of these options, and the Committee can anticipate a rapid increase in availability of both higher ethanol blends and drop-in alternatives as a result – but only to the extent obligated parties provide market access to these fuels. Unfortunately, many of these solutions are currently unattainable due to barriers to the marketplace erected by obligated parties. The Committee should investigate these artificial barriers and, if necessary, take action to remove them to ensure that the market for transportation fuel alternatives established by the RFS is allowed to operate. Any remaining challenges to overcoming the blend wall can be

addressed through the broad regulatory flexibility granted to EPA under the statute. None of these solutions require changes to the RFS.

We would also encourage the Committee to examine how the RFS is providing solutions to our dependence on foreign fuels, driving investment and development in the commercialization of cellulosic and advanced biofuels and creating high skilled jobs for American citizens.

Market forces under the RFS are driving investment in solutions to the blend wall. Congress can hasten the transition across the blend wall by ensuring artificial barriers to market access for biofuels are eliminated. But the number one thing Congress can, and should, do to continue to bring renewable fuel to consumers, is to keep the RFS in place, as is.

Thank you for considering our comments.

Sincerely,

Brent Erickson
Executive Vice President
Industrial and Environmental Section
Biotechnology Industry Organization