

THE ENVIRONMENTAL PROTECTION AGENCY'S RENEWABLE FUEL STANDARD
PROGRAM: CHALLENGES AND OPPORTUNITIES

Wednesday, February 16, 2022

United States Senate

Committee on Environment and Public Works

Washington, D.C.

The committee, met, pursuant to notice, at 10:04 a.m. in room 106, Dirksen Senate Office Building, the Honorable Thomas R. Carper [chairman of the committee] presiding.

Present: Senators Carper, Capito, Cardin, Whitehouse, Merkley, Stabenow, Inhofe, Cramer, Lummis, Boozman, Wicker, Sullivan, Ernst.

STATEMENT OF THE HONORABLE THOMAS R. CARPER, A UNITED STATES
SENATOR FROM THE STATE OF DELAWARE

Senator Carper. Good morning, everybody. I am pleased to call this hearing to order.

Today, we are going to examine the Environmental Protection Agency's Renewable Fuel Standard Program. This includes management and implementation challenges, as well as opportunities to encourage greater deployment of more sustainable fuels. My staff tells me that our committee has not held an oversight hearing on this topic since 2016. This has gone on six years. It is probably time.

To help inform our discussion, we are fortunate to have an expert panel of witnesses who are joining us today. We want to thank all of you for participating in this meeting discussion.

Winston Churchill is credited with saying a lot of things. One of my favorite Churchill quotes is "the further back you look, the further forward you see." We are going to take a moment, if you will, to understand the history of this program and how we got to where we are today.

In the early 2000s, our Nation's energy future didn't look all that promising. Americans were consuming more and more gasoline and diesel fuel. We were incredibly relying on imported oil to fuel this growth, and that reliance was increasing. As a result, global oil prices were on the rise

without any indication of slowing down, and consumers were paying more at the pump every year.

At the time, a bipartisan group of us in Congress took several steps to improve our Nation's energy future and, I would say, with the leadership of the President at the time, George W. Bush. Among those steps, we created and expanded the Renewable Fuel Standard under the Clean Air Act. Our goals included providing new economic opportunity for our farmers while also lowering our dependence on foreign oil and reducing greenhouse gas emissions from the fuel we burn in our cars and trucks and vans.

Since the implementation of the program, we have come a long way toward achieving our goals. Economic growth in agricultural communities has expanded, and our fuels have become significantly cleaner than they were two decades ago. In fact, the Renewable Fuel Standard presents economic and energy opportunities for the people in Delaware and every other State to seize.

Like many of our colleagues on this committee, I still support the goals of the Renewable Fuel Standard. Having said that, there have been a number of challenges when it comes to the implementation of the program, as we know.

For example, the amount of advanced renewable fuels used today in this Country is far less than the 36 billion gallons

that Congress and the President mandated in 2007 to be used by 2022. That shortfall is partly due to unforeseen market challenges, and it is partly due to EPA's delay in approving new fuels to enter the marketplace.

Make no mistake, advanced renewable fuels are being produced that have the potential to replace gasoline, diesel, and jet fuels on a gallon-for-gallon basis in today's combustion engines with no loss of performance. Many of these advanced fuels have already been approved for use in State renewable fuel programs in States like Oregon.

However, EPA has been slow to make decisions on new advanced biofuel applications and pathways for usage. At the same time, the Clean Air Act prohibits some of the advanced renewable fuels that qualify for State programs from qualifying as renewable fuel under the federal program.

We must find better ways to allow new advanced renewable fuels to qualify for the Renewable Fuel Standard. Doing so would be good for our environment, would help refineries meet their obligations, and further support a growing domestic biofuel industry.

Another challenge in implementing the Renewable Fuel Standard is the volatility in compliance costs for refiners. Years of mismanagement under the previous Administration, coupled with the unexpected changes in both fuel supply and

demand caused by the pandemic, have collectively wreaked havoc on the program's compliance market, known as the RIN market.

What is the RIN market? EPA tracks compliance with the Renewable Fuel Standard by using tradable credits, referred to as renewable identification numbers, or RINs. Refiners and importers can generate RINs either by blending biofuels into fuel or by purchasing RINs from another party through what is known as the RIN market.

The huge price swings in RIN costs, from 30 cents to almost \$2 per gallon of renewable fuel in less than two years, have created financial uncertainty for just about everybody, especially those who are required to comply with the Renewable Fuel Standard. That, in turn, has made it extremely difficult for obligated parties to make forward-thinking investments in producing cleaner fuels. We must help reduce the volatility in compliance costs for this program to be successful.

As a recovering governor, when exploring ways to improve Federal policies, I oftentimes look to see what is working in our States, the laboratories of democracy, and see if we can maybe replicate some of them.

Many States, like California, like Oregon, have implemented technology-neutral low-carbon fuel standards. These standards have successfully advanced cleaner fuel usage, kept consumer and compliance costs low, all while fostering local clean fuel

investments and job creation. As we will hear today, these State programs have fuel flexibilities, long-term predictability, and cost-containment provisions that are not included in the Renewable Fuel Standard today, but maybe they should be.

In closing, as one of the strongest supporters of electric vehicles in the Senate, I know it is important to remember that we aren't yet in a post-liquid fuel world. We must retain our domestic capabilities to produce and refine the motor vehicle fuels that power our lives, while also ensuring that these fuels are as clean as possible in order to meet our climate goals.

We look forward to hearing from our witnesses today, but before we do that, let me turn to Senator Capito, who is off of the DL, the disabled list, after a very brief stay there. Happy you are back and looking great. You are recognized for your opening statement.

[The prepared statement of Senator Carper follows:]

STATEMENT OF THE HONORABLE SHELLEY MOORE CAPITO, A UNITED STATES
SENATOR FROM THE STATE OF WEST VIRGINIA

Senator Capito. Thank you, Mr. Chairman. It is nice to be back in the Nation's capital, so I appreciate that.

I want to thank you for calling today's hearing, and I also want to thank our witnesses for joining us here today.

The Renewable Fuel Standard, as the chairman defined it, known as RFS, is an important topic for our committee, but we haven't had that hearing since 2016. I think the long gap between hearings sort of speaks to the intricacies of the program, but it also is the fact that the potential fault lines between opponents, supporters, and would-be reformers do not always align between one party or another.

For my part, there are a few issues I would like to cover today during this hearing: small refinery exemptions is one, the changes to the program coming in the year 2022, and the need for accountability from EPA's Office of Air, including the need for a nominee to head it.

I would like to highlight my concern about the two actions that the EPA recently announced. First, in December, the agency proposed an all-time high Renewable Volume Obligation for 2022 that does not really reflect, I don't think, market realities. I would be interested to hear what our panel has to say about that. I am concerned that this volume obligation is going to

raise costs at a time when gasoline is high in and of itself, impacting American consumers and the economy.

Second, also in December, EPA also announced a proposal to deny all pending small refinery exemptions, which provide critical relief to small refineries experiencing financial hardships that are imposed by the RFS program. This action runs counter to the Congressional intent under the Clean Air Act.

EPA's proposed action will negatively impact Ergon, a small refinery located in northern West Virginia. Ergon has already won two court cases in the Fourth Circuit finding that the EPA acted in an arbitrary and capricious manner in denying its small refinery exemption petitions, but Ergon is just one of a number of small refineries around the Country that had petitions pending before the EPA.

This unprecedented and drastic step to propose a blanket denial of outstanding small refinery hardship petitions is especially puzzling as we see increasing gasoline prices and several small refinery closures around the nation, eliminating good-paying jobs in some of our rural communities as well. Ultimately, this proposal will only lead to more litigation and increased uncertainty under the RFS, with American consumers bearing the costs amid already record-high inflation.

I have urged EPA to reconsider its proposal to provide much-needed relief for small refineries and the families and

businesses being harmed by elevated fuel costs. I look forward to hearing more from our witnesses on this issue.

Next, I would like to touch on an issue that I believe many of us agree upon, and that is that our liquid fuels, and the Chairman touched on this, are still very, very important. I can tell you firsthand, liquid fuel is not going away any time in my State of West Virginia.

Forcing a single-technology approach, such as insisting on 100 percent electric vehicles, disregards the important fact that different communities and businesses have different needs for transportation solutions. It may be true that electric vehicle sales are slowly but surely increasing, but liquid fuel is not used exclusively in passenger vehicles. It is also important for heavy-duty trucks and our airplanes, to name a few.

So, one issue I would like to hear about today is: how important are liquid fuels, and do you think liquid fuels are going away anytime soon. This conversation on liquid fuel is especially important as the RFS program enters a new phase next year.

When Congress enacted the RFS, annual volumes were included for the calendar years 2006 through 2022, but after 2022, EPA has the power to determine the annual volume amounts. The Chairman pointed out that we are not even hitting the amounts

that we are supposed to be hitting as it is now. EPA is expected to issue a rule to do just that sometime this year. However, I have concerns about how EPA plans to take action on this program without anyone in a Senate-confirmed role in the office that handles the RFS Program.

The Office of Air and Radiation at EPA: this is the office that is in charge of air emissions and climate issues, and it handles the renewable fuel standard and many other complex regulatory programs. Yet, we have been waiting for more than a year for the Administration and the President to name a nominee to that office. I have talked about this more than once in our committee. Instead, Principal Deputy Administrator Joe Goffman has served as the lead political official in the office, in regular communication with his former boss, the climate czar in the White House, Gina McCarthy.

No incoming Administration has waited this long to send up a nominee for this critical position since its creation. The previous record was 260 days, set by President Clinton. If EPA is deciding important actions related to the future of the RFS program, the Administration needs to send up an Office of Air and Radiation nominee who can be accountable to Congress.

With that, Mr. Chairman, I yield back my time.

[The prepared statement of Senator Capito follows:]

Senator Carper. Thank you very much for those comments.

Now, we are going to turn to our esteemed panel of witnesses. In a couple minutes, we will hear from them in this order: first, Cory-Ann Wind, the Clean Fuels Program Manager at the Oregon Department of Environmental Quality. Second, we will hear from Emily Skor, Chief Executive Officer of Growth Energy. Third, we are going to hear from Lucian Pugliaresi. Lucian, would you just say your name for us?

Mr. Pugliaresi. Lucian Pugliaresi.

Senator Carper. All right, Lucian Pugliaresi, thank you.

Next, the President of the Energy Policy Research Foundation. Finally, last but not least, we are going to hear from LeAnn Johnson Koch, Partner at Perkins Coie.

Before our witnesses begin their testimony, I will turn it over to our colleague, Senator Merkley, to introduce one of our witnesses. Senator Merkley, the floor is yours. Thank you.

STATEMENT OF THE HONORABLE JEFF MERKLEY, A UNITED STATES SENATOR
FROM THE STATE OF OREGON

Senator Merkley. Thank you very much, Mr. Chairman and Ranking Member Capito and fellow committee members, for today's hearing looking at the Renewable Fuel Standard.

As we look around the world at all the visible and measurable signs of global climate change, we need to adopt cleaner forms of energy and end our dependence on carbon-emitting fossil fuels. It is plain to see.

I believe we have an incredible opportunity to reduce emissions by electrifying our cars and trucks. The investments we have made in the Infrastructure Investment and Jobs Act, as well as the ones we want to make in Build Back Better, are important steps toward that goal. But there is no doubt that sustainable liquid fuels are going to play an important role for years to come as we strive to tackle the challenge of global climate chaos.

Not all of the solutions are going to start with the Federal Government. We are going to see States innovate, and we need to learn from them. This is something we have recognized back home in Oregon, as year after year, we confront fiercer wildfires devastating our forest, historic droughts devastating our ranching and farming communities and having a huge impact on the health of our lakes and streams, and acidifying oceans that

is wreaking havoc on our sea life off the Oregon coast, and certainly on our fishing community.

Oregon has stepped up to do more through the Oregon Clean Fuels Program. Since it began almost six years ago, it is a resounding success. Through this program, our State has reduced a significant amount of greenhouse gas emissions from transportation fuels and put us on track to meet our goal of a 10 percent reduction within the next three years.

I think that the success we had back home in Oregon can and ought to help inform the discussion for our Nation regarding the federal fuels policy. Oregon stands as an example of fact that a low-carbon fuel standard can work in the transportation sector, which is why I am delighted to introduce my fellow Oregonian, previously from Hawaii but now many decades in Oregon, is Cory-Ann Wind, the manager of the Oregon Clean Fuels Program.

She is a proud graduate of Oregon State University, with a degree in bioresources engineering. She has been an integral member of Oregon's Department of Environmental Quality for almost three decades, working the last twelve of them in fuels and transportation and climate policy.

As the head of the Clean Fuels Program, Ms. Wind is responsible for coordinating between the State fuel importers affected by the regulations and the clean fuels industry to

ensure that everyone has the tools and technical assistance necessary to transform our fuel market.

She works to ensure that our rules and regulations align with those of neighboring States, certainly Washington and California, to help make sure that the States along the West Coast are moving in the same direction.

I am thrilled that she is with us today through the miracle of electronics to share her experiences about what has worked in Oregon and how those successes can be implemented on a larger scale.

Thank you, Mr. Chairman.

[The prepared statement of Senator Merkley follows:]

Senator Carper. Thank you, Senator Merkley, very much.

Now, we are going to begin our witness testimony. We are going to start off with Ms. Wind. I am going to ask you to please proceed with your statement if you are ready.

Go right ahead.

STATEMENT OF CORY-ANN WIND, OREGON CLEAN FUELS PROGRAM MANAGER,
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Ms. Wind. Good morning, Chair Carper, Ranking Member Capito, and members of the committee.

For the record, my name is Cory-Ann Wind, and I work for the Oregon Department of Environmental Quality as the Oregon Clean Fuels Program Manager.

Thank you for the invitation to speak to you today about the Oregon Clean Fuels Program, which is Oregon's version of the low-carbon fuel standard. I would also like to thank, at this time, Senator Merkley, for the very nice introduction and for your continued leadership in addressing the climate crisis.

The Clean Fuels Program is one of Oregon's most successful statewide policies for addressing the State's contribution to global climate change. The program began in 2016, and thus far, the program's success and progress can be summarized in three distinct outcomes.

First, the companies that are producing biofuels are making those fuels more cleanly and delivering them in greater volumes to Oregon. The carbon intensity of the ethanol and biodiesel that Oregon uses has decreased, and we have seen significant increases in the blending of biodiesel and renewable diesel in recent years. Renewable forms of diesel, natural gas, propane, and electricity have all entered the Oregon market since the

beginning of the program and have emerged as commercially viable and cost-effective replacements of their fossil versions.

Electricity will become increasingly important as new regulations and incentives for vehicles and infrastructure are implemented. All of these fuels have played an important role in reducing about six million tons of lifecycle greenhouse gas emissions so far and displacing over a billion gallons of fossil fuels in Oregon.

Second, the transition from fossil fuels to biofuels and electricity is reducing tailpipe emissions in Oregon and improving the public health of Oregonians. In addition to reducing greenhouse gases, low-carbon fuels also emit less carbon monoxide, nitrogen oxides, and particulate matter compared to fossil fuels.

Reducing these pollutants has saved Oregonians millions of dollars in avoided health costs over the years. This is especially important for Oregon's historically overburdened communities that are located near transportation corridors, multimodal facilities, and distribution hubs.

Third, the program has spurred innovation and investment without impacting the price at the pump. The program has fostered a \$100 million a year-plus market where investments are being made to increase the production of lower-carbon fuels, spark new innovations in technology, and invest in

infrastructure to deliver these fuels across the State. These investments have allowed the transition from fossil products to cleaner fuels to happen without any significant rise in retail or wholesale prices when compared to our neighboring States, even those that do not have similar fuel regulations. In fact, the program has lowered the cost of many low-carbon fuels and has created a powerful financial incentive to decarbonize the transportation sector.

The Clean Fuels Program that we have created in Oregon takes the best parts of the Renewable Fuel Standard and combines it with the best parts of a low-carbon fuel standard. The Renewable Fuel Standard creates the base demand for biofuels that are needed to begin the transition to lower-carbon fuels, and the low-carbon fuel standard ensures that the lowest of the low-carbon fuels comes to Oregon.

Participants can stack the value of the credits from the Renewable Fuel Standard with the credits from the low-carbon fuel standard, as both are necessary to provide the necessary incentives to fuel providers to continue to lower their carbon intensities. The market also benefits from the long-term certainty from low-carbon fuel standard programs that have established targets through 2030. Oregon is currently in a rulemaking that will extend its targets and establish standards through 2035, but we have not done this alone.

Oregon has benefitted greatly from being a signatory to the Pacific Coast Collaborative. Since 2013, British Columbia, Washington, Oregon, and California have worked together to harmonize best practices for policy alignment, program design, and implementation to create the largest market for cleaner, lower-carbon fuels on the West Coast.

This collaboration has grown to other States that are now also looking for smart strategies to reduce transportation emissions, ones that can build off of strong federal support of the agriculture and biofuels industry, zero emission vehicle standards, and investments in electric vehicle charging and alternative vehicle fueling infrastructure.

That concludes my testimony for today. I am happy to take any questions that you might have. Thank you again for the invitation to be here.

[The prepared statement of Ms. Wind follows:]

Senator Carper. We are delighted that you are here. Thank you so much. I like to say, find out what works, do more of that. Sometimes those States come up with some pretty good ideas that we would benefit from. Thank you very much for your testimony.

Next, we are going to hear from Ms. Skor. Ms. Skor, please proceed. Thanks so much for joining us. Nice to see you.

STATEMENT OF EMILY SKOR, CHIEF EXECUTIVE OFFICER, GROWTH ENERGY

Ms. Skor. Nice to see you, Chairman Carper, Ranking Member Capito, and members of the committee. Thank you for the opportunity to testify today.

I am Emily Skor, CEO of Growth Energy, the world's largest biofuel trade association.

The RFS remains the Nation's most successful clean energy policy, yet its full potential as a climate solution remains untapped. For the past eight years, a lack of accountability and failure to comply with the law has slowed progress in carbon reductions.

But today, as Congress looks to immediately reduce the carbon intensity of our Nation's transportation fleet, it is imperative that biofuels like ethanol, the most affordable and abundant source of low-carbon, high-octane fuel on the planet, are part of our transportation mix now and into the future.

Let me be clear: there is no path toward net-zero emissions by 2050 without biofuels. Ninety-eight percent of the cars on the road today use liquid fuels, and EIA projects that gasoline or flex fuel-powered vehicles will dominate new vehicle sales through 2050.

We can achieve progress in carbon reductions with today's infrastructure, today's vehicles, and a home-grown supply chain through a robust and binding Renewable Fuel Standard and

acceleration toward nationwide, year-round use of lower-cost biofuels like E15.

To date, the RFS has reduced almost one billion metric tons of greenhouse gas emissions. Expanded use of low-carbon biofuel cuts emissions in air pollution, drives energy innovation and economic growth, creates biomanufacturing jobs, and lowers gas prices for American drivers.

Since 2013, the RFS has consistently been undermined through the abuse of waivers, small refinery exemptions, and compliance deadline extensions. Most of these administrative actions have been to appease the unfounded claims of a select few looking to subvert the RFS, slowing progress in carbon reductions.

EPA's recent proposals, delayed as they are, right some of these wrongs. They include the required 15 billion gallons of conventional biofuel in 2022, a long overdue remedy for EPA's unlawful 2016 general waiver, and an end to the abuse of small refinery exemptions.

Despite these positives, EPA takes a major step backward by seeking to reduce the 2020 blending obligations finalized two years ago. This retroactive change exceeds the agency's authority and creates market disruption and uncertainty. EPA needs to fix and finalize the proposals as soon as possible.

Looking forward, to achieve our shared clean energy goals,

we need year-round access to higher blends of ethanol, like E15. Nationwide, E15 would slash CO2 emissions by more than 70 million tons, support more than 180,000 new jobs, and save consumers more than \$12 billion in annual fuel costs.

Unfortunately, refiners successfully sued to prevent E15 from being sold in the summer throughout much of the Country. Not only have they deprived consumers of a lower-cost fuel, they eliminated an easy path for their own RFS compliance. Without immediate action, consumers will lose access to their most affordable fueling option on June 1st, when Americans drive the most. Congress or EPA must restore market access so drivers can save up to 10 cents per gallon every time they fuel up with E15.

In addition to reducing emissions in light-duty vehicles, biofuels are poised to play a greater role in decarbonizing other forms of transportation, and biorefineries are already deploying carbon capture and wind and solar energy and incentivizing sustainable farming practices, all to drive further innovation and further reductions in our carbon intensity. We see promise in new and emerging low-carbon fuel markets in hard-to-electrify sectors, like aviation, marine, and heavy-duty vehicles.

To lead our Nation through a clean energy transition, we must have a healthy and thriving biofuel industry. We must have a strong and growing RFS. We must move toward E15 as the

Nation's standard fuel.

Don't be fooled: the RFS does not harm refiners. Three Administrations and the courts have affirmed this. Claims to the contrary are just a smokescreen to divert attention away from clean, affordable, American energy. Undermining the RFS and delaying the rollout of E15 means increasing gas prices for American consumers, period. Yes, prices are driven by the price of crude, not the cost of the RFS.

America's farmers and biofuel producers are ready to work with the Administration and Congress to restore E15 and put the RFS back on track.

Thank you, and I look forward to your questions.

[The prepared statement of Ms. Skor follows:]

Senator Carper. Thanks very much for joining us, and for your testimony.

Mr. Pugliaresi, you are recognized. Please proceed.

STATEMENT OF LUCIAN PUGLIARESI, PRESIDENT, ENERGY POLICY
RESEARCH FOUNDATION, INC.

Mr. Pugliaresi. Thank you, Senator. Could we queue up the charts, please?

Chairman Carper, Ranking Member Capito, members of the committee, thank you for this opportunity to make some comments on the EPA's Renewable Fuel Standard and our management of the program.

I am President of the Energy Policy Research Foundation. We have been around since 1944. I also want to thank EPRINC's Senior Director, Max Pyziur, for helping me with the testimony and the preparation of the charts.

The first thing I would like to say is that in all our work over the years, and we testified here, actually, in 2016, we have always said that biofuels, and particularly ethanol, represent a very important component of the fuel supply for the U.S. It is a very cost-effective way to get octane and extend the supply.

A basic criticism of the program is not in the biofuel; it is with the mandate. Let's go to the first chart. As you can see in the first chart, and Chairman Carper talked about this already, we are not hitting the original targets of the Energy Security Act. In fact, there are a lot of reasons for that. You can see now we are about \$20 billion against the initial

proposed target of 36.

The basic reason we are not hitting the targets is because our expectations were wrong. There is a lot of uncertainty in the future of oil and gas prices and supply and demand, and in 2007, expectations were that gasoline demand was going to grow dramatically by about 30 percent over the next 20, 30 years. In fact, it declined dramatically.

This made it more difficult to incorporate biofuels because when biofuels become a large percentage of the gasoline pool, the costs rise. There are actually quite low-cost and actually save money up to around the 10 percent, above 10 percent, compliance costs rise. You can see this here.

This is actually very interesting to us, because when we testified in 2016, we informed the committee that there was a certain price risk to the program, that if you try to drive these biofuels by mandates above 10 percent of the gasoline pool, the compliance costs escalate.

As Chairman Carper pointed out, the RIN credits are one way to understand what the program costs. We estimated that, using the CBO scenarios alone, that the increase in the cost of the program per gallon to consumers could be anywhere from 30 to 50 cents. Well, today, RIN prices are driving up the cost of gasoline about 28 and a half to 30 cents.

You can see this is something called the crack spread. I

am not going to bore you with this, but in a way, the crack spread is what it costs to take crude oil and turn it into gasoline, diesel fuel, and other petroleum products.

You can see here that when we had a period, and LeAnn is going to talk a lot about this, but before EPA changed the rule on how to treat the credits under the exemption, the small refiner exemptions were driving down RIN prices, because it essentially increased the volume, but that program has ended. Combined with the acceleration in prices as we come out of the COVID, we now have very high RIN prices in the U.S., and these are reflected in this chart.

The other issue I would like to point out is that we are now entering a period of very high oil prices. In this period, preceding this, prices were low, and a lot of the costs of the program were masked, because as Ms. Skor pointed out, a big percentage of the cost of gasoline and products is crude oil.

I would like to show you here, from California, the problem is yes, crude oil might be contributing about \$2, but an array of programs, low-carbon fuel standard, RFS, federal taxes, all of these are contributing to the cost. So, we just have to keep this in mind, that one of the components of high gasoline prices are these programs.

I think I will just flip to the end of my comments here. As we go forward, our future is very uncertain. I really

encourage Congress to give some guidance to EPA, because unless we have a set of programs which are robust against uncertainty, we are likely to have a lot of dislocations. This is the fundamental problem with the program, which is the mandate.

Thank you so much.

[The prepared statement of Mr. Pugliaresi follows:]

Senator Carper. Mr. Pugliaresi, thank you very, very much.

Last, but not least, we will listen to Ms. Koch. We thank you for your testimony. Please proceed.

STATEMENT OF LEANN JOHNSON KOCH, PARTNER, PERKINS COLE, LIMITED
LIABILITY PARTNERSHIP

Ms. Koch. Thank you, Chairman Carper, Ranking Member Capito, and members of the committee for the opportunity to talk about the Renewable Fuel Standard.

I spent the entirety of my 30-year career representing the petroleum refining industry, and particularly, small refineries. I know their companies; I know their people; I know their communities, and now I also know the very real threat they face as a result of EPA's proposal to end small refinery hardship relief under the Renewable Fuel Standard.

I am referring, of course, to what Senator Capito described: EPA's December 7, 2021 proposal to issue a blanket denial of all pending small refinery hardship petitions. The EPA's deadline to issue their decisions was 90 days after the petitions were submitted. Instead, they now intend to deny them retroactively, causing small refineries to enter the market to buy RINs at their near-record highs.

Most important and most telling is the fact that EPA's proposed denial did not reference its legally required consultation with the Department of Energy, and the Department of Energy's conclusion that if EPA acts as they propose to do, small refineries will be at risk of shutdown and bankruptcy. Notwithstanding that advice from the Department of Energy or

legally required consultation, EPA is moving ahead with its plans. Certainly, this was material information to parties asked to provide comments on the fate of small refineries.

Senators, I am sure you are acutely aware of the fact that gas prices are at their highest levels in eight years, and that the inflation rate is increasing faster now than in the last 40. We are at a crossroads. If EPA persists ignoring its statutory duty and taking aim at America's small refineries, it will not only violate the law, it will exacerbate these already adverse economic conditions that our Country faces. The harm to refineries and to the U.S. economy will be harm for harm's sake, because denying small refinery hardship relief cannot and will not affect one gallon of biodiesel. No biodiesel blending will be lost.

At Congress's direction, the Department of Energy in a 2011 report determined that small refinery hardship would grow increasingly acute as the volume mandates increase, because as the volume mandates increase, RIN prices increase. When RIN prices increase, small refineries' costs increase, and that is because small refinery hardship is caused by their limited ability to blend, not their unwillingness to blend.

EPA's 2021 proposed denial concludes that a small refinery with limited access to renewable fuel blend stocks, no downstream blending capability, no retail capability, no

pipelines to access lucrative product markets, will have the exact same costs to the penny to comply with the Renewable Fuel Standard as the largest integrated oil company in the United States, companies that have the ability to export their fuel and avoid the RFS mandate completely, companies with the ability to blend others' fuels, fuel produced by small refineries, to generate excess RINs, and the ability to take those excess RINs and trade them, speculate in them, in the wholly unregulated \$30 billion RIN market. Large, integrated refineries report in their public reports earning tens of millions of dollars in profits speculating in RINs.

I listened to a hearing talking about the harm to the biofuels industry from granting small refinery hardship relief, which is a fiction. Small refineries, first of all, disproportionately produce diesel, not gasoline. They blend as much ethanol as they can, but gasoline is a small part of their production. The data demonstrate that there is zero correlation between small refinery hardship relief and the blend rate, generally. So, in the years when the hardship relief was granted more than in prior years, there was zero impact on the blend rate.

This is a question that we have to have Ms. Skor explain to us, because there is clearly no correlation between the two.

Forcing small refineries to buy RINs in record-high RIN

prices will result in their failure. It will result in their closure, and it will result in their bankruptcy, according to the Department of Energy, and EPA needs to step back.

[The prepared statement of Ms. Koch follows:]

Senator Carper. Ms. Koch, thank you so much.

Before we begin questions, I am going to ask unanimous consent to place into the record materials on historical fuel and energy prices. Hearing no objections, so ordered.

[The referenced information follows:]

Senator Carper. Let's ask some questions.

Ms. Wind, the past Administration's mismanagement of the Renewable Fuel Standard, along with the ongoing fuel impacts of the pandemic, have created volatile swings in compliance costs for the Renewable Fuels Program in recent years, making it hard for all stakeholders to plan and invest to meet the program's requirements. It is my understanding that Oregon has not experienced the same volatility in compliance costs with its Clean Fuels Program.

My question is this: how have the flexibilities built into Oregon's low-carbon fuel standard, along with the additional cost containment and other measure within Oregon's program that differ from the federal program, how do they help to mitigate compliance cost spikes, Ms. Wind?

Ms. Wind. Yes, thank you for that question, Chair Carper. I think a lot of what is built into the program is the ability for the agency to monitor the costs. We do, of our neighboring States in comparison to the State of Oregon, we do routinely track the fuel retail and wholesale prices of fuel that are delivered in California and Washington, and in Idaho.

For the past years that we have been operating the program in Oregon, we have not seen a significant increase in comparison to those States. Those are States that also don't necessarily, in the State of Idaho, don't have any kind of additional fuel

standards.

We do keep track of those prices, and we are legislatively required to have cost containment mechanisms in the program to be able to monitor those fuel prices. I think it is a combination of the monitoring and the cost containment mechanisms that have not caused these large volatilities in the fuel prices in Oregon.

Senator Carper. All right, thanks a lot. Just a quick follow-up: it is my understanding that Oregon tracks consumer fuel costs and the surrounding States' consumer fuel costs as part of its implementation of the low-carbon fuel standard. Very briefly, are there surrounding States that do not have a low-carbon fuel standard today that have higher fuel costs than Oregon?

Ms. Wind. Thank you for that question, Chair Carper. As I previously stated, in the most recent analysis of the data that we have been looking at, we do compare our fuel prices, both retail and wholesale, to the States of Washington and California and Idaho. It is noted that our fuel prices in Oregon have shown that we are lower than even the State of Idaho.

The State of Idaho does not have any additional fuel regulations. They don't have a low-carbon fuel standard in place there. We feel confident that the prices of the fuels in Oregon are not being disproportionately impacted by the fact

that we do have a low-carbon fuel standard.

Senator Carper. All right, thanks for that.

One question for Ms. Skor, if I could, on E15 and advanced biofuels. Ms. Skor, recent court decisions prevent the sale of fuels that have blends of ethanol to 15 percent, known as E15, this coming summer, unless Congress or the Administration takes some further action. At the same time, EPA, over the course of several different Administrations has been slow to approve advanced biofuel applications for new pathways and fuels for the renewable fuel standard.

The question is this: in your mind, would the approval of additional advanced biofuel applications and Congress acting to allow E15 to be sold year-round help mitigate some of the volatility in the renewable fuel program costs that we are seeing today?

Ms. Skor. Thank you, Chairman. It most certainly would. The easiest path to bring down the price of the RIN is to blend more biofuel. It is basic supply and demand. The more biofuels blended, in particular higher blends like E15, the more RINs created. That is how you bring down the price of the RIN.

Not only will it address the stated cost, but you are also going to be introducing a lower-cost fuel into the fuel supply for consumers, and there are also technologies languishing in EPA that I have got producers currently producing cellulosic

ethanol. They are not getting credit for it, because the application has been sitting around for five years.

There is more innovation that we can do to bring low-cost, low-carbon fuels to the table, but we do need some certainty and some predictability and for the regulations to keep up with the marketplace and the innovation.

Senator Carper. All right. I have plenty more questions, but I am going to yield, at this point, to Senator Capito. Thank you for those responses.

Senator Capito. Thank you, Mr. Chairman.

Ms. Koch, in your remarks, you were pretty clear about the small refinery exemption. Obviously, I mentioned that in my opening remarks, my concern. You are probably aware of the case that I brought forward of Ergon in West Virginia, who has two favorable court decisions from the Fourth Circuit.

Shouldn't EPA take into consideration that our courts have actually taken into consideration making regulatory decisions, and that this was causing hardship to this small refinery? How would you respond to EPA's blanket denial of everything, when the courts have actually come forward and said it is not a sound decision?

Ms. Koch. Yes, Senator Capito. You are exactly right. For the 2016 to 2018 compliance years, the Fourth Circuit Court of Appeals vacated and remanded EPA's decision to deny hardship

relief to Ergon West Virginia. Ergon runs about 23,000 barrels per day. It is truly one of the smallest refineries in the Country. The court summarily rejected EPA's decision because EPA did not consider the facts of Ergon's specific case: its location, how it distributes its fuels, the fact that 70 percent of its then production was diesel, and it remanded to EPA.

EPA then took another shot at Ergon and again, denied Ergon's petition, even though it had been vacated and remanded by the court, and again, determined that Ergon was ineligible. The second time, the Fourth Circuit vacated EPA's decision again, this time, finding that EPA had been arbitrary and capricious in treating Ergon differently than any other small refinery.

Now, this is the third attempt to prevent Ergon West Virginia from receiving hardship relief. Essentially, what EPA is proposing to do is Ergon and every other small refinery in the United States will be denied hardship relief.

If EPA proceeds on this path, ironically, on the basis that every refinery in the United States, from the largest multinational oil company to the tiniest, small refinery in Newell, West Virginia has exactly the same cost of compliance. It doesn't matter that a large integrated oil company can export. It doesn't matter that a large, integrated oil company has excess RINs and makes millions in speculation. Everybody's

cost is the same.

I always go back to the DOE study prepared for Congress, which explains the hardship that small refineries will suffer as a result of their inability to blend, as a result of their inability to take massive amounts of capital and joint venture. So yes, you are correct, Senator, that this is the third attempt to divest Ergon of relief.

Senator Capito. Right. We specifically in the law made provisions for a small refinery exemption, correct?

Ms. Koch. Specifically made provisions for each petition to be decided on its merits, that is correct.

Senator Capito. Right, thank you.

Mr. Pugliaresi, your last chart, I was looking through your charts, because we have them in our book—talks to me about where we see gas prices going and who really gets hurt the most. This talks about the rising costs of transportation fuels harm low-income and many minority communities. We know that if you have to pay an extra \$10 to \$15 to fill your car up, that hits that person that, at the end of the month, is looking for an extra \$10 or \$15 to help pay their electric bill or some other bill that is also rising at the same time.

You talked about the cost of blending is about 20 to 30 cents per gallon, so there is a cost there. You also mentioned to me earlier, before we got started, that you think, as we are

moving forward, there are some guardrails that EPA needs to have as we are moving forward, that we could provide for them.

If you want to talk about that issue, I would like to hear that, but I would also like to hear your opinion on the overall cost of what we see now, the high cost of gasoline and how we can deal with this issue of who is hitting it the hardest, and how it can move. There are proposals out here to get rid of the gas tax, but that is 18 cents. That is not even close to this.

Mr. Pugliaresi. First, let's talk a little bit about the sort of government-mandated energy transition, because we are the largest oil and gas producer in the world. We are very concerned that certain policies are now seeking to constrain the North American production platform before the alternatives are ready.

We are going to produce a lot of EVs; we are going to produce a lot of alternative fuels and technologies, but if we proceed with, between 2010 and 2020, the United States alone, plus the application of biofuels, provided over 80 percent of world increases in demand for liquid fuels. That is the first thing we need to think about.

We should treat this North American production platform as a strategic and economic asset. We should be very careful before we decide to disrupt it. That is the biggest incentive, the biggest program we have to keep gas prices under control.

The next thing is that we are fighting over a small volume. In the absence of a mandate, we would still be blending anywhere from 8 to 10 percent. Ethanol is a valuable feedstock. It helps to meet octane requirements, and other biofuels, but if we proceed with a mandate, we kind of prohibit innovation and alternatives to come forward. We have no idea what the fuels of the future really are going to look like.

Your final point, this is devastating for low-income communities, as you can see from that chart. Everyone who wants to proceed with these exotic fuels of the future should keep in mind that I don't believe the American people will react very positively if we go into a period of sustained high gasoline prices.

Senator Capito. Thank you.

Senator Carper. All done? Okay. All right, thanks so much, Senator Capito.

Senator Cardin was here earlier. He is now joining us, I think, by WebEx remotely. Senator Cardin, if you are there, please proceed with your questions. Thanks for joining us.

Senator Cardin. Well, thank you, Chairman Carper. I appreciate this very much.

This hearing is long overdue. The history of the Renewable Fuel Standards is something that needs to be understood, and we need to update this, so I very much appreciate your leadership

on these issues. There are many competing priorities. We have energy security issues, we have the environment and our concerns for climate change. We have the cost issues, that we have just talked about.

By the way, there are lots of governmental subsidies in regard to energy that affect the cost issues, not just here. And then the food stock.

I would like to get the view from our members of the panel as to what we can do if we want to focus on development and growth of domestic advanced biofuels derived from non-food-based food stocks. How should we be adjusting our policy in regards to renewable fuel standards?

Mr. Pugliaresi. I think the way to do this is to allow a lot of alternative biofuels to compete in the marketplace for the liquids market. For those fuels which have a lot of promise and for which we think are substantial public, long-term public benefits, we should have a good research and development program, even some support for, probably, deployment.

In the end, we should allow a large opportunity for consumer choice and for competition to take place between manufacturers or processors of fuel to deploy these into the marketplace.

Ms. Skor. I will go ahead, and I will follow on those themes of choice and competition, two themes that we

wholeheartedly support. When it comes to choice, consumers do need choices. They need options at the pump. It is very unfortunate that come June 1st, one of the lowest carbon, low fuel, low-cost options available to them is going to be eliminated because a few refineries sued and won in court.

So we have to reintroduce higher blends of biofuel, year-round access to E15. That is giving consumers one low-cost choice.

When it comes to competition, as we all pursue lower carbon intense energy, that is very important. Critical to that is making sure that the modeling, that the standards, that the incentives, the performance standards, are technology neutral. In this Country, let the best win, right? So, let's make sure that we are looking at the full life cycle analysis of all of the technologies and all of the available solutions.

We are going to need everything to be able to achieve these ambitious climate goals, so make sure that the modeling reflects up-to-date science, it reflects innovation taking place within agriculture to bring down carbon intensity, and then I think you are going to have a competitive environment with choice for consumers.

Senator Cardin. I would just mention in that regard, Senator Carper and I both serve on the Senate Finance Committee. We have looked at proposals to try to have it neutral in regards

to the tax issues and reward those that are lower in carbon emissions and help our environment. We agree with that.

The problem is that today's structure does reward certain high carbon sources, and we really don't have a level playing field. I don't know if the other panelists want to respond on this or not.

Ms. Wind. Yes, thank you for the question. This is Cory-Ann Wind.

I think this is, what I would say is that, so this is what the core of a low-carbon fuel standard does, and so it really does reward the carbon intensity of that fuel.

As you mentioned, going from a crop-based fuel to a waste oil for biodiesel, for example, that fact that they do have lower emissions means that they do have higher incentives in a low-carbon fuel standard. Those higher incentives actually bring down the cost of those fuels.

That is how it is scored in a low-carbon fuel standard, and I think it has been working really well to incent the lowest of the lower carbon fuels.

Senator Cardin. That is some of the debate we are having now on the price of carbon. If we had a true price of carbon, I think we would have a fair competitive standard, giving choice to the consumer.

Thank you, Mr. Chairman.

Senator Carper. Thank you, Senator Cardin.

Before we turn to Senator Inhofe, I want to ask unanimous consent to submit for the record various materials demonstrating recent strong economic growth, including a statement from the Assistant Secretary for Economy Policy at the Department of the Treasury from January 31st, 2022. According to this statement, real GDP grew 5 and a half percent over the four quarters of 2021, the fastest annual pace in, get this, 37 years. This is in addition to the materials I submitted earlier, which show energy prices today are still lower than they were in 2007, and today's prices at the pump are driven by growth in fuel demand as the economy emerges from the pandemic.

Without objection.

[The referenced information follows:]

Senator Carper. Next is Senator Inhofe. Senator Inhofe will be followed by Senator Whitehouse. Senator Inhofe?

Senator Inhofe. Thank you, Mr. Chairman. Before you start my clock, I am going to experiment with something that I haven't tried before. I have two questions, but the first question has four parts, so rather than put Ms. Johnson in a position of having to write down fast, I am going to ask my staff to hand her the written copy of those four questions, which I will read now.

First of all, Ms. Johnson, will --

Senator Caper. The Senator's time has expired.

[Laughter.]

Senator Inhofe. I didn't do that to you.

Senator Carper. All right, go ahead.

Senator Inhofe. Will denial of the small refinery exemptions, which we have two in Oklahoma, ultimately drive gas prices up, and does the data support the assertion that small refinery exemptions lower blending and biofuels? Please describe your understanding of the EPA's stakeholder engagement with refiners regarding the proposed rule. Is there data to support the claim that EPA's denial of hardship relief for small refineries would contribute to closure of American refineries and lost jobs? Anything that has already been answered, you can go ahead and run over that fast. All right?

Ms. Koch. Thank you, Senator Inhofe, and thank you for the list of questions.

With respect to your first question of whether denial of small refinery exemptions will drive compliance costs higher and gas prices higher, it is a certainty. If EPA publishes its proposed denial, the parties holding the RINs that small refineries need for compliance will be in a position to demand exorbitant prices because small refiners will be captive buyers on the eve of the compliance deadlines, multiple compliance deadlines on top of one another, because EPA has been so delayed in its rulemaking.

This is assuming that RINs are available at all, so my small refineries do not have the RINs that they need for compliance. They are physically unavailable. No more 2019s are available for compliance; no more 2020s are available for compliance because, as EPA described, parties' uncertainty about what the ultimate volumes will be are holding onto their excess RINs.

It is a recipe for crushing small refineries. It is a recipe for escalating RIN prices. They will get much worse if EPA moves forward with its proposal. Gas prices will increase with RIN prices for parties that can partially or fully pass through their costs; for example, large integrated oil companies and large exempt retailer chain, and small refineries will be

forced to violate the law without hardship relief, shut down, curtail, or go bankrupt. Those are the Department of Energy's predictions.

With respect to your second question, Senator, does the data support the assertion that small refinery exemptions lower blending of biofuels, I want to answer that in two parts. First of all, EPA's current proposal relates to compliance years 2019, 2020, and 2021. It is impossible to blend any more fuel in those years. Those years have already closed, so no, no biofuel blend rate will go down.

Essentially, the other proof is that, there is a lot of discussion about the 2016 to 2018 timeframe when the prior Administration granted more hardship relief than it had historically. During the period of time when small refinery hardship increased, so did the blend rate, and the simple reason is: small refineries cannot meaningfully impact the blend rate. The blend rate, the blending is done downstream. The only question is whether or not small refineries are going to make massive wealth transfer to the large integrated oil companies and large exempt blenders that hold the RINs needed for compliance.

Your third question was to describe stakeholder engagement with refiners regarding the proposed rule. I can say this: small refiners were blindsided by EPA's proposal to

retroactively deny all 2019 to 2021 petitions years after their statutory deadline to issue their decisions had passed. EPA checked a box. They met with us on August 25th of 2021. They shared no substance about their plans to issue retroactive mass adjudications and denials for small refineries.

The proposal matches entirely, instead, the asks of the biofuel industry, which seems to have had meaningful engagement with EPA. EPA also seems to have engaged with the USDA, and by the way, you, Congress, decided that the appropriate consultation was with the Department of Energy, not Ag, and the Department of Energy is, as I have said, has determined that EPA's plan to deny hardship relief will result in the shutdown and closure of refineries.

Your last question, Senator, was whether there is data to support the claim that EPA's denial would contribute to the closure of American refineries and lost jobs. I won't repeat what I said previously, but essentially, a number of small refineries do not have the RINs they need for compliance. If they are denied relief, they will be captive buyers in a market with escalating RIN prices.

EPA has acknowledged that there was a shortcoming in the production of RINs for the 2019 compliance year, and that the RINs that are available in the market are not in the hands of small refineries. Small refineries will necessarily violate the

Clean Air Act because they will not have the ability to get the RINs that they need for compliance, which will then force them to decide between spending money on RINs if they have it, shutting down, and/or going into bankruptcy.

Senator, I hope I have answered each of your questions.

Senator Inhofe. Excellent.

Senator Carper. And you have done it in just the right amount of time. The Senator's time has expired. Go ahead, just briefly. Very briefly.

Senator Inhofe. I do have one last thing for Mr. Pugliaresi, and that is, is there anything, I know you talked about this and you answered a question addressing this also, but is there anything in terms of the risks associated with an entirely electric fleet that you didn't adequately cover?

Senator Carper. Just very briefly if you would, please, very brief in your response.

Mr. Pugliaresi. Yes. The biggest problem is, we are energy independent now. In order to move to an electric fleet, we have to move to a series of critical materials and minerals, on which we will be highly dependent. Some of them are sourced from countries that are not necessarily friendly to the United States.

If I may just correct one question that I thought was very interesting, it is very important to understand that Oregon has

the fifth highest gasoline prices in the Country, so it may be lower than some other adjoining States, but gasoline prices are quite high in Oregon.

Senator Carper. All right, thank you.

Senator Whitehouse, you are up. Thanks very much.

Senator Whitehouse. Thank you, Chairman, and thanks everyone for being here.

I have long supported the biofuels and ethanol standard, but it has kind of been an act of faith that someday the market would come around and that corn ethanol, in particular, was kind of a pathway effort that would let cellulosic ethanol and other forms come forward.

I am interested, Ms. Wind, in your testimony about the carbon intensity of the ethanol and biodiesel that Oregon uses, that it has decreased. I am wondering how confident you are in the measure of carbon intensity of your corn ethanol fuel stock.

Ms. Wind. Yes, thank you for that question, Senator. We do use the Argonne grade model to calculate carbon intensities in the State of Oregon, which is the accepted national model to do so.

With respect to the ethanols that we are receiving in Oregon, the import of that fuel, it is producer-specific, and so we can keep very close track of the different ethanols that we are getting, even the corn ethanols. What we are seeing is

incremental decreases in the carbon intensity.

So, for ethanol over the past six years, it has continued to incrementally go down, probably about 10 percent. The carbon intensity of the biodiesels have had more of a significant decrease, but it is steady, and it shows that there is value in a low-carbon fuel standard to continue to draw down those carbon intensities. These facilities are getting more efficient and better at their energy inputs, and that is reflected in the lower carbon intensity scores.

Senator Whitehouse. You mentioned cellulosic ethanol, I believe. What is the market share within the ethanol market of cellulosic ethanol, or in your portfolio, if you know that better than the national market?

Ms. Wind. Yes, thank you for that, Senator. As far as cellulosic ethanol, we don't have any cellulosic ethanol coming into the State of Oregon. What the ethanol that is coming into Oregon, it is not cellulosic, but it is decreasing in carbon intensity.

Senator Whitehouse. Is it? How much of it is corn?

Ms. Wind. It is 100 percent corn.

Senator Whitehouse. Okay, there we go. One of the things that I think we need to do in order to find a pathway to climate safety is to put a price on carbon. That seems to be a fairly commonly held view among economists and banks and so forth and

among people who are looking hard at the climate problem for emissions reduction solutions.

At present, the absence of one is a really massive subsidy for the fossil fuel industry. The International Monetary Fund calculates it north of \$600 billion per year, just in the United States. Six hundred billion dollars per year is an enormous number, and it provides a very strong motive for a massive political election lobbying operation by the protected and subsidized fuel to defend and protect its subsidy politically. We are in a kind of a difficult position here in Congress.

I am wondering, back to you again, Ms. Wind, if there were a price on carbon, how would that affect the ethanol portion of your fuel market?

Ms. Wind. Thank you for that question. In effect, the way that the low-carbon fuel standard works is that the monetization, the value of the fuel, is in the credit prices that are being traded in the program. This is a market that we do not control. It is a market that contributes to the credit prices, the credit center traded within the program.

Currently speaking, the credits in the State of Oregon are trading at about \$125 per ton. It has been higher, and it has been lower. We publish that on a monthly basis to show transparency to the market. There is certainty in what that credit price is, that is associated with the carbon. That is

how we do it in the low-carbon fuel standard.

Senator Whitehouse. My time is up. Chairman, thank you very much.

Senator Capito. Thank you. Senator Cramer?

Senator Cramer. Thank you, Senator Capito. Thanks to all of you for being here.

This is a topic that has perplexed me since the day I got to Congress. It is not the topic that perplexes me as much as the debate. It never changes. A lot has changed since 2005 and 2007, when the RFS was created, during a time of scarcity of natural resources. Of course, we now have an abundance of natural resources.

In the meantime, we have some other policy decisions. We have an Administration right now pushing for up to \$12,500 per electric vehicle subsidy to change the demand for electric vehicles. I am going to just state some facts, and then I am going to ask for some feedback.

We have this debate over this constantly moving target, right? Several of us have had this discussion. What I would say would be, as a result of lazy legislating, which I am convinced is a historical phenomenon in this Country, Administrations have been given an awful lot of leeway to determine things like RVOs, even when they are stated in the law.

Obviously, the hardship, the small refinery hardship waivers are another tool, and then we get upset because, you know, for four years, it is one way, then for four years, it is another way, and then for four years, it is another way. I know a couple of you, and I have had this discussion.

But it seems to me that at the end of this hearing—for the last decade, several people I have discussed this with have liked to deny that at the end of 2022, there is a new rule in place, that the RVOs are no longer in law. They are in law, but they are not required, that the authority to set the RVOs, in other words, the EPA and the Administration has even more unilateral authority after this year.

I would like to just have a little discussion from the panel. What is your understanding, we will start with you, Ms. Koch, what is your understanding of the act when the RVOs switch over, or the EPA gets carte blanche, in my view, authority in 2023 to set the RVOs? Where are going to go if nothing happens and they have that authority?

Ms. Koch. Thank you, Senator. I think that is an excellent question, and something that keeps me awake at night.

I see this freight train heading towards the highest possible RVOs to try to break through the blend wall and to promote E15. The problem is that EPA had discretion in how to set up the program, and it set up the program in such a way that

it distorted competition.

Growth Energy has stood shoulder to shoulder with the American Petroleum Institute, which represents the large integrated refineries, preventing closing the blender loopholes. Essentially, Growth's theory is that just keep pushing, just keep pushing, just keep pushing, at some point, E15 will happen.

E15 won't happen before every small refinery is shut down, because right now, we are counting on volunteer blending, what we call the blender loophole. Small refineries do not have the ability to blend. Large integrated refineries have the ability to blend more than they produce.

Until this market distortion is fixed, it is a recipe for destroying those refineries that cannot blend. If we want to keep pushing E15, if we have in fact determined that E15 results in reductions in greenhouse gas emissions, which is something that I don't think we at all agree with, we need to fix the structure of the program.

I was interested in the discussion of cost caps. Very many times, limitations on the ability to speculate in the RIN market, limitations on the cost of a RIN, obligating blenders, all of these proposals to fix the things that are preventing renewable fuel blending have not occurred. If we just go straight ahead, we are going to just collaterally damage our industry.

Senator Cramer. Ms. Skor, first of all, I want you to be able to respond to that, but couldn't a future Administration, instead of pushing E15, just eliminate, could they go to zero? Would that be possible, one gallon or something like that, in the law?

Ms. Skor. Senator, thank you for the question.

Yes, after 2023, there are no Congressionally set blending requirements, so EPA does have greater flexibility in terms of setting the blending obligations. A few important things they still have, some criteria that they need to consider, job creation, energy independence, environmental impact.

I think one of the things that we have all suffered from, in every sector, is the lack of certainty and stability. If there is an obligation, it needs to mean something. If there is a deadline, it needs to mean something.

One of the things we look forward to in the set is EPA's opportunity to set blending requirements for multiple years in advance, similar to what Ms. Wind was talking about in Oregon. I think that would help address some of the volatility concerns.

Senator Cramer. Thank you. I wish we had more time. Maybe in another round, Mr. Chairman.

The biggest point that I want to make is that 2022 is here now. For 10 years, people looked at me like, don't worry, that is in the future. Well, it is not in the future anymore. We

have to come up with something. I would rather come up with it with everyone in the room, if you know what I am saying.

Senator Carper. As long as it includes us.

Senator Cramer. As long as you are in the room with me, I am good, yes.

Senator Carper. Thank you, sir. All right. Thanks,
Senator Cramer.

Senator Duckworth, I think you are out there on WebEx. If you are, please proceed. Senator Duckworth? No?

Senator Lummis is here in person, live and in person. We will come back to Senator Duckworth when she can rejoin us.

Senator Lummis, you are recognized. Then, I have Senator Stabenow after you by WebEx. Go ahead, please. Thanks.

Senator Lummis. Thank you, Mr. Chairman.

I would like to begin by asking consent to enter three documents into the hearing record. One is an academic study published in the proceedings of the National Academy of Science called Environmental Outcomes of the U.S. Renewable Fuel Standard. The second is a study by the University of Georgia called Analyzing the Downstream Impacts of U.S. Biofuel Policies. The third is an article entitled U.S. Bread and Donut Makers Urge Biden to Roll Back Biofuel Requirements.

Senator Carper. Is there objection? Hearing none, so ordered.

[The referenced information follows:]

Senator Lummis. Thank you.

Senator Carper. You are welcome.

Senator Lummis. Thank you very much. We have already heard testimony that the RFS mandate is adding about 28 to 30 cents a gallon to the wholesale cost of gas on average, and, of course, at a time when fuel prices are extremely high and inflation is extremely high, it works a hardship on consumers. I believe we should look at every avenue to provide relief to consumers.

When I am in Cheyenne, on the ranch I grew up in, in the house I grew up in, I live right next door to a small refinery that lost its small refiner exemption. Furthermore, they were unable to, when refining for hydrocarbons, they were absolutely unable to purchase non-hydrocarbons to blend to meet the renewable fuel standards.

So, they converted the oil refinery to a refinery that now refines soybean oil. That refinery in our little town, in the State with the smallest population in the Nation, went from 260 livable wage jobs to 60 livable wage jobs. We lost 200 employees in Cheyenne, which is a huge number in our little community.

This has had an enormous impact on our community, and this happened during the previous Administration's tenure. I didn't see them slow-walking the loss of the small refiner's exemption.

I saw them putting the hammer down and costing small communities like mine hundreds of jobs.

Ms. Koch and Mr. Pugliaresi, when Congress created the biofuel mandate, we predicted that the program would disadvantage small refineries, and of course it has. It increasingly precludes refineries from selling the products they produce and requires them to buy products they don't produce, if they can get them. This squeezes the smallest firms first and most severely. Higher cost producers are harmed the most and first in time.

So, is this an effort to just make sure that, much as we did with banks, you are too big to fail or too small to succeed? In the case of small refiners, are they too small now to succeed?

Mr. Pugliaresi. Senator, we think about the American refining complex. We traditionally had a lot of oil production produced and processed on the Gulf Coast, and then the products moved up the continent. But of course, with the emergence of production in North Dakota and energy independence in the U.S., our small refiners and regional became much more important. I think they provide a vital role.

As I have said, I think the solution remains in order for all these different facilities with their different cost structures and their different markets to adapt, they need an

open market, and the fundamental problem they all face is these mandated requirements to blend to certain targets, which do not necessarily yield any benefits even to the farmers.

The program is, as I said, we are fighting over very small volumes. If we were to open it up and have some broad support for moving biofuels forward, we would all be a lot better off. These kinds of dislocations would tend to disappear.

Senator Lummis. Ms. Koch, same question.

Ms. Koch. Senator, I really appreciate your question. It reminds me of something one of my small refineries said to me: we dance between the toes of giants. What that means is, the smallest refinery in Cheyenne, Wyoming, the smallest refinery in Newell, West Virginia, the smallest refinery in whatever rural community, from Pennsylvania to California, danced between the toes of giant, integrated, multinational oil companies until the Renewable Fuel Standard came along and said, you know what, we are going to tilt competition in favor of the large integrated oil companies, but don't worry, we have got your back.

Congress said specifically, we recognize that the volume mandates and the inability of small refineries to have access to capital to become large, integrated oil companies that don't have access to pipelines, that disproportionately produce diesel fuel, don't have access to blend stocks, don't worry, we have got your back. You will be okay. We can provide an exemption.

Small refineries blend every drop of blend stock they possibly can, but they don't always have access, and they don't always have the ability, so what happens is that they are captive buyers in a wildly inflated RIN market. That is how they are harmed.

I just want to be clear. When we talk about 2019, 2020, and 2021, where EPA has proposed to deny hardship relief, not one more drop of renewable fuel can be blended. So what we are talking about is EPA compelling small refineries to make massive wealth transfers to large, integrated oil companies because they don't have access to feedstock, because they cannot blend. It is un-American.

Senator Lummis. That is, I think, that should be the focus of some of the work that we do to have a better Renewable Fuel Standard Program, because we are just assuring that only the big integrated companies will succeed, and all of the small businesses will fail. They are, once again, moving people out of small, rural communities and into the bigger areas that have the bigger refineries. It is happening in so many industries that it is having a profound effect on America's jobs and demographics.

There has to be a way to encourage renewable fuels at the same time that you don't make it all about the small fail and the big survive and thrive.

Thank you, Mr. Chairman. I yield back.

Senator Carper. Thank you very much for being here, and for those questions.

Senator Duckworth, have you joined us yet on WebEx?

Senator Duckworth. Yes, I have, Mr. Chairman.

Senator Carper. All right, Senator Duckworth, you are recognized, please. Thank you.

Senator Duckworth. Thank you.

Ms. Skor, some of the comments made in today's hearing demonstrate there is seemingly no end to the list that opponents the RFS Program will seek to pin on American biofuels. Critics now appear to be blaming biofuels for rising retail gas prices, notwithstanding the reality that what consumers pay at the pump is largely determined by a, oil prices, and b, basic supply and demand.

Ms. Skor, could you address the claim that RIN prices and biofuel production are somehow responsible for increasing retail gas prices?

Ms. Skor. Thank you, Senator, and yes, those are false claims. So, the price of the RIN has no bearing on the price of fuel at the pump. Those are entirely separate markets. The dominant factor driving the price of fuel for consumers at the pump is the price of crude oil in addition to supply and demand. That is something that is affirmed by our government agencies

and other modeling.

What I think what is really important to understand is the role of biofuel in bringing down the price of fuel for the consumers. The evidence today is the price of E15. Consumers in 31 States today, they can go up to the pump, and they could put in standard 87. That is a 10 percent blend. Some of them could choose an 88 octane. That is a 15 percent blend.

When they have a little bit more ethanol, that actually brings the price down. They are saving up to 10 cents per gallon. There are also stations where you can buy zero percent ethanol. There, you are paying a premium up to 50 cents not to have ethanol. So most assuredly, biofuels like ethanol help bring down the cost of gas prices.

Senator Duckworth. Thank you.

Ms. Skor, based on how big oil describes the burdens of purchasing RINs, it is impressive that oil refiners survived the bipartisan enactment of the RFS more than 15 years ago. My understanding is that EPA, under the last three Administrations, the American Petroleum Institute and numerous individual oil companies are all on public record confirming that oil refiners, large and small, recover RIN costs downstream and are therefore not irreparably harmed by the amount of money they pay to acquire RINs.

Could you help us understand how, despite the arguments of

big oil over many years, oil refiners have managed to purchase RINs and stay in business?

Ms. Skor. Thank you for the question.

Yes, the RIN affords refiners flexibility in terms of how they demonstrate compliance with the RFS. They can blend biofuel, like ethanol, and they can hand in a RIN, or they can purchase a RIN. So they have got the flexibility to be able to do this. The RFS has been in place since 2007. So we have had more than a decade for the business to understand their annual obligations and make business decisions accordingly.

Again, important to understand, the RIN marketplace and the volatility that you see when you have refiners who are choosing not to blend and wait until the eleventh hour, and then seek some type of exemption or waiver or extension from the agency, I think that is really where you are seeing the volatility come into play. But the bottom line is when it comes to consumer price at the pump, the more biofuel, the more they are going to save.

Senator Duckworth. Thank you, Ms. Skor.

Mr. Chairman, I would like to ask unanimous consent to enter into the record EPA analyses from 2015, 2017, and 2021 that confirm what Ms. Skor just explained, along with two documents that counter the recent study that has garnered attention this week, one from the Renewable Fuels Association

and another from the National Corn Growers Association indicating, among other things, that the USDA found that ethanol's carbon intensity was 39 percent lower than gasoline and, according to the EPA, the RFS has not expanded cropland, it has, in fact, decreased them by increased efficiency on existing cropland, not by expanding acreage. According to the USDA, the amount of fertilizer required to produce a bushel of corn has fallen dramatically in recent decades since the creation of the RFS.

Senator Carper. Is that your unanimous consent request?

Senator Duckworth. Yes.

Senator Carper. Is there objection? Hearing none, so ordered. Thank you.

[The referenced information follows:]

Senator Duckworth. Thank you.

I also ask unanimous consent to include in the record for this hearing reports from Environmental Health and Engineering. It is a report addressing biofuels and greenhouse gas reduction; the Life Cycle Associates 2020 report documenting the one billion metric tons of GHG reductions attributed to biofuel use since 2007.

Third, a study published by USDA scientists in 2021 titled *The Greenhouse Gas Benefits of Corn Ethanol: Assessing Recent Evidence*, which found climate-smart agriculture practices reduce emissions. Finally, fourth, a study published by Argonne National Laboratory that found corn ethanol is reducing the carbon footprint and diminishing GHG emissions.

Senator Carper. Is there objection? Hearing none, so ordered.

[The referenced information follows:]

Senator Duckworth. Thank you.

These studies confirm what we already know: American grown, blended biofuels have been reducing GHG emissions for years, and the RFS has played an integral part in these efforts.

I am out of time. Thank you, Mr. Chairman.

Senator Carper. All right. Thank you, thanks so much.

Senator Ernst, you have been patient, but Senator Stabenow has been patient as well on WebEx. If you don't mind, I am going to let her go first, and then you are immediately right after her. Thank you for your patience.

Senator Stabenow, you are there?

Senator Stabenow. I am, Mr. Chairman, and thank you to Senator Ernst. I appreciate so much working with her on these issues. I appreciate very much your doing this hearing.

I want to take just a step back, way back, for a moment, and kind of frame this. I think this has been framed as big refiners, small refiners, and so on. This is really about whether we are going to continue the dirtiest kind of fuel or have cleaner fuels.

If you go back 100 years, actually, Henry Ford and Thomas Edison first tried to do a vehicle with a battery but could not get government support to help them create the innovation. Two years later, the biggest permanent tax credits for oil and gas were embedded in our federal tax code, and they have been there

100 years. We, at that time, picked a winner, and they won.

Now, we are trying to just balance that out with giving opportunities to biofuels, electric vehicles, wind, solar, and so on, all of which start and stop. It is not a consistent policy. It is not embedded in the tax code.

I want to ask Ms. Skor, when we look at, from a business standpoint, the importance of policy and regulatory certainty when you are making investment decisions, innovation decisions, and so on, how important is that?

Ms. Skor. Thank you for the question, Senator. That is incredibly important. I think there is a very good example in terms of, my industry is producing right now cellulosic biofuel. That is up to 100 percent and beyond in terms of the GHG reductions. But we are not getting credit for it, because the technologies have been pending EPA review for over five years.

We as a Nation, we are leaving carbon reductions on the table. Then the impact is you have innovators sitting on the sidelines because they see a lack of certainty, a lack of a marketplace moving forward. Therefore they are going to sit this one out.

It really does stifle the innovation, the investment, that we need to continue to bring down the carbon intensity of corn ethanol, which we are doing a great job of doing that, and also to be able to get our industry to net zero and participating in

the hard-to-electrify space. That is a place where we are going to be able to perform as a really important feed stock.

Senator Stabenow. Thank you. Just one more time, for the record, are biofuels responsible for high gas prices?

Ms. Skor. No, quite the opposite. The more biofuels that we introduce into the fuel supply, the more we bring down the price at the pump for every driver.

Senator Stabenow. Thank you. It is also jobs, right, in rural America and certainly in rural Michigan.

One of the questions I have to ask as somebody who not only is a supporter of biofuels and rural jobs, but also electric vehicles being made in my great State, both are important to reducing carbon emissions in the transportation sector. I think it is important, just for the record, to say that is why the United Auto Workers, who make great automobiles and the new electric vehicles, strongly support the Renewable Fuel Standard as well. In fact, the UAW is the largest private union in Iowa with members employed by companies making farm equipment. They consistently talk about the fact that they are supportive.

Ms. Skor, does Growth Energy agree that both electric vehicles and biofuels are critical to reducing carbon emissions and petroleum use?

Ms. Skor. Yes. Let me add that we appreciate that UAW submitted very strong remarks to EPA in support of a robust RFS.

We have very ambitious climate goals, and there is no one-size-fits-all solution. We are going to need every tool in the toolbox, which means biofuels alongside electrification.

The benefits of biofuels, those are going to be for the immediate, the mid-, and the long-term. In the immediate term, we have about 270 million cars on the road today. So biofuels allow us to have a solution for those cars, to bring down the emissions, to clean up the emissions and do so affordably and in an available way for all consumers.

In the mid- to long-term, if we are a strong industry today, that allows us to have the innovation that we are continuing to do to further drive down the carbon intensity of our low-carbon fuel, but also participate into the hard-to-electrify space. For that, we need accurate carbon modeling, and we need to make sure that the incentives provide a fair, level playing field for all of the parties who want to be able to compete and participate.

Senator Stabenow. Thank you, I agree.

Mr. Chairman, I will yield back, and yield to my friend from Iowa, Senator Ernst.

Senator Carper. Senator Ernst, your patience is rewarded. Thank you.

Senator Ernst. Yes, thank you so much. I appreciate that; thank you, Mr. Chair.

I ask for unanimous consent to submit to the record comments from the Renewable Fuels Association and the Clean Fuels alliance.

Senator Carper. I think we are going to set a record here for unanimous consent requests. Without objection, so ordered.

[The referenced information follows:]

Senator Ernst. Outstanding, thank you so much.

Just to address some of the issues that have been brought forward by our witnesses and members of the committee as well. Just looking back at the average closing price of crude oil, in 2020, it was \$39.68 a barrel, and the average closing price in 2022 so far is \$85.72 a barrel. Today, it was \$95.46 per barrel of crude oil.

Is that due to the RFS, to our witnesses? Emily?

Ms. Skor. I will go ahead and take that one.

Absolutely not. The primary factor in terms of the cost fuel at the pump is going to be the cost of crude oil. It has nothing to do with the RFS.

Senator Ernst. Thank you, Ms. Skor. I think a point that our members are trying to make today is the cost of fuel is because of the RFS. It is not. It is about the price of oil. So, I reject that. I hope that our folks out there listening are paying attention to that. The price of our fuel is the price of the oil.

We have had the RFS around for a number of years, and the reason we have is because Congress asked for the RFS to be established so that we could reduce our greenhouse gas emissions. The folks across the Midwest, our farmers, our producers, responded to the call to Congress. They developed systems that produce clean, reliable energy sources.

I also reject the premise that oil refineries and their rural communities are more important than my rural communities.

As we are looking to 2023 and beyond, America's farmers and the biofuel sector are best positioned to work with this Administration and others to put the Renewable Fuel Standard back on track and be part of the solution to secure a clean energy future. As much as the Biden Administration dreams of an all-electric world, the reality is, liquid fuels are here to stay. With 98 percent of cars and trucks today, and nearly 80 percent of new vehicle sales projected in 2050 running on gasoline or flex fuel, biofuel is the key pathway to decarbonizing the transportation sector and the RFS is the policy engine that makes this possible.

Congress passed the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007, which mandated the RFS, in part, to help reduce America's dependence on foreign nations. Folks, I firmly believe energy security is national security. While President Biden claims to support America's clean energy economy, he is turning his back on the RFS in favor of electric vehicles, which will only make us more dependent on China.

Science is on our side here, too. Biofuel has enabled the U.S. to cut emissions from the transportation sector for over a decade. Between 2008 and 2020, the RFS saved nearly one billion

metric tons of carbon dioxide equivalent greenhouse gas emissions, and it is only getting cleaner. The latest research shows corn ethanol is 46 percent less carbon intensive than petroleum-based gasoline, and biodiesel is 74 percent less carbon intensive than petroleum-based diesel.

Biofuel can further reduce greenhouse gas emissions with carbon capture and sequestration technologies and on-farm conservation practices, which many of our Iowa farmers are already doing.

So let's follow the science and use biofuel as part of a clean energy policy, but it is not the only clean energy source. Biofuel is also great for our economy and our pocketbooks. Iowa corn and soybean farmers had record-high crop yields in 2021. The biofuel industry accounts for over \$5 billion of GDP, generates \$2.6 billion of income for households, and supports nearly 46,000 jobs in Iowa alone, in my rural areas.

Ethanol is also the cheapest form of fuel for consumers right now, by about 50 cents, and certainly with record high inflation, it only makes sense to make this fuel source more readily available.

That is why I continue to urge the Administration, allow summertime sales of E15 as soon as possible. It will not only support our consumers, it will also support the nearly 300 retail stations in Iowa who want to provide a cleaner choice at

the pump.

Folks, the RFS is the law, and refiners have had over 15 years to come into compliance. Blend renewable fuels or buy RINs. It is your choice. Any claim that RIN prices are increasing gas prices, it is a bunch of hogwash. Refiners claim they need exemptions because RINs cost them money, but the last three Administrations have said RIN prices do not cause harm to refiners.

Small refinery exemptions go against Congressional intent, and the Supreme Court reinforced this. A strong RFS supports rural America and increases consumer access to affordable, home-grown, clean-burning biofuel today, tomorrow, and, we also hope, for many years to come.

Thank you. I will yield back.

Senator Carper. Thanks, Senator Ernst. Thanks for your attendance; thanks for your patience, and your questions and comments.

Several members and witnesses asserted that the increase of gasoline at the pump is attributable to crude oil prices. So I asked my staff, I said, well, let's actually look at the numbers. If you go back to February 2021, the price of oil at the pump was \$62.28. The price today is roughly \$94 per barrel. That is an increase of about 51 percent. Those are interesting numbers.

I have a couple of questions and Senator Capito, you may have some wrap-up questions as well.

Before we do that, Senator Wicker, Roger is going to try to get here. Maybe he is joining us remotely. Senator Wicker, are you out there anywhere? No, he is not going to be able to come. Okay, thanks.

A couple of questions. The first one that I would like to ask, Ms. Wind, with respect to eligible fuels, unlike the Renewable Fuel Standard, which requires eligible liquid and gaseous fuels and electricity to be derived from renewable biomass sources, low-carbon fuel standard programs, like Oregon's, are generally intended to be both fuel neutral and technology neutral. With this in mind, the Oregon Clean Fuel Program has a broader definition of transportation fuels than the Federal Renewable Fuel Standard.

My question, Ms. Wind, is how has this broader definition of transportation fuels benefitted the Oregon program, and how has this encouraged investment in producing cleaner fuels in your State?

Ms. Wind. Yes, thank you for that question, Senator Carper.

That is true. The State of Oregon, with the low-carbon fuel standard, we do basically value any of the transportation fuels that are lower carbon than gas and diesel. So in addition

to the biofuels and electricity, we also do have renewable natural gas. We have propane and renewable propane, and we are going to be investing more in hydrogen, as well.

What we would like to see is that, even with natural gas and with propane, that we switch from the fossil versions to the renewable version. But even the switch from say, fossil gasoline or fossil diesel, there are benefits from the propane and the natural gas. If those are the fuels that, because of the lower cost of those fuels, are what is leading to more infrastructure, more vehicles in the alternative fuel space, and then switching to the renewable versions lowers the carbon intensities even more, those are the kinds of things that we also see in the State of Oregon and will likely continue to see as we move into the future for the Oregon Clean Fuels Program.

Senator Carper. Okay, thanks, Ms. Wind.

I have a follow-up question also to Ms. Skor. Ms. Skor, with restrictions on what qualifies as an advanced fuel under the Renewable Fuel Standard, could a technology neutral program, like Oregon's Clean Fuels Program, allow more opportunity for your member companies to participate in the current structure of the Renewable Fuel Standard?

Ms. Skor. Thank you for the question.

Yes, we are a low-carbon fuel, so we do very much appreciate the concept of a low-carbon fuel standard.

Importantly, as you stated, Senator, making sure that this is technology neutral. This is where the carbon modeling comes into play. We have to make sure that you are evaluating the full life cycle analysis of biofuels like ethanol, that you are considering all of the low-carbon farming practices that continue to bring down the carbon intensity of our fuels.

If you have a program that is truly technology neutral, that reflects the current state-of-the-art science and the innovation taking place throughout industry, that allows for use of higher biofuel blends, like an E15, that is a place where we can play and I think will be able to really help in terms of achieving some of our collective low-carbon goals.

I will add that that is a very complementary to the RFS, so the two programs work well in tandem. I think Ms. Wind talked earlier about that value stack, to continue making sure the lowest of the low would go into a market like in Oregon.

Senator Carper. I have two more quick questions, two more quick ones, and then I am going to yield to Senator Capito. We have a vote underway as well.

This is a question for the entire panel. I appreciate the perspectives, I think we all do, that our panel has shared with us today. I want to compliment our staffs for pulling you all together. Thank you for joining us in person and remotely. I hope that this dialogue can help inform thoughtful action to

support the future of this important program.

With that said, I also recognize the challenges in forging a path forward for the Renewable Fuel Standard that satisfies everyone and the potential need for compromise and collaboration.

In closing, I just want each of you to take just half a minute, if you will, and tell us where you believe there might be common ground for all of us on this panel as we deliberate this issue going forward, and we will. Ms. Skor, would you like to go first?

Ms. Skor. Certainly, thank you.

I heard a lot of consensus about the importance of competition, about the importance of marketplace certainly, and the importance of consumer choice as we make sure that we drive toward low-carbon fuel options for consumers that are affordable and available. This is a place where biofuels really have a role to play.

What we need is a Renewable Fuel Standard that is enforced so there is some certainty, and those making business decisions throughout the fuel supply chain, including agriculture, biofuels, and on the refining side, so we understand what the obligations are and we bring down that volatility.

We look forward to seeing the EPA fix and finalize the blending obligations for 2020 and 2021 and 2022 as expeditiously

as possible. That kind of certainty is going to be something that is going to be good for all parties.

Senator Carper. Thank you.

Senator Ernst, do you have one more question?

Senator Ernst. Thank you, Mr. Chair. Just very briefly, because I think I have gotten most of the answers for my questions. But I would like Ms. Skor, Emily, would you respond, give a statement or thoughts on the anti-ethanol study that was done earlier this week?

Ms. Skor. I appreciate the comment, thank you. Yes, I am familiar with that. It is really very concerning when you look at the manipulation of the science and data, the unorthodox methodology that leads to really, fictitious and erroneous conclusions.

In short, you have a piece of work that is untethered from reality. You look at the totality of science and the consensus of EPA, Department of Energy's Argonne National Labs, California Air Resources Board, Oregon's Department of Environmental Quality, and of course, many academicians and scientists. Ethanol is lower carbon than gasoline, and that advantage continues to increase.

Senator Ernst. Thank you, Ms. Skor. Thank you, Mr. Chair.

Senator Carper. Sure.

Senator Capito has one last question, then I want to ask

the remainder of my time to go to three of our witnesses, and then we will wrap it up.

Senator Capito?

Senator Capito. Thank you, Mr. Chairman.

Yes, I do have to run really quickly after I just make a comment or two. It has been a very interesting hearing. I think there is consensus that there is a lack of certainty. Maybe certainty in different areas that you might share different areas that don't have certainty, but you are looking to us to provide some of the certainty, so that EPA can move forward.

In my view, nothing screams lack of certainty than having an exemption that is then revoked two years later. That, to me, is just unconscionable, no matter what it is happening to, if it was a corn producer, if it was a refiner, if it is a coal miner. Anything, an EV car maker, if you have the okay, and it says that you are going to have the permit to move forward, how can you possibly conduct business if somebody is going to come back two years later and revoke it? I think that, to me, is lack of certainty.

I do have the study here that shows, from the University of Wisconsin, that U.S. corn-based ethanol is worse for the climate. I am not going to argue that. I don't know. I think that we need to get what is a life cycle, when does it start,

how long does it go, what kind of emissions are included in producing ethanol from corn or growing corn or getting crude out of the ground. I think we need to have some consistency here and certainty here that we are using the same measurement data, because I think it confuses the American public, quite frankly, and many of us here who are making those decisions.

I just want to thank you, Mr. Chairman. I don't really have a question. I just thank the witnesses for being here for us, and I thought our members asked some really good questions. Thank you.

Senator Carper. Yes, it has been valuable. This committee, as you know, is pretty good at finding the middle in the complex, difficult issues, unanimously in some cases. This is a hard one. We look forward to working with your team and others that are on this committee trying to find a path forward going forward.

I like to say if it isn't perfect, make it better. This situation is not a perfect situation. We have to do better than this. Thank you.

I am going to go back to our panel again. I would ask a question I call a common ground question. I would ask each of you to take a minute to let us know where you believe there is common ground among all of you. I think only Ms. Skor has the opportunity to respond, so let me just ask our other witnesses

if they would respond, as well.

Ms. Wind, why don't you go first? Common ground.

Ms. Wind. Thank you for the question, Senator Carper. I think I would, yes, common ground, echo what Ms. Skor and Ranking Member Capito have mentioned, uncertainty. It is something that we hear quite a bit from the stakeholders that participate in the Oregon Clean Fuels Program and in the market. Certainty, as far as regulatory certainty, as far as the standards being established for our program, that is why we are undertaking our current rulemaking now to expand those standards out to 2035 to provide that certainty.

I think along with certainty, transparency in what we do in the way that we do our life cycle accounting and the bonding and the information that is used to establish those carbon intensities, as well as the market aspects of our program, the credit pricing and the transactions for that. It is something that is the pillar of how we implement the program in Oregon and, I think, has served us really well.

Senator Carper. Thank you, ma'am.

Mr. Pugliaresi?

Mr. Pugliaresi. Yes, thank you, Mr. Chairman. I was thinking, one of the problems is maybe we should try to do a better job of getting a common set of facts.

Senator Carper. Sometimes that helps.

Mr. Pugliaresi. Yes, sometimes it helps.

I think that one of the things I would like to ask the committee to do is, let's have the Energy Information Agency publish data for us on what the FOB export price of gasoline is and what the wholesale domestic price of gasoline is. Let's have them break down the components, because there is a lot of discussion of crude oil is causing prices to go up. Of course it is, but there are other components in the manufacturing of transportation fuels.

I think if we could get them to do a little more work on this, we might get some consensus for a sense of where are the hotspots, so to speak, beyond crude oil, that are driving up gasoline prices.

Senator Carper. Good, thank you for that suggestion.

Ms. Koch, same question.

Ms. Koch. I think common ground is that small refineries do not oppose biofuels, so biofuels that are lower emitting are not a problem. Where we depart is on the ability of everybody to share in the ability to blend or pay unreasonably high RIN prices.

But I would say that we have commonality in wanting lower emitting biofuels. Where we depart on that point also is on whether or not ethanol is, in fact, a lower emitting fuel. As we have been talking about, the recent studies suggest that

ethanol could be 24 percent higher emitting of greenhouse gas emissions than petroleum-based fuels.

To Mr. Pugliaresi's point, information is key. Senator Ernst explained that blending is a choice. It is not a choice when you don't have access to biofuels. I think the EIA could help us enormously by instead of resisting Freedom of Information Act requests related to how much is each refinery paying to buy RINs, what is each refinery's actual cost of compliance.

We understand that sufficient RINs are available for compliance, but not in the hands necessarily of the people who need them for compliance. Whose hands are they in? More forthcoming data would certainly help to dispel, maybe, some of the disagreements. I think that that would be important.

There are substantial barriers to blending, which I agree with Ms. Skor, there are. I think we disagree as to what those barriers are, but there are substantial barriers. We have to have a change to the Renewable Fuel Standard if we want it to be sensible, if we want it to not distort competition, and if we want to bring down the price of gasoline and diesel.

Senator Carper. Thank you.

I have a real quick question for Ms. Skor. I am going to ask you to just be very brief in your response, because we have a vote underway, and I don't want to miss that vote.

Ms. Skor, it is my understanding that the previous Administration significantly increased the number of small refinery waivers it issued compared to the Obama Administration, including issuing waivers for refineries owned by integrated companies like ExxonMobil. Is that your understanding?

Ms. Skor. That is correct, Mr. Chairman. In the previous Administration, EPA increased the number of small refinery exemptions by a factor of six. That was a six-fold increase. Over 80 small refinery exemptions resulted in four billion gallons of demand destruction, and without any information or transparency, in the theme of information, as to how it is that they determined that those particular refiners met the very narrow threshold that is, you have to demonstrate disproportionate economic harm as a result of RFS compliance.

We are pleased to see that this EPA is taking a different approach and really looking to follow the law and the narrow scope of that relief avenue, which is available.

Senator Carper. Thank you for that response.

In closing, let me just say, we have had great participation here, certainly from the witnesses, but also from the members in-person and remotely. I am grateful for all of that. I am grateful to our staffs for pulling together a great panel.

This is not an easy issue. It is the first time we have

had a hearing on it in almost six years. It is long overdue. It has been helpful for me, and I hope it has been helpful for some of my colleagues. We have raised as many issues and questions as we have answered, but it is a good start.

Again, this is one of the hallmarks of this committee, as we work together and we work across party lines, we try to get to yes as often as we can and find consensus.

I want to thank you all for joining us today. If done correctly, renewable fuels help safeguard our Nation's energy security, boost economic opportunity for farmers, and reduce greenhouse gas emissions. I look forward to continuing our conversation and working with members of our committee, our colleagues in the Senate, and other stakeholders to improve the Renewable Fuel Standard Program. As we look to the future of the program, I believe we can encourage even greater sustainability for the fuels that empower our lives.

Before we adjourn, some housekeeping. Senators will be allowed to submit written questions for the record through the close of business on Wednesday, March 2nd. We will compile those questions, panel, and we will send them to you. We will ask you to respond, if you will, by Wednesday, March 16th.

With that, this hearing is adjourned. Thank you.

[Whereupon, at 12:02 p.m., the hearing was adjourned.]