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ADVANCED BIOFUELS UNDER THE RENEWABLE FUEL STANDARD:

CURRENT STATUS AND FUTURE PROSPECTS

FRIDAY, JUNE 22, 2018

House of Representatives,

Subcommittee on Environment,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 9:17 a.m., in Room 2322, Rayburn House Office Building, Hon. John Shimkus, [chairman of the subcommittee] presiding.

Present: Representatives Shimkus, Harper, Olson, Johnson, Flores, Cramer, Walberg, Duncan, Ruiz, Peters, Green, McNerney, Cardenas, and Matsui.

Staff Present: Samantha Bopp, Staff Assistant; Kelly Collins, Legislative Clerk, Energy/Environment; Wyatt Ellertson, Professional Staff, Energy/Environment; Margaret Tucker Fogarty, Staff Assistant; Theresa Gambo, Human Resources/Office Administrator; Mary Martin, Chief Counsel, Energy/Environment; Sarah Matthews, Press Secretary; Austin Stonebraker, Press Assistant; Jean Fruci, Energy and Environment Policy Advisor;

Caitlin Haberman, Professional Staff Member; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; Alexander Ratner, Policy Analyst; and Catherine Zander, Environment Fellow.

Mr. Shimkus. The Subcommittee on Environment will now come to order. And the chair recognizes himself for 5 minutes for an opening statement.

This is our fourth hearing this year specifically aimed at addressing issues related to fuels and vehicles. The first provided an overview of the future of fuels and vehicles. The second took a detailed look at the high octane concept. The third focused on electric vehicles as a small but growing part of the vehicle mix.

In each of these hearings, the renewable fuel standard was a part of the discussion, which is not surprising because this program continues to have a significant impact on the fuels market. But most of the RFS focus thus far has been on corn ethanol and related issues, like blend wall, and not the advanced biofuels part of the program.

Today, we address the imbalance by having a discussion focused entirely on advanced biofuel issues. And I welcome our witnesses who represent those operating in that space.

Biodiesel is every bit as important to my soybean growers as ethanol is to my corn growers. And both biodiesel and cellulosic production facilities are significant job creators in the local communities where they are located, including in my district in southern Illinois.

So the economic impact of advanced biofuels cannot be ignored. The 2007 changes to the RFS envisioned a transition from first-generation biofuels to more advanced biofuels. In fact, the RFS statutory targets for 2022 call for 21 billion gallons of advanced biofuels while corn ethanol and other first generation would top out at no more than 15 billion gallons. The future is going to include a great deal more advanced biofuels.

The reality has been somewhat mixed. For biodiesel, the production capacity

has grown significantly, and billions of gallons are now added to the Nation's diesel supply each year. In that regard, the RFS provisions for biodiesel have been a success. But biodiesel remains expensive compared to petroleum-based diesel fuel, and there has been little progress, making it more cost competitive.

Unfortunately, cellulosic biofuels have not progressed as well as hoped. Congress was convinced in 2007 that cellulosic biofuels were just around the corner. But more than a decade later, we are still waiting for liquid cellulosic biofuels to make a significant contribution.

Biogas from landfills has been a main source of cellulosic biofuels. Investors in cellulosic facilities point to the need for certainty and that the policy surprises coming from EPA and the White House undercut that certainty. Critics say that including cellulosic biofuels in the RFS was a flat out mistake, especially now that the fracking revolution has reduced dependence on foreign oil.

So some want to double down on incentivizing cellulosic biofuels while others want to pull the plug on the idea. Interesting times. It is important to note that, as we consider various RFS reform ideas, including the transition to high-octane fuels, we need to be mindful that biodiesel and cellulosic provisions need to be part of the conversation and addressed as well. All of these parts are interrelated. Thus, the future of advanced biofuels is tied up with the future of the RFS.

I look forward to the hearing from today's witnesses and the members in order to engage in a meaningful dialogue on this topic. And looking to my side, anyone wishing -- my remaining minute and a half.

Seeing none, I will yield back my time and yield to the ranking member right now of the subcommittee, Mr. McNerney, of California.

[The prepared statement of Mr. Shimkus follows:]

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Mr. McNerney. Well, I thank the chairman. Good morning.

And I thank the witnesses for coming here this morning.

An important goal of the renewable fuel standard program is to promote fuel diversity and lower consumer and environmental costs of transportation fuels. Until Congress created the RFS program, the transportation sector relied exclusively on fossil fuels. Our overdependence on these fuels has made consumers and our economy vulnerable to price spikes and supply disruptions at various times in the past. Decades of fossil fuel use have unleashed massive volumes of harmful air pollutants and carbon emissions. Developing cleaner fuels must be part of the solution to these ongoing challenges.

Growth in the use of advanced biofuels fuels far short of what Congress anticipated when this program was expanded in 2007. The industry has made progress, but technical and economic challenges are still holding back greater use of these fuels. I believe the witnesses here today will all be offering some suggestions on how we can improve the investments and marketing climate for advanced fuels -- for advanced renewable fuels.

The advanced biofuel program is very important to my home State of California. This Federal program helps California to meet its goal for low carbon fuels. Regulatory programs, like California's low-carbon fuel standard and Federal RFS program, help the early market incentives needed to spur investments and cleaner fuels. Biodiesel, biogas, and cellulosic ethanol are needed to reduce carbon emissions and other harmful air pollutions from the transportation sector. Reducing carbon emissions from the transportation sector is a big challenge, but it is one that we must take since emissions in this sector do continue to grow.

The good news is that, despite these challenges, investments in alternate fuels are

being made. And these investments are creating jobs and increasing the supply of alternative fuels in California.

There are several facilities in my district, and a new biogas facility is under construction. If we want to see these investments continue, investors must be convinced that there will be a market for these fuels. The uncertainty created through the EPA's delays in rulemaking and in approval of new biofuel pathways are among the challenges with the RFS program that affect advanced biofuel investments.

Clearly, the management of the program is an important factor in ensuring steady progress for new fuel technologies. Unfortunately, it appears that Administrator Pruitt has used his waiver authority to create additional uncertainty in the renewable fuels market. The Administrator's decision to grant unprecedented numbers of waivers to some refiners through a process with no transparency calls into question the target amount of biofuel that the market and its participants will be using. Conventional ethanol still makes up the bulk of the renewable fuel markets.

But I suspect that reducing the number of refineries obligated to blend biofuel will affect the market for all biofuels, including biodiesel and advanced biofuels. Whatever the faults of the RFS program, manipulating markets through a secret waiver process that calls the program into question is not the way to address those faults. Our committee should be looking into this and ensuring that the Administrator is managing the program accordance with the law.

Again, I want to thank the participants and the witnesses, and I yield back.

[The prepared statement of Mr. McNerney follows:]

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Mr. Shimkus. The gentleman yields back his time.

Let me apologize to the folks here for the heat of this room. And I think the air has kicked on. So maybe we are going to feel a little bit cooler. And this is a note to committee staff to make sure that it stays cool.

Mr. McNerney. Mr. Chairman, this room is either too hot or too cold.

Mr. Shimkus. And this issue might be a little too hot or too cold for a lot of people.

So, looking on the majority side, anyone seeking time to make a statement?

Seeing none, looking on the minority.

The chair recognizes the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. Green. Thank you, Mr. Chairman. I want to thank you and both the ranking member for holding the hearing today. Most people here know that I am not really a big a big fan of the renewable fuel standard, the RFS.

The RFS has led to artificially inflated costs thrust upon both refiners and our consumers for a product that hasn't had the environmental impact reduction that was promised when the RFS was created.

A few years ago, our district had three small biofuel refineries, but the market cratered, and I think I have one left. Although in our area, I don't have small refiners. They are 100,000 barrels, 250,000 barrels. And so that is one of my concerns.

I look forward to hearing from our witnesses today, specifically about the RFS interaction with advanced biofuels market. While I think the RFS program is inherently flawed, I do not believe waivers given out in secret without established processes is a good use of Administrator Pruitt's authority. I am afraid that, while many of these smaller refineries have received waivers, the larger ones who do not will still have to meet the overall blend requirements which satisfy the RFS program.

Thank you again for calling this hearing.

[The prepared statement of Mr. Green follows:]

******** COMMITTEE INSERT ********

Mr. Shimkus. The gentleman yields back his time.

We now conclude with members' opening statements. The chair would like to remind members that, pursuant to committee rules, all members' opening statements will be made part of the record.

We want to thank all our witnesses for being here today and taking the time to testify before the subcommittee. Today's witnesses will have an opportunity to give opening statements followed by a round of questions from the members present.

Our witness panel is before us, and I would like to -- personally also like to thank you all for coming. I have some folks from my -- from Illinois and from -- actually, my congressional district. And we will recognize them appropriately when we get a chance to do that.

I would like to start with Mr. Mike McAdams, president of Advanced Biofuel Association. Sir, your full statement is in the record. You have 5 minutes. Welcome.

STATEMENTS OF MIKE MCADAMS, PRESIDENT, ADVANCED BIOFUELS ASSOCIATION; DERRICK MORGAN, SENIOR VICE PRESIDENT, AMERICAN FUEL & PETROCHEMICAL MANUFACTURERS; ROBIN PUTHUSSERIL, VICE PRESIDENT, GREATER CHICAGO TRUCK PLAZA, ON BEHALF OF THE NATIONAL ASSOCIATION OF TRUCK STOP OPERATORS; RANDY HOWARD, CEO, RENEWABLE ENERGY GROUP, ON BEHALF OF THE NATIONAL BIODIESEL BOARD; BROOKE COLEMAN, EXECUTIVE DIRECTOR, ADVANCED BIOFUELS BUSINESS COUNCIL; COLLIN O'MARA, PRESIDENT, NATIONAL WILDLIFE FEDERATION; AND LUKE MORROW, MANAGING DIRECTOR, MORROW ENERGY, ON BEHALF OF THE COALITION FOR RENEWABLE NATURAL GAS.

STATEMENT OF MIKE MCADAMS

Mr. McAdams. Thank you, Mr. Chairman, Ranking Member, members of the committee. It is nice to be with you this morning.

My name is Mike McAdams. I am the president of the Advanced Biofuels Association. I welcome the opportunity to testify this morning on the current status and the future prospects of the RFS program. I want to thank Chairman Shimkus and members of the committee for your efforts over the last year to reform the RFS.

ABF members strongly support RFS reform. ABFA represents 35 companies across the entire biofuels distribution chain who produce the fuels, distribute the fuels, and market advanced biofuels under the RFS program. Our combined production is over 4 billion gallons per year currently. The RFS has resulted in both great successes as well as shortfalls. We believe comprehensive reform will maximize future volumes of

advanced and cellulosic fuels for the future.

On the success front, the production and use of biodiesel and renewable diesel is three times greater than what was originally anticipated and is now approaching 3 billion gallons per year. The environmental performance of these gallons achieve GHG reductions of up to 80 percent off of baseline fuel. This sector also continues to hold great potential as the United States diesel market is over 50 billion gallons a year and growing.

In this space, we can deliver not only biodiesel, but we can also deliver drop-in diesel and jet fuel for a growing airline industry.

As for advanced and cellulosic fuels, I urge the committee to address numerous barriers of entry in the RFS program that specifically disadvantages the innovative fuels of the future. I have provided the committee with ABFA's list of 21 RFS reform proposals for you to review. These proposals fall into three broad categories: one, address definitional and technical issues; two, clarify statutory ambiguities; and, three, tweak certain overly burdensome regulatory frameworks which are currently in place. As much as possible, we urge the Congress in making these changes to the statute, to take the politics out of the equations and make the RFS a rules-based system as much as possible. An example of this is Congressman Welch's legislation to amend the annual RVO process. His bill would base the RVO on the previous year's actual production, queuing up at midyear and end-year adjustments to account for increases or decreases in production. This approach would remove the uncertainty and therefore reduce voluntarily in the RIN market. It also diminishes the need for using waivers when you set the RVO, especially the use of cellulosic waivers. Additionally, the cellulosic waiver system must be reformed so that RINs attached to actual cellulosic gallons are purchased before we use the waiver credits in their place.

Finally, in order to finance the production of new and advanced biofuels of the future, investors must have certainty over time that there will be the value of the RIN standing behind them. A 20-year guarantee would provide that certainty and encourage much more investment in this space as it is tied to the average debt frame for a capital loan.

Among ABFA's 21 proposals are suggestions to permit the use of a broader range of technologies and feedstocks via pathway approval reform. For instance, Chairman Walden has been working on a number of fixes for the wood-based fuels that would allow the growth for pyrolysis, one of the promising technologies in the cellulosic space. Currently, three of ABFA's members are building cellulosic plants in the United States with this technology.

In conclusion, I urge the committee to review EPA's recent actions regarding the small refinery exemptions which have had significant impacts on the RIN market. Administrator Pruitt has recently chosen to lower the thresholds that EPA utilizes to grant RFS compliance exemptions to small refineries. Press reports state that EPA has granted up to 30 exemptions for years 2016 and 2017, three times what we have ever previously seen. These actions have undermined the program and rendered the RVO mandates meaningless. ABF urges the committee to review EPA's applications of these thresholds and the lack of transparency surrounding these decisions.

Thank you again for the opportunity to testify. And I look forward to your questions.

[The prepared statement of Mr. McAdams follows:]

******** INSERT 1-1 ********

Mr. Shimkus. Thank you. The gentleman yields back his time.

The chair now recognizes Mr. Derrick Morgan, senior vice president of American Fuel and Petrochemical Manufacturers.

You are recognized for 5 minutes.

STATEMENT OF DERRICK MORGAN

Mr. Morgan. Thank you, Mr. Chairman, Mr. Ranking Member, members of the committee. Thank you for inviting me to testify today on advanced biofuels under the renewable fuel standard. AFPM members account more than 95 percent of the refining capacity in the United States and are the obligated parties under the RFS. As a result, we are acutely aware of the costs and the challenges associated with advanced biofuel mandates.

The RFS was intended to grow a market for first-generation biofuel while spurring commercialization of advanced and cellulosic biofuels. Although reasons for these goals are understandable -- energy security, rural development, environmental benefits -- our experience with the RFS has made clear that the law is failing to deliver upon many of its goals.

The corn ethanol industry has been the prime beneficiary of the RFS. E-10 is a competitive fuel and does not require a mandate, as evidenced by more than a billion gallons of ethanol exports last year. The advanced biofuel and cellulosic mandates are a different story, though.

The vision of cellulosic biofuels capturing 16 billion gallons of market share by 2022 is illusory, has proven illusory. The U.S. will produce only about 10 million gallons of liquid cellulosic fuels in 2018, a mere fraction of the nearly 200 billion gallons of

transportation fuel we will consume this year.

Despite this reality, EPA has routinely set mandates hiring than actual production, leaving refiners to buy phantom fuel credits for gallons of products that just don't exist. The lack of cellulosic production is not for a lack of trying, including by a number of our member companies. Someday, someone could make a breakthrough. And when they do, it very likely won't need a mandate.

Biodiesel is the primary advanced biofuel on the market today. Unfortunately, it is also tremendously expensive. Last year, biodiesel cost approximately $1.50 more per gallon than the petroleum diesel it was blended into, even before taking into account its lower energy density. For this reason and despite advanced biofuel mandates approaching 3 billion gallons, U.S. producers never made more than 2 billion gallons of biomass-based diesel in a given year.

As a result, imported biofuels are displacing U.S.-produced petroleum and diesel. This simply does not make sense for a law entitled the Energy Dependence and Security Act. AFPM strongly supports a transition to a more competitive fuels market and away from the RFS. We have gone from the world's largest importer of crude oil and refined products to the largest exporter of refined products in the world. Our net imports of petroleum are way down, the lowest percentage since 1967. Domestic production of crude oil and finished products continues to increase. Of what we do import, more is coming from our immediate neighbors with 40 percent from Canada.

North American energy security has never been stronger. But as long as the RFS is the law of the land, we ask policymakers to place a stronger nexus between mandated volumes and demonstrated domestic production. This will ensure we can comply with the law and would be better for consumers who should not have to pay more for fuel to subsidize foreign biofuel manufacturers.

We also support rural communities and biofuel production. Many of our members, our large biofuel producers themselves, will have investments or joint ventures with biofuel producers. Many of our refineries are located in rural areas. And we produce the diesel that powers tractors and school buses. We simply believe there must be better ways to support rural America than by creating expensive and inefficient Federal mandates.

We remain open to good-faith discussions about the future of the RFS and ways to create better opportunities for all stakeholders, especially consumers. The committee's work on the issue is greatly appreciated by our members. We look forward to the dialogue in the coming weeks and months, and I look forward to answering your questions today.

Thank you very much.

[The prepared statement of Mr. Morgan follows:]

******** INSERT 1-2 ********

Mr. Shimkus. Thank you.

Now, next for my colleagues, we are going to recognize Robin Puthusseril. So that is probably the most difficult name to pronounce and read here. So we are glad she is here. Vice president of Greater Chicago Truck Plaza. Now, I am a down-stater. So we will claim her today. Greater Chicago Truck Plaza, on behalf of the National Association of Truck Stop Operators.

And you are recognized for 5 minutes.

STATEMENT OF ROBIN PUTHUSSERIL

Ms. Puthusseril. Chairman Shimkus, Ranking Member, and members of the subcommittee, thank you for the opportunity to testify this morning. My name is Robin Puthusseril, and I am the vice president and part owner of the Greater Chicago I-55 Truck Stop in Bolingbrook, Illinois. Along with my father, John Puthusseril, and my brother.

I am testifying today on behalf of NATSO, the national association representing travel centers and truck stops. NATSO represents not only small, single-store operators, such as myself, but also large, nationwide travel center and convenience store chains. My testimony today will focus on my company's experience with biodiesel and provide my perspective as to how Congress can continue to incentivize fuel retailers like myself to incorporate biodiesel into our diesel fuel supply.

First and foremost, it is important to understand that, as a diesel retailer, I operate in the most transparent, competitive commodities market in the United States. Truck drivers are, by and large, more savvy and price-conscious than typical American motorists. Truck drivers are often aware of retail diesel prices when they are hundreds of miles away from potential refueling sites. Fleet managers use this information to

direct drivers to specific retail locations in order to purchase the lowest priced fuel available.

I say this to illustrate the competitive nature of my market, which compels me to pass through cost savings on to my customers.

The RFS is sound Federal policy because it recognizes this reality. Specifically, it creates a structure where, when it is implemented properly, I am able to offer lower fuel prices the more biodiesel I sell. This is generally good for retailers because, as buyers, we like long markets with a diverse array of supply options at our disposal.

Absent government incentives, biodiesel costs more money to sell than diesel fuel. So, absent government incentives, I would have absolutely no reason to blend biodiesel into my diesel fuel because it would make the end product more expensive rather than less expensive.

The RFS makes the end product less expensive. Under the RFS, when I blend biodiesel into diesel fuel, I am able to separate and sell compliance credits, known as RINs. When I sell RINs, I can lower the cost of my diesel fuel. This allows me to better compete for market share.

My travel center has been selling biodiesel blends for 12 years. After the RFS and similar State incentives were enacted, it was clear to me that I had to invest in biodiesel in order to remain competitive. In addition to spending more than $500,000 to update my fuel infrastructure, I spend approximately 70 percent of my time today managing this line of supply. This includes analyzing pricing proposals, testing our fuel supply, coordinating deliveries, managing inventory, and ongoing administrative and regulatory compliance work, which is significant. This is all on top of managing our staff of more than 50 employees and overseeing all aspects of our truck stop, from fuel sales and truck parking lot maintenance to our sit-down restaurant and convenience store.

I didn't ask for the RFS. But now that it is the law of the land, I view it as my responsibility to my family's business and our employees to adjust our practices accordingly. The growth prospects for advanced biofuels are in Congress' hands. Because biodiesel is more expensive than diesel fuel, it must continue to be subject to robust Federal incentives if it is to continue to gain market share. I firmly believe that the advanced biofuels market has a potential to be a part of American's long-term all-of-the-above energy future.

I am concerned, however, that the EPA in recent months has granted small refinery hardship waivers to an unprecedented number of refineries. These waivers have lowered demand for advanced biofuels. They have substantially diminished the value of the biodiesel investments that Congress encouraged me to make when it established the RFS.

Going forward, I would hope that EPA act in a manner that is more consistent with the RFS by requiring all waiver requests be received and assessed prior to finalizing biofuel mandates for a given compliance year. That way, when RVOs are finalized, the market can be confident that those numbers will not be adjusted downward after the fact.

When the RFS was enacted, if I didn't invest in biofuel infrastructure and adjust my business practices, I would be at a serious disadvantage today. That is why I made the investments. If Congress can continue to provide a roadmap that leads to robust advanced biofuels markets, the travel center industry will be better able to offer affordable fuel for motorist as we serve as the home away from home for America's truck drivers.

Thank you for the opportunity to testify today. I am happy to answer any questions that you may have.

[The prepared statement of Ms. Puthusseril follows:]

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Mr. Shimkus. Thank you very much.

Now I would like to turn to Mr. Randy Howard. For full transparency, REG operates national biodiesel refinery in Danville, Illinois, which is in the northern part of my congressional district. And he is the CEO of our renewable energy group.

You are recognized for 5 minutes. Welcome.

STATEMENT OF RANDY HOWARD

Mr. Howard. Thank you.

Chairman Shimkus, Congressman McNerney, and members of the subcommittee, it is my pleasure to be here with you this morning. I am Randy Howard, president and CEO of Renewable Energy Group, or REG. I am honored to speak to you today on behalf of the National Biodiesel Board and more than 60,000 men and women across the country that support the biodiesel industry.

Established in 1992, NBB is the leading U.S. trade association representing biodiesel and renewable diesel, including producers, feedstock suppliers, and fuel distributors.

Let me tell you a little about my company. REG is the largest domestic producer of advanced biofuel making biodiesel in 10 plants across the United States. We also own and operate a 75 million gallon renewable diesel refinery in Louisiana and two biodiesel plants in Germany. Combined, our plants have demonstrated the annual production capacity of 575 million gallons. We currently employ 840 people in our company in good-paying jobs and also support thousands of other jobs in agriculture, transportation, and energy sectors.

I first joined REG as a member of their board of directors after a 33-year career in

the petroleum industry. When I retired from Unocal 76 in 2005, the oil industry was embracing renewable fuels as part of the Nation's all-of-the-above strategy. I saw then and continue to see biomass-based diesel as the key to the future of liquid transportation fuels, transforming waste, fats, and oils into high-quality, low-emission renewable fuel that extends our precious petroleum reserves and contributes greatly to the energy security of America.

The most important part I would like to make to you today is that biodiesel is truly a success story of the RFS, helping to realize the energy security and environmental benefits that are RFS was intended to achieve. Biodiesel is by far the most wildly used advanced biofuel, meeting more than 90 percent of the annual RFS advanced biofuel obligations. According to EPA, biodiesel reduces lifecycle greenhouse gas emissions by 57 percent to 86 percent compared to petroleum diesel. The greenhouse gas reductions from 15.5 billion gallons of biodiesel used through 2017 equates to the removal of over 30 million passenger vehicles from America's roadways.

Biodiesel has consistently delivered more than the RFS currently requires, and we can do much more. Federal and industry data shows the U.S. biomass-based diesel plants operate at the start of this year have an aggregate capacity of more than 2.6 billion gallons. Since that time, companies have announced or completed another 238 million gallons of expanded capacity. REG just completed a 20 million gallon expansion of our first plant, and we are looking at a major expansion of renewable diesel in the future.

Biodiesel can also help to boost U.S. exports and rebalance international trade. The EIA estimates growth of another 200 billion gallons of distillate fuel demand worldwide by 2030. U.S. biodiesel is and should be a part of that growth.

Second, in addition to these energy and environmental benefits, biodiesel supports rural American jobs. Biodiesel can help solve the current farm crisis. Farm

income has declined steadily over the last 4 years, reaching lows not seen since 2009. Last year, REG added value to nearly 4 billion pounds of agricultural waste.

Feedstock diversity continues to be a strength of our industry. U.S. producers utilize a wide range of feedstocks, such as recycled cooking oil, vegetable oils, animal fats, and distillers corn oils. This diversity allows biodiesel and renewable diesel producers to alter feedstock use based on regional and global market dynamics. Supplies are ample and continue to grow. There is also a number of feedstock pathway applications which EPA has not acted on, in some cases for several years, which would provide even more feedstocks.

Third, there are no infrastructure barriers to biodiesel's continued growth. While biomass-based diesel currently makes up less than 5 percent of the distillate pool, there are hundreds of fuel retailers across the U.S. selling biodiesel blends up to B20, or 20 percent. REG and other advanced biofuel companies are selling high biodiesel and renewable diesel blends to a growing list of corporate and municipal customers. We are proud to have customers such as FedEx, UPS, and the New York City sanitation department, just to name a few.

In closing, biodiesel is a renewable industry success story and stands ready to deliver more gallons and more economic and environmental benefits to the market. The RFS provides a winning combination of benefits for Americans, greater energy security, substantial environmental benefits, and enhanced value-added agriculture. We would ask Congress to continue the support of the program and to use its oversight authority to ensure the EPA administers the program according to Congress' intent.

I look forward to answering your questions, and thank you for this opportunity.

[The prepared statement of Mr. Howard follows:]

******** INSERT 1-3 ********

Mr. Shimkus. I thank the gentleman.

The chair now recognizes Mr. Brooke Coleman, executive director at Advanced Biofuels Business Council. He has been here before. Welcome back.

STATEMENT OF BROOKE COLEMAN

Mr. Coleman. Good morning, Chairman Shimkus, Congressman McNerney, members the committee. My name is Brooke Coleman. I am the executive director of the Advanced Biofuels Business Council. Thanks for the opportunity today to testify. We represent worldwide leaders in the effort to develop and commercialize the next generation of advanced and cellulosic biofuels.

By any measure, the RFS is doing what it was designed to do. The ethanol industry alone has built 200 biorefineries in the last 30 years to the oil industry's roughly 10 and now displaces the rough equivalent of Saudi Arabia and foreign oil. And few, if any, of the companies producing first-generation biofuels are not somehow invested in advanced biofuels.

It is politically expedient to cast the RFS as good for first-generation biofuels but less effective at promoting advanced biofuels. These claims are designed to divide and conquer the left-right coalition that made the RFS a reality and are wildly overblown. Already advanced biofuels make up about 20 percent of the volumes required under the RFS, and now the most technologically advanced biofuel, cellulosic biofuel, is on the precipice of large-scale commercial growth.

Policy and financing uncertainty notwithstanding, we are producing commercial volumes of cellulosic ethanol from agricultural residues and municipal solid waste. Not everyone has succeeded in the timeframe anticipated, but delay should not be mistaken

for failure.

So let me address the elephant in the room. Why are we measuring cellulosic biofuels by the millions instead of the billions, as anticipated? Certainly, the global recession occurring shortly after the passage of the law slowed things down. When things started to get better in the 2012-2013 timeframe, the previous administration succumbed to oil industry pressure and stopped enforcing the law altogether. The RFS was back on track in November 2016, but the current administration almost immediately proposed to cut RFS volumes, ultimately turning to refinery waivers to roll the program back and create the investment uncertainty that biofuel innovators are too familiar with.

While it is certainly plausible to argue that these implementation issues could be cured by amending the statute, we disagree. Current law could not more clearly prohibit the type of waivers used by the Obama administration from 2013 to 2016 as recently confirmed by, I believe, the 10th circuit. But they did it anyway. Current law could not more clearly prohibit giving small refinery waivers to some of the largest refiners in the world, but the current administration did it anyway. Current law could not more clearly make woody biomass and corn fiber eligible for the RFS. But a decade later, we still don't have answers about trees, and many corn fiber pathways are logjammed at EPA.

These aren't statutory problems. They are political will problems, and not the political will in this room. We do not support trying to cure a political will problem by opening up an already strong Clean Air Act statute. It is unclear to me what political metric would suggest that the current political environment would produce a stronger statute for advanced biofuels than we have today. But either way, the process would not produce solutions to the problem at hand.

Let me finish with a couple of thoughts. The RFS is essentially a contract

designed to convince the private sector to spend billions of dollars to bring new fuels to market, and they have done that. Single companies in my council have spent $500 million alone. If you want to keep U.S. investment, keep and hold program administrators to this commitment.

Two, proper enforcement of the law is extremely important for our fuel industry. Fuel markets are not free markets. Oil prices are manipulated at the top by OPEC often for the express purpose of weakening competition, including in the oil industry. At home, ethanol has been the cheapest form of octane for decades. But without policy, we struggle to find buyers because the oil industry would prefer to buy octane from themselves, even when it is cheaper.

Number three, while it may not seem like it, the oil industry is running out of ways to avoid the law. The courts have struck down prior misuse of RFS general waiver authority already, and the absurdity of the current small refinery waiver scheme has and will continue to be exposed.

Four, there are much easier ways to produce step change results for my industry and advanced biofuels in general. I will mention two. First, it is not easy work, and progress has certainly been made. But EPA must kick out eligibility pathways faster. For example, we can produce hundreds of millions of gallons of cellulosic ethanol from corn fiber in the near term if we can clear the pathway logjam at EPA. Clarity on municipal solid waste are two more that have already been mentioned.

Second, and this is largely for cellulosic ethanol. Regulator parity for RVP, which we have discussed, Reid vapor pressure, would open new and immediate opportunities for growth in cellulosic ethanol. As you mentioned, 15 billion gallons is capped.

I will close by saying that it may not be the sexiest answer to the question asked, but the best statutory path remains the path that we are on.

Thank you.

[The prepared statement of Mr. Coleman follows:]

******** INSERT 1-4 ********

Mr. Shimkus. The chair thanks the gentleman.

The chair recognizes Mr. Collin O'Mara, president of the National Wildlife Federation. You are recognized for 5 minutes.

Welcome back.

STATEMENT OF COLLIN O'MARA

Mr. O'Mara. Thank you, Mr. Chairman, and thank you, Mr. McNerney, for convening this session today.

Is this on?

Okay. My name is Collin O'Mara, and I am head of the National Wildlife Federation. We are America's largest conservation organization with 6 million members, a couple million hunters and anglers and as well as birders and gardeners, completely bipartisan, representing every part of the country.

And 2 years ago today, I was before this committee talking about this exact issue. And at the time, I said, you know, we were supporters of the original RFS and the RFS2 because of the promise of getting to advance truly sustainable fuels and the promise that was made that there would not be adverse impacts to habitat and to wildlife, both of which have kind of proven not to be true.

And so, at the time, I said, kind of, the road to hell is paved with good intentions. But at the end of the day, as my old boss Jack Markell used to say, he used to be Governor of Delaware, a vision without execution is nothing but a hallucination. And I do think that we have to have an honest conversation about the role of government in getting us to the point where we are today. I mean, we have distorted these markets to the point where we are basically reducing the amount of investment that we are seeing in

the advanced, and we are basically creating a massive incumbent industry that is having adverse impacts on the landscape.

And so I want to talk about three things today. The first one is to kind of expand on the vision for what an advanced biofuel future could actually look like. The second is I want to offer a perspective for why we failed to achieve the vision so far. And I want to suggest some ways that Congress can actually right the ship and reach these elusive goals because I do think -- and I do disagree with some of my panelists here. I do think that there is this fallacy that we all accepted 7 years ago, or 11 years ago now, that if we invest in first-generation biofuels, they will automatically lead to kind of the future that we want for the advanced biofuels. And we just simply haven't seen that happen.

And if you look at the amount of venture capital money and equity money going into the advanced fuels, it is a fraction of the money going into cellulosic -- excuse me, going into traditional corn ethanol. And the reason is pretty simply. If you give a fairly guaranteed return from a fairly predictable program on the first-generation side and you have wildly unpredictable volumes on the next-generation side, of course you are going to put the smart on the last generation. It is just good economics.

And so I won't go -- in my previous testimony, I talked a lot about the wildlife impacts, the loss of grasslands in the plains. I mean, right now, 87 million acres of land are in corn production. That is the most since World War II. Eighty-nine million acres are in soy production. If you look at those 176 million acres, the production on them, the productivity on them, is absolutely fantastic. I mean, we are getting better and better at being more efficient in the amount of crop that we are producing. This is because of biotechnology, because of the application of fertilizers and pesticides.

But we are also -- the landscape is shifting, so we are losing acres in more arid place -- we are basically taking acres that are more arid places out of production, and

then we are putting more acres that were habitat in the grassland into production. And what has ended up happening, for folks that care about wildlife and sportsmen, folks who like to duck hunt and pheasant hunt, we are losing some of the best habitat in the country for ducks and for pheasants.

And so the vision -- kind of the point I wanted to make on the vision was that sustainably harvesting native grasses, native prairie, these could provide feedstock and provide revenues for ranchers and for folks across rural America while continuing to sequester additional carbon, providing homes and forage for wildlife species, and maintaining or enhancing water storage capacity, and offering diversified revenue streams.

The same thing with cover crops. Instead of just paying folks for cover crops that are taking up nutrients, actually harvesting those cover crops, turning those into feedstock for biofuels creates another revenue stream for farmers that are already trying to do their part to improve water quality.

Same thing in areas with more trees and grasses. They could benefit significantly from thinning and using other woody waste to create a few feedstocks for biofuels -- for advanced biofuels.

And so the question is, why aren't we there? If there is all these potential food stocks that have good economics behind them at a micro level, why can't we get to the macro growth? And I would argue it is mainly for two reasons.

The first reason is that EPA's having to lower the statute for their overly ambitious target has really strangled the industry in its infancy. And then, once these annual targets are set, they are consistently undermined by the issuance of these waiver credits. And I think you are hearing broad agreement on that point today.

These moving targets are horrible for both the producers as well as the investors

that are looking to make decisions. And so there isn't that incentive to make the big investments for the next generation of fuels.

And so the two industries are in a very different place. If you think about where the corn ethanol industry was 11, 12 years ago, it was in its infancy. We are at 10 percent now. I mean, soybeans right now, it is 2 billion gallons. I mean, we have made incredible progress in those areas to the chagrin, in some ways, of the wildlife impacts.

But we haven't seen any of that on the other side. And I think what I would really encourage this committee to do is look at the GREENER Fuels Act that Congressman Welch has introduced. There are a lot of commonsense solutions, bipartisan solutions in that act that will create a lot more certainty in the industry, reduce the conservation and the wildlife impacts from the current RFS, and do it in a bipartisan way.

The longer we wait for a solution, the harder it is going to be to get one. I do think that there is a bipartisan solution here that could have a huge benefit for wildlife and still achieve that incredible vision for a sustainable energy future at the same time.

I look forward to your questions. Thank you, Mr. Chairman.

[The prepared statement of Mr. O'Mara follows:]

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Mr. Shimkus. Thank you very much.

And last but not least is Mr. Luke Morrow, managing director at Morrow Energy on behalf of the Coalition for Renewable Natural Gas.

Sir, you are recognized for 5 minutes. Welcome.

Mr. Morrow. Thank you. Are you able to hear this?

Mr. Shimkus. You are good.

STATEMENT OF LUKE MORROW

Mr. Morrow. Okay. Excellent.

Thank you, Chairman Shimkus, Ranking Member, and members of the subcommittee. I am Luke Morrow, president and founder of Morrow Renewables. I also serve on the board of directors of the Coalition for Renewable Natural Gas, which is the trade association for the renewable natural gas industry. I appreciate having the opportunity to testify today about renewable natural gas, or RNG, and the important role it plays in the RFS program.

RNG is biogas-derived biofuel. Our industry takes untreated biogas captured from landfills, wastewater facilities, and anaerobic digesters and refines it to meet the fuel qualify standards of geologic natural gas. It is fully fungible in existing pipeline infrastructure.

RNG qualifies as cellulosic biofuel under the RFS. It represents over 95 percent of the fuel used to meet the program's cellulosic biofuel requirement and reduces lifecycle greenhouse gas emissions by 80 percent or more compared to conventional diesel fuel.

My company, Morrow Renewables, is based in Midland, Texas. We have been

involved in the natural gas industry since 1986 and have been active in the RNG industry for the last 18 years. We work collaboratively with landfill owners, operators, and waste management companies to bring RNG projects to fruition. Our company developed and utilizes patented technologies to refine biogas into high BTU RNG that can be readily used in natural gas vehicles. We employ over 180 people and have seven projects across the Texas, Louisiana, and Arkansas producing cellulosic biofuel.

In fact, 2 days ago, I was the ribbon cutting for our latest project in Melissa, Texas, which is one of our biggest projects to date. This project will produce, at a minimum, 12 million gallons of cellulosic biofuel annually. In total, our current projects produce about 35 million gallons of cellulosic biofuel every year, which we expect to almost double by the end of this year.

Since 2011, the RNG industry has developed over 45 facilities capable of producing high BTU RNG that can be used for transportation applications. There are currently an additional 48 projects under construction or consideration.

Our industry has produced increasing volumes of cellulosic biofuel since RNG was incorporated into the RFS program. RNG production for transportation fuel grew from approximately 33 million ethanol equivalent gallons in 2014 to over 240 million gallons in 2017. That is more than a 620-percent increase in the 3 years -- 620 percent.

For 2018, the EPA estimated that RNG production would increase by approximately 21 percent over the previous year's levels. EPA actual data show that the industry has grown 29 percent over the last 12 months. In other words, our industry is currently on track to exceed the EPA's estimate of 274 million gallons of production for 2018.

America's RNG industry has a great story to tell. We are converting waste into a transportation grade fuel that can be used in natural gas vehicles, such as the Metro

buses here in Washington, D.C.

In addition, we are providing the fuel needed to meet the RFS program's cellulosic biofuels target and doing it in an environmentally sustainable manner while adding high-paying engineering, manufacturing, construction, and operations jobs to our economy.

As this subcommittee thinks about the future of the RFS program, I want to convey how important policy certainty is to the stability and growth of our Nation's RNG industry. I can tell you from firsthand experience that bringing an RNG project to fruition requires significant capital investment and long-term contractual arrangements.

There are things that the EPA can do to provide this stability. Keeping the annual rulemaking process that sets the program's volumes requirements on schedule is helpful. The use of a consistent methodology that recognizes historic growth while accounting for new investment when setting the cellulosic biofuel volume targets will help provide the certainty required to attract additional investment and expand cellulosic biofuel production.

Lastly, I would note that reports of the small refinery exemptions being applied in new expanded ways have injected uncertainty and undermine the economic assumptions upon which capital investments were made and continue to be made in the RNG industry.

We would encourage the subcommittee to take appropriate steps to ensure that the small refinery exemption is being applied in a manner consistent with the letter and intent of the law and in a way that does not undermine our industry's ability to produce additional volumes of cellulosic biofuel.

Chairman Shimkus, ranking member, and subcommittee members, thank you again for the opportunity to testify. I would welcome any questions you may have, and may God bless America.

[The prepared statement of Mr. Morrow follows:]

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Mr. Shimkus. May God bless America. Thank you very much.

Especially after this testimony here, we got a -- we need a lot of blessing going on here.

So let me thank you for your testimony and move to the question-and-answer portion the hearing. I will begin with -- recognize myself 5 minutes for the beginning.

And I just want to -- so we are here because, really, the policy certainty question, right? So anyone know who is going to be elected President in 2022? Anyone know who they -- anyone know who will be the next Administrator of the EPA? The answer is no, right? Does anyone know when it is perceived that the RFS program will be turned over to the next Administrator? 2022, right?

So let me ask -- let me start with my question for McAdams, Howard Puthusseril, Morrow, and Morgan. What are your main concerns with the RFS post-2022? And what, in your view, is the best way to address those concerns.

Mr. McAdams. So I would answer by doing a reform bill so that we have clarity, not only before 2022 but after 2022, instead of waiting for a reset. And the reason I say that is because so many of the current provisions in the statute and in the current regs are so ambiguous that EPA doesn't have the ability to make the calls they need to make. And I have seen two major companies build plants, one in China and one in Sweden, because we couldn't make the calls on how to apply the policy in the first place.

So I know I have disagreements with folks on this panel about that. But having represented those two companies who couldn't build a plant here because we couldn't make a decision on whether tall oil was a waste when it is 2 percent residue in a tree or whether a single-cell organism is an algae, but --

Mr. Shimkus. Okay. I have got other people to go. We got your point.

Mr. Morgan.

Mr. Morgan. I would say it is certainly a little bit of the uncertainty question post-2022. But the main point is that ultimately fuel should be standing on their own two feet and competing in a free and open marketplace where there is a willing seller and a willing buyer. Both people are better off after the transaction.

So we need to move toward a free market. And doing that now would actually be good, because it would give you more of an opportunity, more of a runway to figure out how to do that post-2022. So now is the time for reform.

Mr. Shimkus. Ms. Puthusseril.

Ms. Puthusseril. You know, I run a truck stop, and so we look at things on a day-to-day basis. And so for my customers, what they are looking for is the most affordable fuel prices. They are looking for a fuel that they can get that is good. And we have seen the RFS, as it is intended to work, is working. Whenever I can offer low price fuel for the drivers --

Mr. Shimkus. Let me ask, you have you been briefed by the association of a concern on 2022?

Ms. Puthusseril. No.

Mr. Shimkus. Okay. Let me move -- I am running out of time, so let me go to Mr. Howard.

Mr. Howard. Thank you, Mr. Chairman.

Frankly, Mr. Chairman, I am not sure we see much difference post-2022 with the uncertainty that we have seen to date in the RFS and the implementation. Certainly we would like to see updates in transparency and consistent long-term growth that is clear for biodiesel and renewable diesel. Clearly, it has been a success story, but it has been in fits and starts, and we don't see much difference.

Mr. Shimkus. Okay. Let me go to Mr. Morrow.

Mr. Morrow. Yes. Thank you, Mr. Chairman.

So we have only been as cellulosic biofuel RNG in the market for 3 years, and 2022 is right around the corner. So we are -- our entry is making massive investments. So we would just like to see some certainty going forward and to know what that is to make investments to continue to do what we do.

Mr. Shimkus. So does your industry feel that there is certainty right now?

Mr. Morrow. Not at all.

Mr. Shimkus. Okay. And this is kind of outside. But one of the main drivers of us possibly moving forward is the octane debate. The basic debate is best fuel engineers and the best vehicle passenger engineers producing the best vehicles to meet CAFE and low carb and some of those other issues.

I would like to go through the panel, but quickly. I know that is not in your segue, but since that drives about 75 percent of this debate, what are your thoughts on that?

McAdams, you want to --

Mr. McAdams. Oh, I --

Mr. Shimkus. Quickly though. Quickly.

Mr. McAdams. Okay. I am on the optimal task force with DOE, and they going through a range of different fuels. And we just can't -- you want to make sure that you leave enough flexibility that you can have a drop in fuel that is renewable. That -- and it doesn't have to necessarily --

Mr. Shimkus. Okay. Let me go to Mr. Morgan because he has really the person I want to ask this of.

Mr. Morgan. Yeah. We definitely see potential in a 95 octane specification in exchange for a sunset of the RFS that could potentially work better for everybody,

including for consumers. It would be -- a 95 RON level would be a nationwide fuel on day one. That is important to the automakers. The automakers tell us and testified before this committee that that is the optimal level that would allow them to engineer the vehicles. And if the RFS goes away, it will free up enough investment for us to be able to compete in a free and open market.

Mr. Shimkus. And I will end here. But I think, in observation of the other panels, you would probably be alone in the statement of sunsetting the entire RFS? Just instructional.

So, with that, I will turn to the ranking member, Mr. McNerney, for 5 minutes.

Mr. McNerney. I thank the chairman.

Mr. O'Mara, how can Congress work to improve the RFS and ensure it includes other biofuels and biogasses?

Mr. O'Mara. Thank you, Mr. McNerney.

And I think, if you look at the legislation that Congressman Welch just put forth, the GREENER Fuels Act, looking at having more clear, kind of, definitions for the types of fuels that are allowed but then being a little technology agnostic. Like, we shouldn't be picking winners and losers from LG versus native grass versus, you know, different technologies. Set performance standards and let the market actually work. And I think, right now, we are overly prescriptive. And the process of having EPA allowing new next-generation fuels into the process has been absolutely abysmal.

And so, again, I mean, I do think there are models in California and other places that have set standards, and then let American innovation work.

Mr. McNerney. I have heard a couple of panelists refer to Mr. Welch's legislation.

Is there anyone that is familiar with it that would oppose that legislation?

Mr. Coleman. Yes. We oppose Mr. Welch's legislation. So there is a number of things in that bill that, quite frankly, are mind blowing, from my perspective. There is a whole bunch of asks from the American Petroleum Institute: a cap of ethanol use, a total exclusion for corn fiber, cellulosic ethanol, sunsetting where it shouldn't exist.

We have a number of problems with that bill, and we would ask for opposition.

Mr. McNerney. Thank you.

Anyone else?

Mr. McAdams, does your industry find that the playing field for biofuels, gas, and diesel to be level?

Mr. McAdams. No, sir, because they are at different economic places at the current time. And that is part of the problem with the program when you have had 40 years and $20 billion, as the incumbent corn industry has, and you are trying to compete ethanol to ethanol, they are not on a level playing field.

So you have to buoy up if you are going to have the advanced fuels compete with the incumbent fuels on both an octane basis and just on an entry to the market basis. And, frankly, the teeth in the RFS didn't do that for cellulosic.

Mr. McNerney. Does anyone on the panel feel that the EPA's waiver for small refineries that is actually given to large refineries is a good idea? Does anyone think that is a good idea?

Mr. Morgan. I will just say we don't take positions on any individual refinery waivers because it deals with confidential business information and all that. But we oppose the idea of doing a retroactive reallocation. We are not sure how they could do that legally and logistically under the statute. And it points to the need, really, for a comprehensive solution. That is why we are here. I would just say to my fellow panelists, if they are frustrated with how the RFS is run, welcome to the club. And if you

think it is bad now, wait for 2022 when there is even more uncertainty. So all of this to me points right back to the need for a comprehensive solution.

Mr. McNerney. Mr. O'Mara, who do you think that that policy benefits, the policy that the chairman -- or the Administrator is pushing forward?

Mr. O'Mara. Yeah. I think there are places where kind of the uncertainty and the RIN cost and things like that have been -- have adversely impacted some manufacturers and some -- you know, some refiners. I do think that reduces some pressure on kind of habitat impacts, especially as prices get up higher and higher.

But I think the challenge of this debate continues to be projected as just kind of corn versus oil. And there are a whole series of industries that are in -- a whole series of constituencies that are badly influenced by the status quo. And I think the problem is that we keep trying to have these, like, little quick fix, you know, kind of get through the press cycle and do something from either the administration where we need to have a bigger conversation because it is just more complicated than any individual action that the Administrator has taken.

Mr. McNerney. Well, I certainly agree with the chairman on this. It is a good diverse panel, and so we get some different viewpoints on that.

Mr. McAdams. Mr. McNerney, I just want to make the committee aware that I have actually sued the Environmental Protection Agency over the way they are issuing the small refinery waivers. And what they have done is they have purposely driven down the price the D6 RIN. And that is a direct benefit to the merchant refiners.

Then what they did was they went from an average of 7 to 10 to 30. And some of my largest distributors of diesel have lost millions and millions of dollars as a result because they were sitting there holding a hundred million RINs. So we think -- our guys have received economic harm and that some of the people they gave them to didn't pass

the economic harm test.

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[10:15 a.m.]

Mr. McNerney. Thank you.

Mr. Coleman. One additional point. When it all comes down to it, what those waivers do is they transfer wealth from rural America into the pockets of refinery owners. I mean, that is what they do in the short-term. And rural America is hurting and refineries are not.

Mr. McNerney. I just want to end by saying, Mr. Morrow, I was pretty excited hearing your testimony. Let's see how we can continue that success story.

Mr. Morrow. Thank you, sir.

Mr. McNerney. Mr. Chairman, I yield back.

Mr. Shimkus. The gentleman yields back his time.

The chair recognizes my friend and colleague from Texas who has been laboring with me on this issue, Mr. Flores, for 5 minutes.

Mr. Flores. Thank you, Mr. Chairman. I apologize to the audience for being late today. My mother experienced a significant medical condition earlier this week, so I had to deal with some of those things this morning.

Mr. Morgan, your organization has been supportive of the high octane concept. What, if any, changes need to be made to the advanced biofuels provisions in the RFS in order for a high octane program to move forward?

Mr. Morgan. Thanks for the question.

Yeah, I think the key thing is there that we need to be moving toward a free market. We are open to all ideas about how to do that in the advanced space. We

feel like the octane idea has the potential to do that in the conventional ethanol space.

We don't have a specific solution, to be honest, on the advanced space, but we are open to ideas and looking for an off-ramp toward all the fuels competing on an equal basis.

Mr. Flores. Okay. Would your constituents accept a sunset date for advanced biofuels that is later than a sunset date for the remainder of RFS?

Mr. Morgan. We feel so strongly that the program needs to be sunset over time that we are open to all ideas. The timetable needs to be reasonable of course. But we are open to hearing what the colleagues on this table and others need to have the certainty that they need and the timeframe that they need. We will take a look at that, take it back to our membership, and we are open to ideas.

Mr. Flores. Okay.

Mr. McAdams, do you envision a sunset date for RFS that includes advanced biofuels? And if so, what would that sunset look like?

Mr. McAdams. Well, I think you have to base it on how you would get your financing. And so 20 years is what most people have in terms of the debt that they take when they have a capital -- a loan. And if you gave the plants, when the plants came on, like you do in the Tax Code, you flip the switch on and you get 20 years of a RIN, then people are going to have the confidence to finance those plants.

Twenty is not the only answer you could have, but I think you have got to have some longevity where they can repay the loan just like you have a 30-year loan on your house because it is easier to pay for.

So that is the game that has to be worked on in terms of how long you would go forward in order allow these plants to be financed and built.

Mr. Flores. Okay. Thanks for the answer. Just to clarify, you are saying most

of the capital investments have about a 20-year financing--

Mr. McAdams. Yes. When you look at the electric side, you usually see a 20-year agreement between the purchaser of the power and a purchase power agreement, right? That is generally what the electric industry does, so I just borrowed that from the electric --

Mr. Flores. Oh, okay, I see what you are saying.

Mr. Morgan. And I would just point out that would be 17 plus 20, which is 37 years, is a long time to wait.

Mr. McAdams. Well, you wouldn't have to do it that way. You could do it in some other constructions is what I am saying. You have to work that out. Because you guys had to have 30 years to pay for the $6 billion refineries. It is the same issue.

Mr. Flores. Okay. Well, this is helpful.

Mr. Morgan, there are recent reports that the EPA is considering reallocating waived volumes from exempted refineries -- excuse me, exempted small refineries -- in the 2019 RVO. What is your perspective on these reports?

Mr. Morgan. I would just say that --

Mr. Flores. Just to be clear there, reallocating from small refineries to everybody else.

Mr. Morgan. Yes. We have very grave concerns about that, particularly trying to retroactively put in waived volumes into a new rule. I am not sure how they could do that. We have very strong concerns for that legally.

Also, I think, to my point just a minute ago, I think this points out why we need to have a comprehensive solution, clarity in the statute, rather than relying on administrative action. And in 2022, the statutory guidelines fall off and there is more administrative discretion.

So for those of us who are concerned about how the program is being operated now, it is much more so in the future, which is why we all need to figure out a path forward.

Mr. Flores. Okay. Mr. McAdams, am I interpreting correctly that that is one of the catalysts for your litigation?

Mr. McAdams. Yes, sir. Absolutely. I mean, who is going to finance a $200 million plant in 5 years.

Mr. Flores. Okay. I thank the panel. It has been great.

And, Mr. Chairman, I yield back the balance of my time.

Mr. Shimkus. Wow, the gentleman yields back his time.

The chair recognizes, I think, the gentleman from Texas -- maybe not -- for 5 minutes.

Mr. Green. The chair and I have some little competition.

I want to thank all of the panel for being here today.

One of the frustrations -- and I think the chair and I were on the committee when this system we have now was created from a number of energy legislation over the last decade or so -- the frustrating thing I have is that, not only coming from an oil and gas community, but biofuels hasn't taken on, and what is picked up is the corn ethanol.

And I know from the environmental perspective, biofuels really have a plus for the environment, whereas corn ethanol doesn't, and that is the frustration.

So, Mr. Morgan, has the RFS had help to commercialize and develop cellulosic biofuels and advanced biofuels other than biodiesel?

Mr. Morgan. Not really. I think you have heard the numbers today, that it is overwhelming, that biodiesel has been in the advanced pool with only 10 million gallons of liquid cellulosic fuels at this point, setting aside the biogas, the compressed natural gas.

Mr. Green. Have we seen domestic production rise dramatically? Has the mandate kept pace with the domestic production capabilities?

Mr. Morgan. No, it has not.

Mr. Green. And how do existing mandates prioritize imports over domestic production?

Mr. Morgan. Yeah, I think you see that in a couple of different ways. So if the mandate is placed higher than demonstrated domestic production, then you are either going to have some increased domestic production, which we have seen a little bit of that, but you also have a lot of increased foreign imports. And that is kind of against the whole purpose of the Energy Independence and Security Act.

Mr. Green. And I agree that one of the concerns is that we should be producing it. If you don't like bringing in foreign oil, you surely wouldn't want to bring in biofuels.

Mr. Morgan. Yeah, that is right, and especially because we produce the diesel here in the United States, our members. So we are actually, in terms of refined products, we are a net exporter, the largest net exporter in the world of refined products.

So when you bring in the biofuels from overseas, you are actually displacing American fuels. Again, some of that is derived from foreign crude oil, but it is domestically produced.

Mr. Green. Speaking for AFPM, what effect has Mr. Pruitt's RFS waivers had on the industry? Are some of the refineries concerned that they will be left holding the short end of the stick when the burden of compliance only applies to remaining refiners who do not receive those waivers?

Mr. Morgan. I would say it certainly splits our members. It is between those who have received waivers and those who have not.

And as to how they are reallocated, we have very strong concerns about that.

That would actually hurt everyone, including, for example, like PES, for example. It would be reallocated to them when they are in financial distress at the moment. That is just one example.

Mr. Green. And the chair and I have been wrestling with RFS for a number of years. And a lot of it is just -- the RIN system is just broken and somewhere along the way Congress needed to fix it. And I think everybody at the table ought to be there to help, because I like domestic production, but I also see that a lot of folks making money out of the energy sector, it is not putting one drop of gas in our vehicles.

Mr. Chairman, that is all the questions. I yield back.

Can I save it for next week?

Mr. Shimkus. I think you already owe us numerous minutes.

Mr. Flores. Will the gentleman yield the balance of his?

Mr. Shimkus. Mr. Flores would like to --

Mr. Flores. Thank you.

Mr. Green brought up an issue that I think is important to consider. Do any of you think the EPA can fix this on its own administratively or do you think that it is going to require a statutory initiative? As quickly as you can.

Mr. Morrow. That sounds like a loaded question.

Mr. Flores. It is not intended to be a trick question.

Mr. Morrow. I think, from our industry's standpoint, as we are new in the RFS, I think maybe any type of legislative post-2022 would be good for us in knowing that there would be some certainty and potentially some sort of -- something that would transcend the next election. So that would probably be helpful for us.

Mr. Flores. Mr. O'Mara?

Mr. O'Mara. Yeah. I think if there was absolute certainty and kind of multiple

year out and actually saying the volumes are going to be consistent and not having kind of all these the workarounds, I think there are some abuses that could be a avoided.

I also think if the Triennial report on the environmental impacts, which is now 7 years overdue, is actually -- because there are things that they can do to reduce filings based on impacts and that work isn't being done. But the only way to make sure it is right, to the chairman's point, long term, regardless of administration, regardless of administrators, have Congress take action.

Mr. Coleman. EPA has the administrative authority to fix everything that I have heard mentioned. And so I think if there is disagreement, it is how to get those things fixed.

Mr. Howard. Yeah, I would agree. I mean, I think a long-term consistent plan is easily implemented if the guidelines are there.

Mr. Flores. Do you agree with the statutory approach or the administrative approach?

Mr. Howard. I think the administrative -- I think there needs to be changes and updates to the RFS. I think it can be fixed to give more clarity, to give more transparency. A lot of the issues I have heard articulated here are due to the lack of transparency in the policy.

Mr. Flores. I need to move on. I am running short on time. Sorry.

Mr. McAdams. We did this program 10 years ago and a lot has changed in the industry on the innovative technology side and the original statute didn't take that into consideration.

So a lot of projects now are multifaced projects with two elements to them instead of one. The statute was written for one element, not two. There are all kinds of problems with respect to how they put the programs together. For the use of wood,

they just box these facilities.

Mr. Flores. Just to summarize, you are saying statutory, right?

Mr. McAdams. It needs to be reformed.

Mr. Flores. Okay.

Mr. Morgan.

Mr. McAdams. And I have given you a list of 21 things that directly need to be statutorily reformed.

Mr. Flores. Okay.

Mr. Morgan. We believe the statutory reform is the best path going forward.

Ms. Puthusseril. I agree with that.

Mr. Flores. Okay. Thank you. I yield back my negative time.

Mr. Shimkus. The gentleman from Texas yields back his time.

The chair now recognizes the gentleman from South Carolina, Mr. Duncan, for 5 minutes.

Mr. Duncan. Way over here on the far right.

Thank you, Mr. Chairman.

Thanks to the panel for being here.

I want to examine the future of advanced biofuels under the RFS. We need to set demands and mandates that the market can actually meet. I think Mr. Morgan addressed in his testimony that nearly a third of all the RFS advanced biofuel mandates were met last year -- last 2 years -- with imported fuels. So it seems to me that the demands and mandates are exceeding what the market here in America can provide.

It seems counterproductive, especially since RFS was set to mitigate the dependence on foreign sources. We have, in fact, decreased dependence on foreign oil, but I am not so sure that much of that can be attributed to RFS standards. Most of it is

due to aggressive exploration and production here at home of fossil fuels. And so just because the government set up biofuels demand doesn't mean we are able to domestically meet it.

So, Mr. Morgan, your testimony directs EPA to set a reasonable advanced biofuel mandate tied to domestic production. In your opinion, what is a reasonable advanced biofuel mandate?

Mr. Morgan. Yeah, I think you would look at the previous year's production domestically here and set it at it that level so you have a track record there. And then as it grows, then you can increase the number the next year.

But you are exactly right, that if a third of this is being met by foreign imports -- and again, as I just mentioned, some of that is displacing American-produced fuel -- or it all is -- some of which is derived from feedstocks from overseas certainly, but it is all American-derived fuel, it is kind of at counterpurposes.

Mr. Duncan. Mr. Howard, do you want to comment on that?

Mr. McAdams. Isn't a third of the fuel you use in the U.S. refineries from overseas?

Mr. Morgan. In terms of feedstock, now our percentage of imports is the lowest it has been since 1967.

Mr. McAdams. But it is still a third.

Mr. Shimkus. Okay. I love this banter. This is a throwback to Billy Tauzin. We will let Mr. Duncan control his time.

Mr. Howard. Yeah, Mr. Duncan, I think you --

Mr. Duncan. Let's go to Mr. Howard.

Mr. Howard. Yeah. So let me say, Mr. Morgan, some of these numbers are very misleading. As of through last year, through August of last year, 600 million gallons

of Argentine biodiesel were dumped into this market and that preceded the prior 3 years. Countervailing duties were put in place last August that restricted that volume.

The biodiesel industry has stepped up. We were running at two-thirds capacity because of that. Now that those countervailing duties are in place and we have fair trade, the biodiesel industry is meeting the RVO requirements. And we have continued growth and plans to continue to meet that from domestic production.

Mr. Duncan. Let me just ask you this. Because, look, I drive a Chevy Duramax diesel pickup truck. That is my truck when I am at home in the district. I like biodiesel. I think the viscosity actually helps my engine probably more than anything. So I am not a novice on this.

But I will say this, that biodiesel is much more expensive than regular diesel fuel. So how can we overcome that? Because if I as a consumer -- and trust me, I am -- if I can find biodiesel in South Carolina now, I think there is one distributor that has got it.

So if I want to buy biodiesel and I find a station that has it, why am I paying 30, 40 cents more a gallon for biodiesel? Because I can tell you, even though I want to do that, because think it will help my engine, and I like the whole idea of biodiesel, I am not going to buy it, I am not, not with 30 or 40 percent price difference.

So until you can overcome that, you are not going to have the consumer buying your product. So how do you overcome that?

Mr. Howard. Well, I think you have heard from one of my customers sitting next to me that she is able to lower her price by blending biodiesel.

Part of the industry's need for continued growth is to be able to have the distribution network to get to everywhere in the country. Right now we have great distribution in the Chicago area, where her truck stop is. We do not have great distribution in your area.

We need to continue to invest in infrastructure. Last year REG, we opened 10 new distribution terminals.

Mr. Duncan. What is the price point difference in the areas where you have great distribution?

Mr. Howard. Right now, typically biodiesel with incentives is sold less than diesel price and passed on to the consumer.

Mr. McAdams. Congressman, I represent Pilot Flying J and Love's, which are the two largest distributors of diesel in the United States, 15 billion out of 50, and they generally pay 25 percent less for the diesel and blend it because they get margin. And when the marginality isn't there, they don't blend.

And because of the small refinery waivers, the RIN collapsed on the floor pool and now we are 15 percent lower blending. So all the truckers supported us on the tax credit because we provided cheaper fuel over the long haul in the entire the United States.

Mr. Duncan. Let me just say this in the 5 seconds that I am actually over.

Mr. Shimkus. Ms. Matsui.

Mr. Duncan. The market will dictate what is purchased. And if we as an American government want to see more of these products on the market, they need to be cost competitive, cost effective, right? They need to be almost equal to or less than the competitive fossil fuel brand.

With that, I will yield back.

Mr. Shimkus. The gentleman yields back.

At this time the chair recognizes the gentlelady from California, Ms. Matsui, for 5 minutes.

Ms. Matsui. Thank you, Mr. Chairman. I do appreciate the testimony we have

heard today.

Advanced biofuels can have a substantially lower climate impact than traditional gasoline and even corn ethanol. The California Air Resources Board last year reported that about one-third of all biofuels in the State's fuel mix were categorized as advanced. That is a significantly higher percent than the rest of the country as a whole.

The key to California's success has been the State's biofuels program, known as the Low Carbon Fuel Standard, which sets goals based on the carbon content of the fuel rather than the feedstock. Under the program the State measures the carbon intensity of the fuel over its full lifecycle. Low carbon intensity fuels generate credits that can be traded.

This performance-based standard clearly has greater climate benefits, but it seems to me that its flexibility is also better for the advanced biofuels industry.

Mr. McAdams and Mr. Coleman, would you say it is more beneficial to have standards that are performance-based, like the Low Carbon Fuel Standard, or technology-based, like the RFS? What are the benefits of each?

Mr. McAdams. Go ahead.

Mr. Coleman. Thank you, Congresswoman Matsui, for the question.

So I worked on that program for a while out there. And you are right to point out that not just advanced biofuels have carbon benefits. So we are playing this game right now where we draw a line between advancing corn ethanol even though corn ethanol is the largest investment in cellulosic ethanol. So you have gains with corn ethanol and then you have bigger gains with advanced biofuels.

In terms of the answer to your question, we like both policies. The RFS is prescriptive. It is very clear for investors when it is properly implemented. And the Low Carbon Fuel Standard has more flexibility.

If there was an opportunity to talk about performance standards, we are more than willing to have that conversation. Right now those policies are perfect complements to each other.

And if you go to the California and talk to the California Air Resources Board, they will tell you the RFS drives gallons towards California and makes compliance with that program helpful and possible. So it is a tremendously important. We would be happy to have further conversation with you.

Ms. Matsui. Well, another difference between the two standards is that California standards are structured to incentivize the lowest-carbon fuels possible. So under the RFS, once the fuel has achieved the requisite 50 or 60 percent greenhouse gas reduction, it is eligible to compete in the market, but there is no benefit for fuels that go beyond the standard.

So on the other hand, the California standard rewards lower carbon-intensity fuels by allowing them to generate more credits than fuels that barely meet the standard. This creates an incentive to develop fuels that can reduce carbon emissions to the greatest extent possible.

Once again, Mr. McAdams or Mr. Coleman, what do you think about the different market signals created by the two standards? Are there benefits to using a sliding scale of rewards based on carbon intensity?

Mr. McAdams. So I think it is a great program they have. I think the political situation in the Congress makes it hard to take the California standard and put it into Federal law, to be candid with you.

But I think you could address the same impact by simply saying any fuel that delivers more than the baseline of 50 percent or 60 percent of the statute will receive an extra one-tenth of a RIN would give an incentive.

So, for instance, if my colleague down here with the Biodiesel Board uses a tallow, he gets an 80 percent reduction fuel, he would get three-tenths of a RIN.

Well, three-tenths of a RIN on a 40 cent RIN value is quite a bit of incentive for the margin for him and that would help bring the fuels into the market in the same way that California's standard does, but using the existing format of the RFS.

Ms. Matsui. Okay. In 2014 the EPA finalized regulations permitting biogas to count as cellulosic biofuel under the RFS when converted to electricity to power electric vehicles or used directly in natural gas vehicles.

Applications to generate RINs using electricity from biogas to fuel EVs are currently pending before the EPA, but the Agency has yet to approve an application.

The potential impact of the electric pathway under the RFS is great for both biogas producers and EV manufacturers. DOE estimates that a proved electric RIN pathway could reduce the cost of electric vehicles and potentially put an additional 3.5 million battery electric vehicles on the road by 2025. The demand for biogas would also rise dramatically.

Let me ask probably Mr. Morrow first. Are you familiar with electric RINs and what -- of course you are -- and what type of benefits do they have and the potential to provide for the environment and biofuels industry?

Mr. Morrow. Thank you for the question.

The electric pathway there, it is just like anything, I think the devil is in the details. We are not really sure how many RINs would be generated on a per MMBTU or per kilowatt basis, so it is hard for me to comment on what that might look like if it becomes a proved pathway. So really all we know right now at this time is what an MMBTU of treated RNG going to the pipeline looks like. I am familiar with the pathway.

Ms. Matsui. Okay. Well, it seems I am going to run out of time. I think this is

an area we ought to explore further.

Thank you very much. I yield back.

Mr. Shimkus. The gentlelady yields back her time. Shows you that there is interesting opportunities in future, good or bad, for those at the panel.

So we want to now turn to another Californian, Mr. Peters, and you are recognized for 5 minutes.

Mr. Peters. Thank you, Mr. Chairman.

And I apologize, I was on floor so I didn't get to hear some of the testimony from the beginning. So if you answered it I hope you will bear with me.

I also want to wish the best to my colleague Mr. Flores' mother, hope she is all right.

I wanted to ask Mr. O'Mara, in general, given the timeframe and what has happened since this was first adopted, how does the dramatic price collapse in natural gas affect all the incentives? And is that part of your thinking as you suggest we take another look at how to incentivize next-generation biofuels?

Mr. O'Mara. Yeah. I appreciate the question.

We feel strongly that we should be looking at actual reductions, right, where are the performance based, where do we actually achieve the greatest kind of environmental outcome, and don't pick winners and losers on the technology side. Because I do think that there was a price -- like, any time a fuel has a dramatic decrease in the price, it does drive greater competition and forces other people to try to meet that price in the marketplace. And so we have seen it in the electrical sector and we are seeing it a little bit here.

And I just think like the less Congress is being prescriptive on technology and the more they are focused on outcomes and performance, the better off for everybody,

particularly better off for the environment.

And David De Janeiro from my team is over here who has been working with your staff and others on this. I mean, there are a lot of these kind of safeguards you can put in place and also performance standards. And I would encourage folks to look at Congressman Welch's bill, the GREENER Fuels Act, because it actually gets in that direction.

Mr. Peters. In terms of technological, in terms of performance standards, how would you define those?

Mr. O'Mara. So there are the examples that Congresswoman Matsui talked around actual performance. Let's talk about emission reductions based on some kind of agreed-upon -- some kind of full lifecycle analysis that we can all agree upon.

I do think that there are lessons that could be learned there fairly easily. I think the easiest one is the carbon content, because it is one that has -- there is more standardization of the methodology and it is a way to basically compare apples to apples across the entire fuel portfolio.

Mr. Peters. Mr. McAdams, did you have a comment on that kind of approach? Is that what you were talking to Ms. Matsui about?

Mr. McAdams. I was just saying there are different ways -- you could solve a lot of these problems in different ways. So if you wanted to reward from a behavioral standpoint, just like the Tax Code that sometimes scales things at percentage bases, you could amend the RIN, give away portions. They are done on energy density now and you could change that section of the law.

Mr. Peters. And that is another way of tracking the subsidy with the need for the subsidy I suppose, right?

Mr. McAdams. And so that gives guys more headroom, right, to sell their fuel

against incumbent fuels that are going to be cheaper. So it lets them play in the market.

Mr. Peters. I would just say it strikes me -- and I haven't really looked that deeply at the Welch bill yet, I will -- it strikes me there must be a difference today in the market from what would happen when this was enacted. And it seems to me that I am skeptical that staying with this program has got to be the best we can do.

But I am going to take you at your word, Mr. Coleman, and sometimes the best is not to do anything. But it does strike me that given the dramatic change in the whole price structure in the energy market and the fact that we have 100 years of energy here domestically now, the way you incentivize alternatives must have been affected by that.

Mr. Howard, did you want to say something?

Mr. Howard. Yes. Thank you, Mr. Peters.

Let me just make sure that it is clear that the industry has transformed, REG specifically. I mean, 10 years ago we made 50 million gallons; last year over 500 million gallons.

The foundation of our business is a waste collection business, used cooking oil, agricultural byproducts. And so when you think about how we have transformed, 80 percent of our feedstock now is a waste fat and oil, not a refined vegetable oil.

So, yes, the market has changed, and we have responded to the California incentives that the Congresswoman mentioned. So, yes, there is a transformation of our industry much more towards that foundation of waste-based conversion. In that, you also get the tremendous environmental benefits.

So however you think about this program going forward and giving us a long-term kind of consistent pathway, you need to make sure that both those functions are valued, the environmental benefits as well as this kind of waste-based environmental collection process. And that is never mentioned as something that is really foundational to our

business and must be valued.

Mr. Peters. Yeah. That is a very fair point. And I think it is useful going forward.

I would just observe in closing that it is very clear to me that the States as laboratories is very constructive in terms of giving each State a little bit of leeway to do that. And I would forward that message on to Administrator Pruitt who seems to not want California to be able to do these kinds of experiments. I think it is very useful.

I yield back.

Mr. Shimkus. The gentleman yields back his time.

And I, again, appreciate the panel. You all are great. And I think it illustrates the challenge that we have.

I would just note for my colleagues one of the concerns I deal with is we have incentivized based upon current law and so we have to be careful about taking away from folks that we have already got into the market and the investments that have been made. And not just current production levels, but as I tell people stay, still in the ground and things moving based upon the law as written.

So it is a very challenging exercise, as we continue to find out.

Seeing that there are no other members wishing to ask questions for this panel, I would like to thank you all for being here.

Before we conclude, I would like to ask unanimous consent to submit the following document for the record: a letter from Representative Bruce Poliquin, which has a question for the record. The Democrat majority has agreed with that.

[The information follows:]

******** COMMITTEE INSERT ********

Mr. Shimkus. And pursuant to committee rules, I remind members that they have 10 business days to submit additional questions for the record. And I ask that witnesses submit their response within 10 business days upon receipt of the question.

Without objection, the subcommittee is adjourned.

[Whereupon, at 10:44 a.m., the subcommittee was adjourned.]