RENEWABLE FUELS ASSOCIATION

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Subcommittee on Energy and Power
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Hearing on
The American Energy Initiative: A Focus on Alternative Fuels and Vehicles, Both the Challenges and Opportunities

Testimony of

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Good morning Chairman Whitfield, Ranking Member Rush, and Members of the Subcommittee. My name is Bob Dinneen and I am president and CEO of the Renewable Fuels Association (RFA).

RFA is the leading national trade association for America's ethanol industry. Its mission is to drive expanded production and use of American-made ethanol and co-products by raising awareness about the benefits of renewable fuels. Founded in 1981, RFA's 300-plus members are working to help America become cleaner, safer, more energy secure and more economically vibrant.

This is a timely hearing about important issues. Continued volatility in crude oil markets, last spring's near-record gasoline prices, threats by hostile nations to shut down key oil shipping routes, new concerns about the environmental impacts of hydraulic fracking and tar sands — these issues and others underscore our nation's desperate need to re-commit to an energy future that embraces alternative transportation fuels and vehicles.

One important alternative fuel — ethanol — is already helping to address these national concerns. America's ethanol industry — buttressed by a visionary Renewable Fuel Standard (RFS) — is already decreasing our reliance on foreign oil, already exerting downward pressure on gasoline prices, already employing tens of thousands of American workers, and already cleaning up our air. As a result of the forward-looking nature of the RFS, the industry is poised to make even more significant contributions to our nation's economic and environmental security in the future.

The Energy Policy Act of 2005, originally introduced by Representative Joe Barton (R-TX), established the first-ever RFS requiring the use of increasing volumes of domestically produced renewable fuels. Recognizing the multiple benefits of renewable fuels, the 110th Congress passed the Energy Independence and Security Act of 2007 (EISA), which modified and expanded the RFS to 36 billion gallons per year by 2022. The manifold purposes of both the original RFS and the expanded program were to bolster energy security, decrease fuel prices by diversifying our energy portfolio, create jobs and stimulate the U.S. economy, and improve the environment. Without question, the RFS is achieving those goals and providing meaningful benefits to the American public each and every day.

The RFS is among the most successful energy policies this nation has ever adopted; it is working exactly as intended. However, a continued commitment to the production of alternative fuel vehicles, and specifically flexible fuel vehicles (FFVs), is absolutely critical to the long-term success of the RFS.

The RFS is Reducing U.S. Dependence on Oil Imports

U.S. oil import dependency has fallen considerably since peaking in 2005, the year the original RFS was adopted. Net imports of crude oil and petroleum products accounted for more than 60 percent of total demand in 2005, a year in which ethanol production totaled 3.9 billion gallons. Last year, however, as ethanol production neared 14 billion gallons, U.S. oil import dependence had fallen to just over 45 percent of total demand.[1] This marked the lowest oil import dependence rate since 1995. Moreover, oil imports from OPEC nations have fallen nearly 20 percent since 2005 and were at their lowest level in 16 years in 2011.[2]

The oil and gas industry has been quick to claim credit for the recent trend toward lower import dependence and enhanced domestic energy security. They point to the emergence of hydraulic fracking, which has led to increased oil production in the shale formations of North Dakota and Texas, as the driver of the recent American energy renaissance. Certainly, increased oil production from fracking has played a role, but a little context is needed. At the same time new fracking wells are ramping up in North Dakota and Texas, old conventional oil wells are running dry in Alaska, California, and Louisiana. So, while total U.S. oil production has been on the upswing the last three years, it is still well below the levels from the 1990s and even below the levels from the first several years of the new millennium.

Let's not forget that the oil boom enabled by fracking is only a recent phenomenon with an uncertain future. The sustained trend toward reduced oil import dependence began in 2005, even as U.S. oil production was on a downward slide through 2008. Why? Because U.S. ethanol production has grown each and every year since 1996, with an average annual growth rate of 24 percent since 2005. In fact, since 2005, ethanol has accounted for eight out of every 10 barrels of newly produced liquid fuel from U.S. sources on a cumulative basis (i.e., taking into account both production gains and losses relative to 2005 levels).

Indeed, today ethanol represents 10 percent of the nation's gasoline pool by volume, compared to 2.8 percent in 2005. In 2011, ethanol displaced the need for an amount of gasoline refined from 477 million barrels of crude oil — that's more oil than the U.S. imported from Saudi Arabia. Without ethanol and without the RFS, our 2011 rate of oil import dependence would have been 52 percent, rather than the actual rate of 45 percent. When the facts are on the table, it becomes crystal clear that increased ethanol production has been a key driver of the recent trend toward greater energy self-sufficiency in the United States.

In any case, we need to be mindful of just how long hydraulic fracking can sustain our nation's insatiable appetite for crude oil. After all, the "tight oil" in the Bakken and Eagle Ford shale formations is a finite resource, just like the oil sitting under the deserts of Saudi Arabia, the jungles of Venezuela and Nigeria, and the deep waters of the Gulf of Mexico. A 2011 report by the Energy

[1] Energy Information Administration. May 2, 2012. "Energy in Brief: How Dependent are we on Foreign Oil?" http://www.eia.gov/cfapps/energy_in_brief/foreign_oil_dependence.cfm?featureclicked=3/
[2] Energy Information Administration. U.S. Imports by Country of Origin. http://205.254.135.7/dnav/pet/pet_move_impcus_a2_nus_ep00_im0_mbbl_m.htm

Information Administration (EIA) estimates that 7 billion barrels of oil are technically recoverable from the Bakken and Eagle Ford formations, the two largest active shale plays in North America.[3] That may sound like a lot of oil — and it is. But the U.S. oil refining industry processed 5.4 billion barrels of crude oil in 2011.[4] That means if near-term oil demand is consistent with 2011 levels, our nation's two largest shale plays have enough technically recoverable crude oil combined to last us about *one year and four months*. Fortunately, by reducing demand for crude oil, renewable fuels like ethanol are helping to extend the longevity of our domestic petroleum resources. Unlike crude oil from shale, tar sands, or conventional sources, biofuels are renewable because they are made from feedstocks — such as row crops, agricultural residues, and forestry waste — that are quickly replenished as part of active biological cycles.

The RFS is Reducing U.S. Gas Prices

While gasoline prices have retreated from the near-record highs experienced this spring, they remain at historically high levels and we are perpetually one geopolitical event away from the next crude oil and gasoline price spiral. Fortunately, increased ethanol consumption, as required by the RFS, is helping to hold pump prices lower than they would be otherwise. Because ethanol is regularly priced at a discount to gasoline at the wholesale level, and because ethanol reduces aggregate demand for crude oil, increased use of ethanol is significantly lowering gasoline prices. In May, economists from Iowa State University and the University of Wisconsin released a paper showing that the increased use of ethanol reduced wholesale gasoline prices by an *average of $1.09 per gallon* in 2011.[5] The new analysis, an update to a 2009 Energy Policy paper authored by economics professors Dermot Hayes and Xiaodong Du, also found that the growth in ethanol production reduced gasoline prices by an average of $0.29 per gallon, or 17 percent, over the entire period of 2000-2011. This means ethanol has reduced the typical American household's gasoline bill by an *average of $340 per year* over the last decade.

A recent study by economists at Louisiana State University — an institution in the heart of oil refining country — came to a similar conclusion. The authors found that "…the growth in ethanol production kept gasoline prices lower than would otherwise have been the case...", and that ethanol reduced gas prices by $0.78 per gallon in 2010.[6] Based on the LSU study's methodology, the 2011 impact would have been $0.84 per gallon. Economic analyses from Merrill Lynch, DOE's National Renewable Energy Laboratory, and others have also concluded that increased ethanol consumption substantially reduces retail gas prices.

Further, a 2010 study by economists at the Center for Rural and Agricultural Development (CARD) examined what would happen to U.S. gasoline prices if ethanol production came to an immediate halt — something that is unlikely to occur, but also something that has been advocated by some misguided opponents of biofuels. The authors found that, "Under a very wide range of parameters, the estimated

[3] Energy Information Administration. July 2011. Review of Emerging Resources: U.S. Shale Gas and Shale Oil Plays. http://205.254.135.7/analysis/studies/usshalegas/pdf/usshaleplays.pdf
[4] Energy Information Administration. Refiner & Blender Net Input. http://www.eia.gov/dnav/pet/pet_pnp_inpt_dc_nus_mbbl_a.htm
[5] Du, Xiaodong; Hayes, Dermot J. May 2012. The Impact of Ethanol Production on U.S. and Regional Gasoline Markets: An Update to 2012. http://www.card.iastate.edu/publications/synopsis.aspx?id=1166
[6] *Marzoughi, Hassan* and *Kennedy, P. Lynn. February 2012.*The Impact of Ethanol Production on the U.S. Gasoline Market . http://ageconsearch.umn.edu/bitstream/119752/2/Kennedy%20Marzoughi%20SAEA%20-%202012.pdf

gasoline price increase would be of historic proportions, ranging from 41 percent to 92 percent."[7] At today's prices, that means gasoline prices would increase from roughly $3.40 per gallon to $4.80-$6.50. That finding should serve as a wake-up call to those who are seeking to reduce or eliminate the RFS or minimize the role of ethanol in the U.S. energy market at a time when oil markets are increasingly volatile. As the economic recovery is fragile and oil markets are unstable, policymakers should be embracing -- not shunning -- ethanol's ability to add to domestic fuel supplies and hold prices in check. If we woke up tomorrow morning and the 10 percent of our gasoline supply that comes from ethanol was gone, it is easy to see how gasoline prices could nearly double. That type of increase would be absolutely crippling to the American economy.

The RFS RIN Credit Fraud Situation Has Been Significantly Overblown

We absolutely agree with obligated parties under the RFS that the integrity of the renewable identification number (RIN) credit trading platform is critical to the overall success of the RFS program. For the program to work efficiently and cost-effectively, obligated parties must have confidence in the validity of the RINs they are acquiring for compliance. Unfortunately, a few isolated cases of RIN fraud in the biodiesel industry have given opponents of the RFS more fodder for their campaign to reform or repeal the program.

Biodiesel RIN fraud has been described by some biofuel critics as "rampant," "systemic," and "widespread." However, a closer look reveals that such descriptions of the situation are nothing more than salacious hyperbole. In truth, the fraudulent activity was very isolated and resulted from the actions of just three bad actors in the biodiesel space. The U.S. Environmental Protection Agency (EPA) effectively identified those bad actors, investigated the fraud, and pursued appropriate enforcement action. In other words, the bad apples were quickly rooted out of the barrel. Meanwhile, the vast majority of other participants in the RFS program were properly generating RINs without any problems whatsoever.

Here are a few statistics for context. Since the RFS2 program began in July of 2010, nearly 29 billion RINs have been generated (this includes all RINs for all types of biofuels).[8] Of that amount, 140 million RINs have been shown or alleged to be fraudulent. That means *less than 0.5 percent* of total RINs generated have been fraudulent or alleged to be fraudulent. Further, all of the alleged fraudulent RINs have occurred within the biodiesel space of the RFS, which constitutes a relatively smaller share of the program. "Renewable fuel" RINs — the type associated with corn ethanol — have comprised the overwhelming majority of RINs generated under the RFS, accounting for 26 billion RINs (nearly 90 percent of the total). Those 26 billion ethanol RINs have been generated without *a single one* of them being purposely fraudulent. That's an excellent track record by any measure.

Our intent in providing these statistics is not to minimize the importance of preventing RIN fraud; rather, it is to bring context and reality to an issue that is being blown out of proportion by those seeking to undermine the RFS. We are actively engaged in conversations with EPA, the biodiesel industry, and obligated parties to contemplate market-based solutions and possible regulatory actions to minimize the risk of RIN fraud. Our position in these discussions is that any private-sector or regulatory approaches to due diligence and minimizing the risk of fraud should focus on the isolated areas of the program where fraud has occurred. That is, any approach should not burden all RFS program participants (the majority of whom operate in the "renewable fuel" RIN pool where no fraud

[7] Du, Xiaodong; Hayes, Dermot J. April 2011. The Impact of Ethanol Production on U.S. and Regional Gasoline Markets: An Update to 2009. http://www.card.iastate.edu/publications/synopsis.aspx?id=1160

[8] See EPA RFS2 EMTS Informational Data. http://www.epa.gov/otaq/fuels/rfsdata/index.htm

issues have been experienced) with onerous reporting, recordkeeping, or audit provisions that offer no additional benefit to the fidelity of the RFS RIN credit trading program.

A Lasting Commitment to FFVs is Needed to Ensure the Long-Term Goals of the RFS are Achieved

As discussed, the RFS has resulted in numerous economic benefits for the American people. The magnitude of those benefits is expected to increase as larger volumes of renewable fuels are required under the RFS moving forward. However, meeting the long-term goals of the policy will require a lasting commitment to flexible fuel vehicle (FFV) production by automakers, Congress, and the Administration.

The RFS requires the consumption of 36 billion gallons of renewable fuel by 2022. In the Regulatory Impact Analysis that accompanied the RFS2 final rule, EPA suggested ethanol could account for as much as 33.2 billion gallons of the 2022 requirement. This level of ethanol would represent 25.4 percent of projected gasoline demand in 2022, according to data from the EIA. This means the average gallon of gasoline in 2022 would need to contain 25 percent ethanol in order to comply with the RFS2. However, only FFVs are currently approved to consume gasoline blends containing more than 15 percent ethanol by volume.

The U.S. automakers have made good progress toward increasing their production of FFVs, and the "Detroit Three" have stated their commitment to provide one-half of their sales of model year 2012 and later vehicles as FFVs. Today, an estimated 11 million FFVs are on American roadways. While that's a good start, it represents just 5 percent of the light-duty automotive fleet. Without a doubt, a larger population of FFVs will be needed to consume the volumes of ethanol likely to be produced to meet the RFS's long-term requirements.

Unfortunately, the current EPA/ National Highway Traffic Safety Administration (NHTSA) proposal for 2017-2025 fuel economy and tailpipe greenhouse gas (GHG) standards significantly discourage the production of FFVs beyond 2016 by treating FFVs differently than other dual-fueled vehicles in terms of corporate average fuel economy (CAFE) credits and GHG compliance values. The proposed creation of incentives for certain dedicated (i.e., single-fueled) alternative fuel vehicles also disadvantages FFVs. If implemented as proposed, the CAFE/GHG rule would frustrate the goals of the RFS and significantly complicate compliance. In our regulatory comments to EPA and NHTSA, we strongly encouraged the agencies to ensure that the final rules are consistent in the treatment of all dual-fueled alternative vehicles and that continued production of FFVs is encouraged through the CAFE/GHG program.

Additionally, the RFA has joined with leaders from other alternative fuel industries to press Congress to enact the Open Fuel Standard (OFS), a visionary piece of legislation introduced by Representatives John Shimkus (R-IL) and Eliot Engel (D-NY). The OFS would require that a certain portion of passenger vehicles sold in the U.S. be alternative fueled vehicles capable of running on something other than just petroleum-derived gasoline. The OFS does not dictate what types of vehicles are to be sold, only that an increasing percentage of the passenger car fleet sold in the U.S. be capable of running on non-petroleum sources, such as electricity, ethanol blends, hydrogen, biodiesel, natural gas, or other sources. Not only would the OFS greatly enable fuel competition and reduce the strategic importance of oil to the United States, but it would also facilitate compliance with the long-term goals of the RFS2.

EPA Has Ample Flexibility in Administering the RFS Program

As part of their ongoing effort to undermine the RFS, opponents of biofuels have highlighted the lack of cellulosic and advanced ethanol commercially available in recent years. They have suggested that the slower-than-expected commercialization of cellulosic and advanced ethanol is evidence that Congress should step in and reform the RFS.

While scale-up is occurring more slowly than anticipated, the advanced and cellulosic biofuels industry is now in the process of building new plants, modifying existing production facilities with emerging "bolt-on" technologies, and introducing new product streams that will allow the renewable fuels sector to become more profitable, diversified and efficient. These are not "phantom fuels," as some would have us believe. In fact, it was reported just last week that the first cellulosic biofuel RINs were generated by an ethanol facility in Upton, Wyoming, a small town in the heart of the state's oil patch.[9] Several billion dollars have been invested in advanced biofuels development with the expectation that Congress and the Administration will stay the course with regard to its commitment to the RFS.

It is important to remember Congress gave EPA substantial flexibility in administering the RFS program, specifically to address some of the uncertainty around the commercialization of advanced biofuel technologies. The agency has the authority to make annual adjustments to the cellulosic biofuel requirements based on likely availability and other factors. Further, in EISA, Congress required EPA to craft a credit waiver system to account for possible shortfalls from the established schedule for cellulosic biofuels. These provisions are working effectively and the important forward-looking element of the RFS, which sends critical market signals to obligated parties and investors, is being retained. Given the administrative flexibility of the program, Congressional intervention regarding the credit waiver provision or the setting of future cellulosic and advanced biofuels requirements is not prudent or necessary.

Conclusion

The ethanol industry greatly appreciates the continued commitment of the 112th Congress and this Subcommittee to the RFS and to the further development of a robust and dynamic domestic renewable fuels industry. Chairman Whitfield and Ranking Member Rush, you have made clear your commitment to the hardworking men and woman across America who are today's newest energy producers. The RFA looks forward to working with you to further develop and implement sound policies that provide the proper incentives to grow the U.S. ethanol industry.

[9] Schill, Susanne Retka. July 3, 2012. "Blue Sugars claims first cellulosic RIN, extends Petrobras deal." Ethanol ProducerMagazine. http://www.ethanolproducer.com/articles/8919/blue-sugars-claims-first-cellulosic-rin-extends-petrobras-deal.