

Table of Contents

U.S. Senate Date: Wednesday, September 10, 2025

Committee on Environment
and Public Works

Washington, D.C.

STATEMENT OF:	PAGE:
THE HONORABLE SHELLEY MOORE CAPITO, A UNITED STATES SENATOR FROM THE STATE OF WEST VIRGINIA	3
THE HONORABLE SHELDON WHITEHOUSE, A UNITED STATES SENATOR FROM THE STATE OF RHODE ISLAND	7
JOHNNY SABO, DIRECTOR, GEORGIA FORESTRY COMMISSION, ON BEHALF OF THE NATIONAL ASSOCIATION OF STATE FORESTERS	13
JONATHAN WOOD, VICE PRESIDENT OF LAW AND POLICY, PROPERTY AND ENVIRONMENT RESEARCH CENTER	18
KATHY METCALF, PRESIDENT EMERITUS, CHAMBER OF SHIPPING IN AMERICA	23
ABIRAMI (ABI) VIJAYAN, SENIOR CLIMATE ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL	28
NIKITA PAVLENKO, PROGRAM DIRECTOR, FUELS AND AVIATION, INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION	33

A LEGISLATIVE HEARING TO EXAMINE A DISCUSSION DRAFT OF THE
WILDFIRE EMISSIONS PREVENTION ACT; AND S. 881, THE RENEWABLE
FUEL FOR OCEAN-GOING VESSELS ACT

Wednesday, September 10, 2025

United States Senate

Committee on Environment and Public Works

Washington, D.C.

The committee met, pursuant to notice, at 10:13 a.m. in
room 562, Dirksen Senate Office Building, the Honorable Shelley
Moore Capito [chairman of the committee] presiding.

Present: Senators Capito, Whitehouse, Curtis, Ricketts,
Kelly, Blunt Rochester.

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

Senator Capito. Well, good morning, everybody. Thank you all for being here. Just by way of explanation of why we have a lot of empty -- there is lots going on on Capitol Hill, so we are expecting people in and out of the committee as we move forward.

But I want to thank everybody for being here as we will discuss two pieces of legislation, a discussion draft titled the Wildfire Emissions Prevention Act, or WEPA, we all have a name for everything, and then S. 881, the Renewable Fuel for Ocean-Going Vessels Act, which is sponsored by Senators Ricketts and Klobuchar.

I thank the witnesses for traveling and for coming.

The WEPA discussion draft amends the exceptional events process to make it easier for States to manage their forests, to reduce wildfire risk, we see them all over the place, and to protect human health and the environment through prescribed burns.

The Clean Air Act has been a success story. Since the Clean Air Act was signed into law in 1970, the U.S. has reduced criteria air pollutant emissions by 78 percent. That reduction is largely attributed to significant decreases in emissions from the energy and transportation sectors.

Today, a large share of emissions that remain come from hard-to-abate sources, such as wildfires. Wildfires are growing in size and severity, and the National Academies found that wildfires pose an increasing threat to air quality and public health.

In a 2024 fact sheet, the EPA estimated that wildland fires accounted for 44 percent of the Nation's primary emissions of fine particulate matter. Passing WEPA would help us to reduce those emissions.

In 2023, many Americans experienced what western States have been dealing with for decades when smoke from Canadian wildfires blanketed the East Coast. There is little we can do to regulate wildfires and their emissions. We cannot install traditional air pollution control technology on a wildfire.

However, we do have tools that can reduce their impact, like the use of prescribed burns. Studies consistently find that prescribed burns are a proven method to reduce the risk of catastrophic wildfires and their associated emissions. For example, Stanford University scientists recently found that prescribed burns can reduce the net emissions of subsequent wildfires by 14 percent.

In 2021, the EPA determined that targeted prescribed burns could have reduced particulate matter emissions from the 2015 Rough Fire by 20 percent, and caused a 40 percent reduction in

respiratory-related emergency room visits and premature deaths.

However, prescribed burns are severely underutilized as a tool to mitigate wildfires. According to the GAO, EPA's air quality requirements limit the use of prescribed burns that reduce smoke from wildfires. This is because emissions from prescribed burns and wildfire smoke impact a State's ability to comply with the EPA's air quality requirements.

The EPA's Exceptional Events Rule provides a mechanism to account for air pollution from wildfire smoke. However, this process is complex and resource intensive, and smoke from prescribed burns is treated less favorably than wildfire smoke.

While the Exceptional Events Rule allows for prescribed burns in theory, the cumbersome process has limited states from using them in practice. The GAO stated that "State and local agencies may not use the provision because exceptional event demonstrations are technically complicated and resource intensive."

Instead of going through this challenging process, State and local agencies often limit the number of eligible burn days to ensure they don't have to use this process, which limits the use of prescribed burns.

WEPA would ensure that States won't be penalized for using prescribed burns and facilitate State leadership on actions that would mitigate wildfire risk. I look forward to hearing from

our witnesses about the environmental and public health benefits that would come from having WEPA signed into law.

This morning, we will also discuss S. 881, the Renewable Fuel for Ocean-Going Vessels Act. Ocean-going vessels include the large cargo and container vessels used to transport more than 80 percent of our international goods. Currently, using biofuels to power ocean-going vessels is not a qualified use under the Renewable Fuel Standard, or RFS, potentially limiting broader adoption of biofuels.

S. 881 amends the RFS to allow U.S. companies to use biofuels for ocean-going vessels to comply with the RFS. In addition to biofuels, U.S. shipping companies and fuel producers are exploring various other alternative fuel options for maritime use. As these companies explore alternative fuels, they must consider various measures of viability, including compatibility with conventional fuels and existing infrastructure, as well as cost, emissions, and availability.

I thank Senator Ricketts for his role in championing biofuels and look forward to learning more about the use of alternative fuels in shipping today.

I will now recognize Senator Whitehouse for his opening statement.

[The prepared statement of Senator Capito follows:]

STATEMENT OF THE HONORABLE SHELDON WHITEHOUSE, A UNITED STATES
SENATOR FROM THE STATE OF RHODE ISLAND

Senator Whitehouse. Thank you very much, Chairman, for this hearing on Clean Air Act legislation.

Whether it is reducing our greenhouse gas emissions or assuring Americans breathable, unpolluted air, we are falling dreadfully short and urgently need real solutions to very real problems.

Let me turn first to wildfires. Climate scientists have warned since the very first IPCC report back in the early 1990s that wildfires were becoming more destructive. It is getting worse fast, as western colleagues like Senator Curtis know all too well.

Insurance markets have noticed and pulled back homeowners' coverage in wildfire areas, just as they have in coastal areas, translating climate risk into rising costs and availability problems for families.

The great climate insurance collapse, when it happens, will likely prompt a failure cascade, first into mortgage markets, then home values, then our entire economy. The Fed Chair has already warned us to expect entire regions of the Country where mortgages just aren't available. I ask that my more complete warnings list be appended as an exhibit to these remarks.

Senator Capito. Without objection, so ordered.

[The referenced information follows:]

Senator Capito. Thank you.

Better forest and land management has a role, but as Stanford Professor Michael Wara said in our Budget Committee hearing, these fixes may help win wildfire battles, but without addressing climate change, "we're going to lose the war."

To vessels. A quick victory is near on maritime fuels. Marine shipping is a major source of greenhouse gas emissions fueling wildfires around the world. If marine shipping were its own country, it would be the world's sixth largest carbon polluter.

It also produces 9 percent of global sulfur oxide and 18 percent of global nitrogen oxide emissions. So, locally, as these ships come into port, their fumes pollute neighborhoods along our coast. Most vessels are not U.S.-flagged and most of the goods, and related pollution, come from China.

How is a victory near? The International Maritime Organization, which regulates global shipping, is implementing a binding emissions standard, with an economic penalty for vessels violating the standard. Industry supports it. Shipping giant Maersk has long called for a \$150 per ton pollution fee on maritime carbon emissions. And it works; the IMO's 2020 policy capping sulfur in marine fuels has already reduced sulfur oxide emissions.

To no one's surprise, the Trump Administration is trying to

undermine this process, another trophy for its fossil fuel donors. But few ships governed by this are U.S.-flagged, and the effect on American consumers will be negligible: pennies on a pair of Chinese-made shoes.

Senator Padilla and I have bills to strengthen this standard for ships operating in U.S. waters, and I urge the IMO and the big international shippers to stick to their guns and finalize the fee.

That is important context for our discussion today on the Renewable Fuel for Ocean-Going Vessels Act, which would extend the Renewable Fuel Standard to maritime fuels. The global shipping community is already moving to low-carbon fuels like methanol and ammonia, to next-generation batteries, and, where they measure up, to advanced biofuels.

Biofuels, to succeed, will need to measure up. Unfortunately, the carbon accounting for conventional biofuels, under lifecycle emissions analysis, often does not measure up. Indeed, studies suggest that lifecycle emissions make some biofuels worse than petroleum.

The United States is the largest market in the world. Everyone wants to bring their goods to our ports to sell to U.S. consumers. We have the opportunity to compete and win in the market for low-carbon marine fuels, actually a win-win-win for our economy, our health, and our planet, but not if we don't

even try. Not if we set up for a competition that doesn't exist. That is a prescription for failure.

Investments already made in hydrogen and other low-carbon technologies were setting us up to be a global leader in this space. Unfortunately, the recently-passed Republican mega bill undermined those investments. I hope together we can re-right that ship. American families and the rest of the world can no longer afford American inaction and backsliding on carbon pollution.

Thank you, Chairman.

[The prepared statement of Senator Whitehouse follows:]

Senator Capito. Thank you, Senator Whitehouse.

I will now turn to our witnesses for their opening remarks, and thank all of you all for being here. Our first witness is Johnny Sabo, Director of the Georgia Forestry Commission, testifying this morning on behalf of the National Association of State Foresters. Mr. Sabo brings a wealth of knowledge and experience in forest management and prescribed fire.

Welcome, Mr. Sabo, and you can proceed with your opening statement.

STATEMENT OF JOHNNY SABO, DIRECTOR, GEORGIA FORESTRY COMMISSION

Mr. Sabo. Thank you, and good morning, Chairman Capito, Ranking Member Whitehouse, and members of the committee, for inviting me to this hearing today and for the opportunity to testify on behalf of the National Association of State Foresters and the Georgia Forestry Commission.

My name is Johnny Sabo, and I am the Georgia State Forester.

My comments today focus on the Wildfire Emissions Prevention Act of 2025, a bill that NASF supports, and for which I want to offer my sincere appreciation to the committee for considering today.

All State forestry agencies have a commission to protect America's forests and most have statutory responsibility to provide wildland fire protection on all lands, public and private, and to reduce wildfire risk on those lands through tools such as prescribed fire. This is true in Georgia, where I am responsible for the protection and conservation of Georgia's 22.4 million acres of forest resources, 88 percent of which is privately owned.

Our forests are under increasing pressure from a variety of threats, including catastrophic wildfires, forest pests and diseases, natural disasters, and conversion to other uses. Notably, wildfire risk is increasing across the Nation, from

Georgia and West Virginia in the East and Utah, Arizona, and Wyoming to the West. USDA Forest Service estimates that approximately 1 billion acres of land across America are at risk for catastrophic wildfire.

It is nearly universally agreed that a significant increase of prescribed fire and fuels treatment is needed to reduce the wildfire threat. Most ecosystems in the United States evolved with fire, are fire-prone and even need fire to sustain healthy conditions. We cannot suppress fire indefinitely, and doing so only increases the intensity of damage of wildfire when it does start.

Prescribed fire is a tool relied upon by natural resource professionals to reduce hazardous levels of vegetation that fuel wildfires by simulating natural wildfire disturbance through carefully planned and managed ignitions. Prescribed fire also improves wildlife habitat and recycles nutrients back to the soil.

Georgia is a leader nationally in prescribed fire, treating roughly 1.5 million acres annually through a network 3,800 prescribed fire burners, utilizing comprehensive burn plans and emerging technologies such as drone-based ignition.

Turning to the EPA Exceptional Events Rule for prescribed fire, NASF and its members have been longstanding supporters and partners with the EPA in implementation of the rule. A key

aspect of the Wildlife Emissions Prevention Act is a continued State-Federal partnership that is at the heart of the Clean Air Act by placing priority on engagement with the States, but then developing the rules and crafting exceptional event determinations for EPA to review.

These partnerships have significantly ramped up in the wake of the lower PM2.5 Air Quality Standard in 2024. States like Georgia have been actively working with the EPA and making sure the tools and processes are in place for demonstrations to proceed.

To this end, a wildfire emissions prevention act would be essential in codifying exceptional events demonstration processes for prescribed fire, given the Supreme Court ruling that courts cannot defer to agency interpretations of law.

We particularly appreciate that this bill would clarify exceptional events to include activities such as prescribed fire that are "intended to mirror the occurrence or reoccurrence of a natural event." This definition recognizes both the critical need for wildfire risk reduction in forests and that risk reduction through prescribed fire is mirroring the natural fire return intervals and the resultant natural smoke and emissions that would occur in the absence of human intervention.

Also, the economic costs of suppressing large wildfires and the damage they cause far exceeds the cost of planned,

controlled burns. By reducing fire severity through prescribed fire, we protect not only ecosystems but rural communities, infrastructures, and human life.

As someone who has served as a wildland firefighter, I believe the core question underpinning the Wildfire Emissions Prevention Act is simple: would you rather fight fire in a forest that has been responsibly managed with prescribed burns, or one left to accumulate decades of fuel waiting for a disaster?

Prescribed fire is science-based, State-led, and essential. Without it, we are left on the defensive.

Thank you for the opportunity to discuss how responsible forest management rooted in science and partnership can protect both our environment and our communities. I appreciate the committee holding this important hearing, and I look forward to answering any questions you may have.

[The prepared statement of Mr. Sabo follows:]

Senator Capito. Thank you.

Our next witness is Jonathan Wood. He is the Vice President of Law and Policy for the Property and Environment Research Center. Mr. Wood has testified before several Congressional committee on environmental and conservation issues, and has litigated cases in the Supreme Court and is involved with the Environmental Law Institute Emerging Leaders Institute.

Mr. Wood, you are recognized for your opening statement. Thank you for coming.

STATEMENT OF JONATHAN WOOD, VICE PRESIDENT OF LAW AND POLICY,
PROPERTY AND ENVIRONMENT RESEARCH CENTER

Mr. Wood. Thank you, Chairman Capito, Ranking Member Whitehouse, members of the committee, for inviting me to participate in this morning's hearing.

As the Chairman just said, I am Jonathan Wood with the Property Environment Research Center, a conservation organization based in Bozeman, Montana.

Forest health has long been a focus of PERC's work. Every summer, the skies over Bozeman remind us of the stakes of the wildfire crisis facing the west. In fact, this weekend as I prepared my testimony, the smoke was so bad, the mountains were invisible, invisible through a brown haze.

While prescribed fire and cultural burning were suppressed for much of the 20th century, a large and growing consensus now recognizes the need for good fire to restore forests throughout the Country. To that end, I and my colleagues at PERC have prioritized policy reforms that will make it easier to apply good fire on the ground, including helping to establish Montana's Prescribed Fire Council through which Federal and State agencies, landowners and conservation groups collaborate to promote prescribed fire's use, as well as passing State legislation earlier this year to establish a permitting, training and certification program in Montana for landowners

that want to use this tool.

PERC is happy to support the Wildfire Emissions Prevention Act which would address a persistent and unintended regulatory obstacle to be used for prescribed fire.

In my written testimony, I describe the growing body of evidence including work done by my colleagues showing that prescribed fire is an effective tool for reducing wildfire severity, improving air and water quality and conserving native plants and wildlife. But in my short time this morning, I want to focus on why WEPA's policy reforms are so essential.

Despite wildfire smoke being the largest source of several air pollutants, and prescribed fire resulting in net improvements in air quality, the Clean Air Act unintentionally discriminates against prescribed fire smoke. Wildfire smoke, as the Chairman said, is routinely excluded from air quality data. But prescribed fire counts against State compliance, creating incentive for States to limit its use.

To its credit, EPA has long recognized this is a problem and tried to address it through regulations. But it is forced to shoehorn prescribed fire into a provision of the Clean Air Act that was clearly not written with it in mind, and includes requirements that are, at best, an awkward fit for prescribed fire. As a result, those regulations and the attempts to make them work in practice is overly complicated.

The Chairman began by stating that the regulations work in theory but not in practice, and that is the assessment of most of the experts who have studied this issue. Indeed, there has only been one successful application of these regulations in the nearly 20 years since they were first established, and that was a special case that is unlikely to be repeated at the scale required.

While southeastern States, like my colleague represents, have mature prescribed fire programs that may some day be able to run this difficult gauntlet, I am most concerned with what this means for western States like Montana that are only beginning to develop their programs. Within the Montana Prescribed Fire Council, our Department of Environmental Quality regularly expresses concern about the ability to stand up a program like this and be able to navigate EPA's difficult process.

Senator Padilla explained in a 2023 letter to EPA, joined by most of the California delegation that, "The reality is that this process is unworkable for the scale of prescribed fire that will be necessary to protect our communities from increasing catastrophic wildfires." I couldn't agree more.

We should also note that the regulations are also legally untested. So there are lots of unanswered questions there.

The Wildfire Emissions Prevention Act is a straightforward

solution to the problem that would give EPA and States much-needed flexibility to promote prescribed fire and improve air quality. It would make prescribed fire an exceptional event, subjected to standards that make sense for prescribed fire, and it would streamline the approval process.

While there is an understandable reluctance to amend the Clean Air Act, which I completely understand, that should not be a concern here. WEPA is a narrowly tailored solution to a very specific problem. It would not affect EPA's regulatory authority, the pollutants covered by the Clean Air Act or any substantive environmental standard.

Ultimately, restoring this Nation's forests on both public and private land is essential to protect air and water quality, to conserve native wildlife and their habitats, and to protect communities from catastrophic wildfire. Prescribed fire is one of our best tools for doing this, but currently is not being used at the scale needed.

WEPA would address a persistent obstacle to its use, and should enjoy the broad support of this committee.

Thank you again for allowing me to join you today. I look forward to your questions.

[The prepared statement of Mr. Wood follows:]

Senator Capito. Thank you very much.

Our next witness is Kathy Metcalf. Ms. Metcalf is the President Emeritus, I like the title, of the Chamber of Shipping of America. Ms. Metcalf has worked in shipping issues for more than 30 years, and is well-versed in alternative fuel development for the marine industry.

Ms. Metcalf, you are recognized for your opening statement. Thank you for coming.

STATEMENT OF KATHY J. METCALF, PRESIDENT EMERITUS, CHAMBER OF SHIPPING IN AMERICA

Ms. Metcalf. My pleasure, Chairman. Thank you, Ranking Member Whitehouse.

As mentioned, I am testifying on behalf of the Chamber of Shipping of America, well over 30 entities that are engaged in the ship chartering operation of ocean-going vessels.

We also have other members who are interested in those operations as well, such as classification societies.

I have a tendency to do what most aides don't like, and that is to throw the written stuff out, because I find it works better, and listening to the comments from the dais, I think it is in order.

We are in a parallel universe right now; I sort of feel like I am. And my colleague from ICCT may feel the same way. For decarbonization, and new regulations, typically you see industry on a "no" side, and you see governments, both at the national and international level at the "yes" side. What we are experiencing now, as alluded to by Senator Whitehouse, is the flip of that.

So first, let me address, and Senator Ricketts, thank you for the bill on renewables. We completely support that bill. But we support that bill as only one piece of an overall strategy to address decarbonization of marine transportation.

This is a very large, complicated spider web. And if we pull on one side of it, the other one gets distorted, so we have to work together. First, thank you, totally support the bill.

Let me talk a little bit about marine fuels. Because with the jurisdiction of this committee, I suspect you may be hearing some other discussions on marine transportation, regardless of the administration's position on climate change.

The global marine industry is agnostic as far as fuels go. We will build ships that burn fuels that are available in the ports in which we call. That is what we need. And with that in mind, they need to be in sufficient quantity to supply the world's fleet.

We also have domestic fleets as well, which is a little easier to manage, because the range of those voyages is much more determined and shorter. We are not talking about the entire globe.

With that in mind, I just want to add that there are a number of fuels that are being discussed over the last 20 agonizing years at the International Maritime Association. We are on the cusp of an agreement with an extraordinary session scheduled for October. And we are hopeful that that will move forward, likely without the U.S. as a party, from what we understand.

But that is okay, because global shipping is not just the

United States, although a lot of ships come to the United States. The good news is if we get a global agreement, those ships coming to the United States are going to have to comply with a global standard, even though the U.S. would not require it. So that is a side benefit of that happening.

What fuels are we looking at? Well, obviously renewables, biofuels. Biofuels are unique and in fact there are a bunch of different base biofuels. Each one has a different profile. Marine engines have to be designed for a specific profile. So I can't just have a marine engine that runs on any biofuel. It is usually a particular biofuel.

With that in mind, the only concern we have with marine fuels, or biofuels, is the fact that we are going to be in direct competition with land-based users. And there are some concerns globally and also within the United States as to whether the quantity is going to be available in sufficient measure.

Let's just talk last now about marine vessels. What do we have to look at to make sure that we can keep moving and moving cargo. You have to look at trading patterns. Tramp vessels go anywhere in the world, based upon the charter, or the buses of the seas, which are the container ships, which have very fixed patterns.

We have to look at vessel types, power demand, the vessel

age, is it economical to retrofit a vessel to use an alternative fuel, or is it better just to scrap it and build a new one?

And then obviously, we need the infrastructure to be able to take the fuel from the producer to the ship. So I thank you for the opportunity to testify. Thank you, Senator Riccketts, for your bill. I am happy to answer any questions. Thank you.

[The prepared statement of Ms. Metcalf follows:]

Senator Capito. Thank you very much.

Our next witness is Abi Vijayan, did I say that correctly?

Ms. Vijayan. It is Vijayan, and thank you, Chair Capito.

Senator Capito. Thank you. Ms. Vijayan is a Senior Climate Attorney at the Natural Resources Defense Council. Previously, she was an attorney for EPA's regional office in Texas, and served 11 years in EPA's Office of General Counsel, including as lead for the National Ambient Air Quality Standards group, known as NAAQS.

Thank you very much for being here.

STATEMENT OF ABIRAMI VIJAYAN, SENIOR CLIMATE ATTORNEY, NATURAL
RESOURCES DEFENSE COUNCIL

Ms. Vijayan. Thank you, Chairman Capito, and Ranking Member Whitehouse, for the opportunity to testify today.

As noted, my name is Abi Vijayan, and I am a senior attorney for the Natural Resources Defense Council.

From my experience as a former EPA attorney and working with scientists and experts in air quality, public health and climate science, I know that wildfires are dangerous to human health and welfare, are exacerbated by climate change, and are increasing every year in intensity. Wildfire destruction causes the U.S. billions of dollars annually, and causes a significant amount of air pollution that is unsafe for Americans to breathe, particularly emissions of fine particulate matter, or PM2.5, and ozone.

Over 150 million Americans live in areas that suffer unsafe levels of smog and PM2.5 pollution. And breathing these pollutants can cause a litany of health issues, including lung disease, cardiovascular problems, stroke, and premature death. Under the Clean Air Act, the EPA sets air quality standards for PM2.5 and ozone, and States, of course, have primary responsibility for assuring that the areas within their jurisdiction attain and maintain those standards, with the EPA then determining whether those States are in attainment.

Under Section 319 of the Clean Air Act, there is clear legal authority for finding that both wildfires and prescribed fires are exceptional events, as implemented by EPA's regulations, which again, clearly state that prescribed fires can be qualified as exceptional events. I would note that those regulations have been challenged and upheld in the D.C. Circuit, so remain good and effective law. And the time to challenge those regulations has long since passed.

While prescribed fires have been used to address wildfires, they historically have not been demonstrated to be make or break events that push States into non-attainment. And they do produce pollution, particularly emissions impacting air concentrations of PM2.5. The EPA has developed a strong regulatory framework and toolkit for States and air agencies that are considering whether to request that prescribed fires be treated as exceptional events and air quality data influenced by such treatment be eligible for certain regulatory exclusions.

The EPA's 2016 Exceptional Events Rule clearly states that, again, prescribed fires can be eligible for treatment as an exceptional event if the required demonstration is made and the regulatory criteria are met. EPA has also explicitly addressed these criteria in those regulations and released a number of helpful guidance documents as well as templates and tools to assist States in meeting those statutory and regulatory

requirements, specifically for prescribed fires.

For example, in November 2024, EPA issued a demonstration template for prescribed fire events on wildlands that may impact PM_{2.5}. This template provides clear and helpful information on what data a demonstration or a prescribed fire could look like, as well as a conceptual model for States to assess and develop as appropriate for their particular facts.

Concurrently with this informative template, the EPA also issued a publicly available FAQ document containing numerous questions and answers regarding the treatment of prescribed fires under EPA's regulations and how those States can meet the criteria for exceptional events under Clean Air Act Section 319.

Given the growing wildfire threat, there is increased interest, certainly, in the use of prescribed fire and other tools that may mitigate wildfire risks, and States are, of course, invested in ensuring they attain and maintain the NAAQS.

Having worked on air pollution issues and climate issues for the entirety of my career, with specific expertise in the NAAQS and exceptional events, I believe that the Wildfire Emissions Prevention Act is unnecessary to address this issue. As I have explained, the Clean Air Act and EPA's regulations already clearly provide for the consideration of prescribed fires under the Exceptional Events program.

Amending an already extant authority that is actively being

implemented by the States through guidance and other tools would be redundant, at best, and at worst, result in regulatory or legal confusion that could unnecessarily complicate or hinder protection of public health from harmful air pollution resulting from wildfires.

Thank you again for the opportunity to testify today. I would be pleased to answer any questions you may have.

[The prepared statement of Ms. Vijayan follows:]

Senator Capito. Thank you very much.

And last but not least, our final witness is Nikita Pavlenko, Program Director for Fuels and Aviation at the International Council on Clean Transportation.

Mr. Pavlenko, am I saying that correctly?

Mr. Pavlenko. Yes.

Senator Capito. Thank you. He has a background in lifecycle assessment and carbon accounting with a focus on the climate implication and deployment of alternative fuels like sustainable aviation fuels.

Mr. Pavlenko, please proceed with your opening statement.
Thank you for coming.

STATEMENT OF NIKITA PAVLENKO, PROGRAM DIRECTOR, FUELS AND AVIATION, THE INTERNATIONAL COUNCIL ON CLEAN TRANSPORTATION

Mr. Pavlenko. Thank you, Chairman Capito. It is a privilege to be given the opportunity to speak with you today.

My name is Nikita Pavlenko. I am the Director of the Fuels and Aviation Programs at International Council on Clean Transportation. ICCT is an independent, non-profit research organization that provides technical analysis to policymakers and to regulators. Our research is focused on reducing the climate and the public health impacts of transportation.

Our review of the Renewable Fuel for Ocean-Going Vessels Act suggests that it will have a negligible impact on reducing the air pollution and climate impacts of maritime fuels. We can draw upon the example of jet fuel in the Renewable Fuel Standard for some historical context. While jet fuel was introduced in the RFS in a similar provision in 2014, it did not materially affect sustainable aviation fuel production. Even today, a decade later, SAF blending in the aviation sector remains below 1 percent.

This type of opt-in provision does not mandate the production of either renewable maritime or jet fuel, it only means that if a producer produces it, they can opt into the RFS program and generate RIN credits. But there are also some further reasons why renewable maritime fuels may fail to reach

the market and may face an even steeper slope than sustainable aviation fuels. Given compatibility issues, the likeliest renewable maritime fuels produced in the near future would be something akin to biomass-based diesel. In most cases, it is much more lucrative to sell that fuel into the road sector.

There are a few reasons why: renewable diesel commands a higher market price, it qualifies for credits in west coast low-carbon fuel standard policies, and it can be used for compliance under west coast cap and trade programs. By instead selling into the maritime market, a producer is losing out on all these valuable incentives.

Including renewable maritime fuels in the RFS can also create some unintended second order effects as well. For example, the inclusion of a new sector may prompt EPA to propose higher volume targets in future RFS rulemakings. Our analysis of the summer 2025 rulemaking suggests that this may exacerbate underlying issues in the program that we have identified.

The current proposal already raises the advanced biofuel volumes in excess of domestic availability, while also reducing the compliance value of imported feedstocks. This has the contradictory effect of one, further increasing the quantity of advanced biofuel needed to meet obligations leading to even greater reliance on foreign imports, and two, raising prices. All of this for very little, if any, climate benefit.

If the inclusion of maritime fuels is used as a justification for further increases in RFS blending targets, we risk deeper trade imbalances, diversion from food markets, and price increases.

Now, there are several promising pathways for producing sustainable alternative maritime fuels that could achieve deep greenhouse gas savings, whether using biomass waste and residues, cellulosic energy crops, or by e-methanol or e-ammonia. However, the current structure of the RFS, even with this proposed change in eligibility, does not create sufficient value certainty to incentivize producers to enter the market.

Interviews and surveys of project planners and industry stakeholders in the SAF industry suggest that policies that mitigate investment risks and complement top-down mandates such as the RFS are critical to ensure the deployment of the more challenging, lowest-carbon fuel pathways. Further, promising non-biomass-based pathways, such as blue ammonia or e-methanol, are not even eligible in RFS and would thus not generate RINs despite their potential emission savings.

One potential outside development which may influence the impact of this proposed revision to the RFS is the implementation of IMO's net-zero framework, which includes a global fuel standard that could offer a powerful complementary signal to decarbonize maritime fuels. If that policy does move

forward, it could then backstop this proposed change in the RFS. But to have a meaningful impact on climate, it must, too, correctly account for indirect land-use change emissions, or include some other forms of meaningful safeguards.

To conclude, while the promotion of alternative fuels in the maritime sector is a laudable goal, doing so through the RFS opt-in provision will likely provide a minimal signal. If used as a justification for higher volume targets in future RFS rulemakings, there is a risk that this could further increase the demand for virgin vegetable oils beyond domestic availability, with unintended trade, climate, and price effects.

Thank you for your time, and I am happy to answer any questions.

[The prepared statement of Mr. Pavlenko follows:]

Senator Capito. Thank you all. We will proceed to questions. Senator Curtis is going to start us off.

Senator Curtis. Thank you, Madam Chair, and thank you for letting me slip in line here a little bit.

Senator Capito. Of course.

Senator Curtis. We have a couple of police officers we want to honor in Utah, and I need to be on my way to do that. Ranking Member, thank you as well.

I would love to start with a shout-out to my colleague, Senator Padilla, for his work, and Senators Hickenlooper and Sheehy on Fix Our Forests, which has a section for prescribed fires in it. I think that is important legislation that the Senate will be considering soon.

I am also really pleased to be working on the Wildfire Emission Prevention Act, WEPA. A big thanks to committee staff, to the Chair and Ranking Member, and of course, to my staff, for bringing this to this point.

I think it is fair to say that in Utah, we know first-hand the burdensome problem with wildfires. This year has been a record year, not just for Utah, but for the west. We also know the burdensome problem of waivers and processing through all of this as well.

I also want to start by acknowledging that Utahns very clearly are attuned with leaving this earth better than we found

it, and that emissions are a big deal, that this bill is not an attempt to get a loophole into emissions but a firm belief that done well, we can actually reduce emissions through proper prescribed burns.

So, I would like to begin with Mr. Sabo. Could you just explain, from your perspective, why these prescribed burns are so important, particularly in the west, where we now say that our wildfire season is not seasonal, it is literally year-round?

Mr. Sabo. Yes, sir, thank you, Senator.

As you stated, they are extremely important. We spoke about, or I testified about, if we do not have prescribed fire, we are constantly playing defense, which a lot of my colleagues do continually out west. First off, most ecosystems, especially in Georgia, they evolved with fire and need fire to thrive. It naturally thins out stands, is good for the wildlife, early successional species in the southeast, such as species as gopher tortoises, that are keystone species.

Then we also utilize fire in techniques that allow us to both protect the forests and wildlife at the same time, where wildfire does not care. It does not protect anything. It does not hesitate to cause destruction.

So prescribed fire is an essential tool in which we can mitigate those risks and we can protect the timber, protect our communities, and protect the firefighters alike.

Senator Curtis. We have a unique characteristic in Utah, the dryness. I was in Acadia National Park and was surprised at all of the what we would call fuel on the floor, and that it is not the same problem for them because of the humidity that we have in the west, which also plays into these prescribed burns. They are very complicated. You have to check humidity, you have to check all sorts of weather conditions and so many layers of check-off. I think that is one of the reasons that more layers of Federal intervention and waivers make this nearer possible.

We had the largest fire in the State this year was the Monroe Fire. I sat down with the Forest Service, and they showed me on a map where they had done prescribed burns. And almost to the inch where they had done prescribed burns, they were able to contain this fire. And had we had more time to do more prescribed fires, we would have been able to contain that fire even more.

Just because of time I want to pivot to Mr. Wood. Can you talk about, so, we have this going on and if in the back of the States' minds they have to worry about litigation, that is an even bigger problem. Can you talk a little bit about why these lawsuits on States that are attempting to use prescribed burns are such a problem, and why that is an issue we need to deal with?

Mr. Wood. Yes, I absolutely think it is a serious concern.

I will note that we haven't used this regulation in practice very much. It has only been used successfully once.

But States like Alabama have submitted many proposed Exceptional Event determinations to EPA, and there is a notable litigious group, environmental group that has been filing objections to many of them. I think we are still waiting to see what that legal landscape looks like.

But from the perspective of States and indeed prescribed burns generally, this is just another risk added to the pile. You are exactly right, that especially out in the west, when we are doing prescribed fire, we are already worrying about humidity, amount of fuels, level of fuels and all sorts of other risks, that this is just another major thing added on top of it that we won't know the answer to for years, and that your bill, I think, could be really helpful in simplifying the process and making it much easier to fight fire on the ground.

Senator Curtis. I am out of time; I yield my time. Thank you very much. Thanks for your consideration.

Senator Capito. Senator Whitehouse?

Senator Whitehouse. Thank you very much. I would just like to echo Senator Curtis' words, "if done well," and relate that I look forward to working with all of my colleagues on trying to make sure we have a good "if done well" solution here.

Ms. Vijayan, has NASA determined that human-caused climate

change is the main cause for increase fire weather in the American west?

Ms. Vijayan. Thank you for the question, Senator. There is significant research, including by NASA, showing that climate change is a primary driver and intensifier of wildfires. There is also significant research showing that climate change is also exacerbating wildfire threats to the west in particular.

Senator Whitehouse. And our work has shown that from 2013 to 2022, home insurance costs have more than doubled. Is there evidence that these insurance increases relate to wildfire risk in areas that are subject to wildfire risk, and would it be reasonable to say that that is likely to get worse if we don't tackle the underlying NASA-designated climate problem?

Ms. Vijayan. I appreciate the question, Senator. I will note that I am not an insurance expert. But based on my expertise as an air attorney and climate attorney, and given the incontrovertible evidence that climate change is causing and exacerbating the problem, wildfires certainly, again, are leading to billions of dollars in property damage.

So given that the wildfire threat is ongoing and worsening, I think it is reasonable to say that threats to property damage will also be at great risk and likely of recurrence. As a homeowner, even though I am not an insurance expert, I do know and have experienced one insurance company's rising costs. They

do pass those costs on to property owners and homeowners and homeowners that are at risk of rising costs as well.

Senator Whitehouse. And while a prescribed burn is likely and hopefully less of a conflagration than a full-on wildfire, it nevertheless creates the same risks of health impact that a full-on wildfire does, although as a lesser conflagration to a lesser degree. Is that a fair way to look at this?

Ms. Vijayan. Yes, definitely, Senator. It is unquestionable that smoke from fire does cause emissions that lead to PM2.5 and ozone impacts among other pollutants.

Senator Whitehouse. And the fire doesn't care whether it was prescribed or not prescribed?

Ms. Vijayan. It does not distinguish between the type of fire.

Senator Whitehouse. Mr. Pavlenko, the IMO has put forward a proposed carbon price for marine shipping emissions with strong support from within the industry, the international industry. Why do you believe the industry supports those market-based mechanisms?

Mr. Pavlenko. Thank you for the question, Senator.

So, when it comes to industry, in my view, what they value is stability and predictability. So when it comes to investing in maritime decarbonization, you are dealing with an industry that is very risk-averse. Ships have a very long lifetime, much

longer than a passenger car, for example. So when you are thinking about what investments you are making for your choice of ship, your choice of fuel, you want stability and predictability. A global scheme that is consistent across different jurisdictions will help to ensure level playing fields for the international maritime shipping industry.

Senator Whitehouse. And to the question of a level playing field, presumably those that want to behave well don't want to see people who cheat get a price advantage. So the emissions fee would protect against that as well, would it not?

Mr. Pavlenko. Yes, definitely. However, with respect to the emissions fee, there are still important decisions to be made at IMO on how it is levied and how greenhouse gas reductions are counted. It is still critical for IMO to ensure a truly level playing field by ensuring accurate carbon accounting and --

Senator Whitehouse. So to that point, let me ask you about the phrase you used, "indirect land-use change." Why does that matter and why should it be counted?

Mr. Pavlenko. It is critical because it is an important component of the well-to-wake life cycle emissions attributable to different fuels. So all else equal, when you create demand, let's say new demand for the maritime sector, for something that uses dedicated crop land, let's say a crop-based biofuel, you

are increasing pressure on land use and that could lead to indirect market negative effects like deforestation.

Now, it is not just limited to deforestation. You can increase yields; you can use marginal lands. You can shift food away from other sectors. And so that is why you have to use these complex economic models to balance all these different ways of responding to that demand and figuring out what the emissions from indirect land use change might be.

Senator Whitehouse. Short answer: proper scoring matters, correct?

Mr. Pavlenko. Yes.

Senator Whitehouse. Thank you. My time is up.

Senator Capito. Thank you.

I will begin my questions. I want to start with you, Mr. Sabo.

You mentioned in your opening statement that you had 3,821 certified burn -- describe to me: are those individuals that can actually have a prescribed burn on their personal property? Is that how that works?

Mr. Sabo. That is correct, Chairman, to the degree, those are the professional practitioners. Georgia offers what we call a certified prescribe burn program, where we educate land managers, private forestry consultants, and we will teach them how to best manage their smoke, if they are burning next to

critical infrastructure, State laws, resources that are available to them, and give them knowledge to where we know that when we issue them an authorization to burn, they are a little bit better than just somebody that has never done it before.

Senator Capito. Right.

Mr. Sabo. Then they also have to have a few burns under their belt before we actually issue them a certified number.

Senator Capito. Okay. Mr. Wood, as I look at it from a practical standpoint, obviously I am on the east coast. I think Mr. Sabo mentioned West Virginia; we have a lot of forest land. And we have had our experience with wildfires, although nothing compared to what you are seeing in Montana.

If I look at it from a practical matter, what I am hearing are prescribed burns are smaller, more contained, to prevent a larger, uncontained, which would have more pollution associated with it. So, from a practical standpoint, what you are trying to prevent are the larger fires that are more damaging to our atmosphere and particulate matter and all that.

That is the crux of the argument that we are having here, am I corrected in that?

Mr. Wood. Yes, that is exactly right. Prescribed fires are lower intensity, and you can control when they happen, so the smoke is less destructive. I described in my oral testimony that this weekend you couldn't see the mountains from Bozeman

because of wildfire smoke.

Senator Capito. Right.

Mr. Wood. That doesn't happen from prescribed fire.

Senator Capito. So when you say the Exceptional Event prescription that you can use through EPA, nobody is using it? Sounds like very few use that.

Mr. Wood. They are trying, and my colleague can speak to that. It is just not working.

Senator Capito. Right. So why is it not working? Is it just pent up in regulation? And this bill would clarify those?

Mr. Sabo. It would help bring clarity. Georgia, in February of 2025, submitted 129 exceptional events. Eighty-nine of those were prescribed fire. That was from 2021 to 2023. So that took that long to quantify everything. We have still not heard back from EPA.

We are ready to submit another 20 for 2024, but as these stacked up, if they are denied, if somehow this gets viewed to where prescribed fire is not an exceptional event, then we start seeing non-attainment areas potentially and we lose the ability for prescribed fire. And then States like Georgia then become States that are not utilizing prescribed fire and have catastrophic wildfires.

Senator Capito. And being in non-containment damages your State how? Obviously, the health aspects.

Mr. Sabo. Right. So we could lose the ability for prescribed fire, and then even things from, when we are talking about attracting industry, different levels in there.

Senator Capito. Right.

Mr. Sabo. So it takes away that head space.

Senator Capito. Ms. Metcalf, let me talk a little bit about alternative shipping fuel. I thought you did a really nice job of sort of educating the uneducated on this issue. We obviously don't have big shippers going out of the State of West Virginia; they can't quite get through Virginia. That is a problem.

[Laughter.]

Senator Whitehouse. Give it time.

Senator Capito. Give it time -- oh, I fed right into that, didn't I?

In terms of the options, it sounds like the industry is very active in trying to find alternatives or at least additives in certain areas to be able to bring down the carbon footprint. Where do you see this going? Will it eventually get to a full-out non-carbon-intensive industry? Or will it be a blend, in your mind?

Ms. Metcalf. Thank you for the question. First of all, ammonia, hydrogen, my colleague at ICCT went through a number of them, methanol, slightly politically a hot one, nuclear. There

are some small nuclear reactors that people are looking at as potential energy sources for port operations.

No, I don't think it is going to be a mix. The ultimate goal is to go to zero emissions by 2050. That is the IMO goal.

Now, whether we get there or not, we can have that discussion over a beer later. But that is the goal, and there will be no room for high-polluting or high-GHG-emitting vessels as we move forward.

The point I wanted to make also is that we need to look at decarbonization of any source, but especially maritime transportation. It is not a light switch; it is a transition.

Senator Capito. Right.

Ms. Metcalf. And it takes time to get there in a wise and economical way. Thank you.

Senator Capito. Right. Thank you.

Senator Kelly?

Senator Kelly. Thank you, Madam Chair. I want to also discuss the Wildfire Emissions Prevention Act. I wish I had more time to talk about ships, something I am very interested in.

But the goal of this bill is to reform the Exceptional Event process under the Clean Air Act, so basically the process is intended to make sure that local regions aren't penalized for air pollution that they cannot control. This process needs

improvements, and we need to do this in a way that also protects air quality.

I have some technical questions for our witnesses about the specifics of this bill. So let's start with the definition of exceptional events. The Clean Air Act doesn't explicitly list these types of exceptional events. It just says an exceptional event is something that is not reasonably controllable or preventable.

Mr. Wood, can you very briefly explain why that is an issue when it comes to prescribed fires?

Mr. Wood. The simple reason is that if you are doing prescribed fire well, it is controllable, and it is done on a recurring cycle. As we have talked a lot today, EPA has tried to make prescribed fire fit in that language. But if you were writing from scratch, you would never include that language to cover a prescribed fire.

Senator Kelly. And prescribed fires can help prevent worse wildfires in States like Arizona, States in the west, that is pretty clear. But right now, the Clean Air Act could penalize a State for using prescribed fires if it makes emissions worse, which just means that we get worse wildfires in the future and then we also get worse air quality.

That seems like something we should fix. But this bill seems to go far, too far in certain places. It redefines

exceptional event as an event that prevents more severe emissions. Do you agree with that?

Mr. Wood. Yes, that is one of the factors that would be required for a prescribed burn to qualify under the current text.

Senator Kelly. And Ms. Vijayan, there is also a new definition added for actions that mitigate wildfire risks. My read of this is it also could be read to include industrial emissions. Is that correct?

Ms. Vijayan. Senator, I think that is a reasonable read of that new language. I do just want to note that as per my opening statements as well that the existing EPA regulations do squarely provide for prescribed fire under the statutory language that you are raising concern about as events that are reasonably controllable, or not reasonable controllable.

Senator Kelly. But to avoid the confusion here, we could solve this, right? Because most exceptional events are wildfire-related.

Ms. Vijayan. Most exceptional events are wildfire-related. I would just note that those definitions that I am alluding to that make clear prescribed fires are covered under EPA's regulations, those regulations have been challenged and upheld by the court. So they do remain good law.

Senator Kelly. So there is also an important procedural

change in this bill. Right now, a State has to request an exceptional event designation from the EPA. But the bill kind of flips that on its head. Now, a State could deem a day to be an exceptional event unless EPA subsequently disapproves the determination. Is that correct?

Ms. Vijayan. That is right, Senator.

Senator Kelly. And Mr. Wood, is it true that EPA takes a long time to approve exceptional events?

Mr. Wood. Yes, as my colleague was saying, they submitted dozens of requests and they are also pending.

Senator Kelly. And if a State is trying to put together their latest attainment plan, not knowing if an exceptional event is approved or not, it can become a real issue?

Mr. Wood. Yes. I would say it is broader than that. If a State is deciding whether to approve a prescribed burn today, they need to know how this process is going to work three, four years down the road.

Senator Kelly. And I am hearing the same thing from our air quality planners in Arizona. I am sympathetic to this.

So, the language in this draft bill seems pretty easy to exploit right now. Is there anything that will prevent a State from deeming hundreds of days a year as exceptional events, and then overwhelming an already overworked EPA staff?

Ms. Vijayan. In this bill, I do not think there is really

a way to prevent that sort of exploitation you are referring to, Senator. As you note, it shifts the ability for the base to determine whether something is an exceptional event and just gives EPA the ability but not the mandate to step in after the fact to evaluate the State's determination.

So definitely, this bill does give States a lot of latitude without really seemingly many protective parameters in determining what an exceptional event would be in the first instance.

Senator Kelly. What if we were more specific?

Ms. Vijayan. I do think that the regulations in their current form give a lot of those parameters that we think are protective, even if this bill were to similarly put in some of those parameters, a cause for great concern would still be shifting the authority to the States in the first instance.

The Clean Air Act, as we all know, is a great success in terms of cooperative federalism. This would kind of turn that on its head. EPA has a great amount of expertise and resources to do the necessary technical and scientific evaluation to determine whether something is actually an exceptional event.

As we have seen, States sometimes don't have those resources, whether it is because of funding or just limitations on those resources. So they often approach EPA for assistance.

So to leave States kind of out there on their own without

that benefit of technical rigor could result in risks to having exceptional events that might be exploitative of such a large loophole.

Senator Kelly. Madam Chair, carrying out prescribed burns and fixing the exceptional event process is an important issue for Arizona. I hope we can agree that the goal of this legislation isn't to add vague new terms and a cumbersome new process with the Clean Air Act.

My staff and I are happy to work with you to improve the language to be more specific and to try to get a better bill.

Senator Capito. Thank you. Thank you, Senator Kelly.

Senator Ricketts?

Senator Ricketts. Thank you, Chairman Capito, and of course, the Ranking Member for holding this hearing today. Thank you for our witnesses coming to talk about these pieces of legislation, especially the one that I am going to talk about, which is the Renewable Fuels for Ocean-Going Vessels Act, our bipartisan bill, which I introduced with Senator Klobuchar.

As you know, Chairman, I love this committee, because we get to talk about biofuels. It is one of the things I love. The previous Chairman knew that as well.

In Nebraska, agriculture is the backbone of our economy, and biofuels provide an important market and benefit energy consumers, agricultural producers, and the environment. It is

really a win-win-win. Last time I went and filled up with E10, 89 octane at my local Hy-Vee, I saved 45 cents a gallon versus the regular 89 octane gasoline. Again, this is just a big benefit for not only consumers, but it helps clean up the environment, and it is great for farmers and ranchers as it creates a premium market for producers, offering crucial support in challenging years, when staying profitable could be difficult.

This would be one of those years where it is difficult, with corn at 350 roughly and soybeans 9 and change. I will tell you right now; our farmers are really in a bad position right now. The feedstock to manufacture biofuel production helps stabilize prices for corn and soybeans. About 40 percent of our corn crop goes to actually producing ethanol. And is really critical at times like these when we see these commodity prices down.

One of the things we have also seen is Brazil continuing to increase its exports of soybeans. Right now, Brazil is projected to export 80 million tons more of soybeans than the U.S. Put that in perspective; they are going to export over 100 million tones, we are going to be about 24. And by the way, that has dropped about 20 million tons from just last year.

So what we are seeing is Brazil having the ability to double crop and so forth, that they are significantly increasing

their soybean production. So, getting back to what Ms. Metcalf was looking for, with regard to, do we have supply, between the U.S. and Brazil there is lots of soybeans out there in the world. In fact, that is one of the reasons suppressing soybean prices right now.

So that is a big challenge for us as well, and of course, this really just may sound ridiculous to just say that somehow, biofuels are taking away from the food supply. It is just simply not true.

Expanding in new and diverse markets is critical for driving demand for U.S.-grown soybeans, especially with Brazil displacing the United States in the Chinese marketplace, and ensuring stronger returns for American farmers. One market to tap that we have just talked about is the maritime sector, where ocean-going cargo tanker and passenger ships are driving greater demand for biofuels.

At its core, the renewable fuels standard supports American agriculture. It directly impacts what farmers receive for what they grow. However, because the RFS excludes ocean-going vessels, the shipping industry is missing out on a proven cleaner fuel.

The Renewable Fuel for Ocean-Going Vessels Act would clear a major roadblock by allowing U.S. biodiesel and renewable diesel producers to meet the needs of ocean-going vessels while

preserving RFS credits. It would expand agricultural marketplaces and enhance American energy security, and create parity for maritime fuels with over-the-road and aviation fuel types in the Renewable Fuels Standard.

The vast majority of ocean-going vessels that are operating today were originally designed to use liquid fuels derived from crude oil meeting the International Organization for Standardization's, ISO, marine fuel standard. The ISO recently modified the standard to allow ship owners to utilize blends of up to 100 percent biodiesel or renewable diesel in their existing ships. This change would help make these fuels a cost-competitive option for ship owners who want to decarbonize using domestically produced fuel in their existing ships without the need to invest in new vessels or undergo extensive retrofitting.

Additionally, the use of cleaner fuels such as biodiesel or renewable diesel is a part of cleaning up the environment. The Ports of Los Angeles and Long Beach, which together handle 40 percent of the containers entering the United States, produce 100 million tons of smog every day, more than the daily emissions of 6 million cars in Southern California.

A typical ocean-going vessel carries between 1 and 4 million gallons of fuel, depending on the size and route. If a vessel runs on, say, 2 million gallons of fuel blended with just 5 percent biodiesel, that is 100 million gallons of biodiesel

used on a single ship.

When just one ship makes that switch, it cuts about 504 pounds of particulate matter and 564 pounds of hydrocarbons from the air. And that is only with a 5 percent blend. A 100 percent biodiesel blend with one vessel using 2 million gallons would cut particulate matter by 5.04 tons and hydrocarbons by 5.64 tons. Obviously, the more you multiply, the more the savings goes up.

So it seems to me it is common sense, and a common-sense immediate solution is to reduce particulate and carbon emissions around our ports and waterways would be to use more biodiesel or renewable diesel. The Port of Portland, Oregon is already utilizing renewable diesel to reduce environmental impact. In addition, the Port of Tacoma in Washington began using renewable diesel called R99, a drop-in fuel that is part of their efforts to reach net-zero greenhouse gas emissions by 2040.

The maritime industry is responding, and now policy needs to keep up. Expanding biofuel use in the maritime sector strengthens our energy security and energy security is national security. Domestic biofuel production is a key piece of the pie.

Administrator Zeldin has unleashed American energy by setting unprecedented RVOs that reflect the capacity of the industry. The administrator has also committed to following the

law by releasing them on time and in line with statutory requirements, unlike the previous Biden administration. Biden's EPA missed the mark for advanced biofuels by setting volumes for the targets at over 2 billion gallons below, and finalizing the RVOs below industry capacity.

Unlike the Biden's delays and low-ball targets, the Trump administration restored confidence in the program with timely and achievable RVOs. And this is critical getting industry to invest.

As the administration and EPA have shown support for these efforts with domestic production already strong, the solution is here and ready to grow. This bipartisan bill will deliver new market opportunities for Nebraska farmers who have played a critical role in creating the strong biofuel economy.

Thank you, Chairman, for letting me go on. You told me I could do that ahead of time; just remember you said that.

[Laughter.]

Senator Ricketts. Ms. Metcalf, do you agree that biofuels are a practical part of the fuel mix for ocean-going vessels?

Ms. Metcalf. Absolutely.

Senator Ricketts. Do you agree that the maritime industry has a need to expand access to these fuels?

Ms. Metcalf. Maritime industry has a need to expand access to all fuels across the spectrum. But biofuels is certainly one

of the big ones we are looking at.

Senator Ricketts. So can you just talk about, could you mention some of the other technologies that are in the marketplace right now? Can you just talk about what is being developed and relative, where is that being adopted? I mentioned the Port of Tacoma, I mentioned the Port of Portland using biofuels. What else is out there and where is it relative to biofuels as far as the maritime industry?

Ms. Metcalf. We speak globally. In the U.S., we have a lot of detached good ideas that I would like to get some sort of an idea magnet and get them all in one room, so we could have a really concerted strategy development. But globally, we are looking at ammonia, hydrogen, methanol, LNG, LPG, biofuels, and electric hybrid.

Although I will warn you that people think electric is the answer. If you are going to have a 50,000-deadweight ton tanker and expect to get it across the Pacific with batteries, you are probably going to have room for about 100 gallons of fuel. Because the rest of the vessel is going to be carrying batteries.

So there are hubs globally. There are hubs in Singapore, hubs in northern Europe. The Maersk Foundation is looking at a variety of fuels. But what we are seeing is certain areas are focusing on certain fuels. So let's say northern Europe is

looking at methanol. Some other area is looking at hydrogen.

So we don't expect one fuel to be the fuel of choice globally. So the technology development obviously relative to the development of engines that can burn these, not burn, propel themselves. We don't use burn anymore, right? We are taking fossil fuels out of the mix.

Senator Capito. Controlled burn.

Ms. Metcalf. Controlled burn.

Senator Ricketts. A very different thing right there. If it is controlled burn it is -

Ms. Metcalf. And that is when my ship sails into your forest.

[Laughter.]

Ms. Metcalf. But there are a number of technologies out there. And again, the fuels development. In one case it is biofuels, it is a little bit of chemistry but a lot of agriculture. In the case of these other fuels, it is a lot of chemistry. Obviously, when I say ammonia, hydrogen, we also have safety issues, carriage issues, how to deal with those fuels. It is a whole new world.

So I hope I have answered your question.

Senator Ricketts. Yes, great. Thank you, Ms. Metcalf. I appreciate that.

And again, I just emphasize that if you look at the soybean

exports of both Brazil and the United States, and frankly, one of the things that I have been told is that we have shipped a lot of soybeans to the Pacific Northwest right now, and there are zero orders from China. So we have a lot of soybeans on hand.

So getting back to your point about, is there a supply available to handle it, obviously there would have to be more investment in crush plants to be able to do that. But we are seeing that investment in Nebraska. And I think with a robust RFS you would see continued investment in being able to get that done.

I would also like to submit a couple of letters I have got for the record indicating support from stakeholders for the Renewable Fuel for Ocean-Going Vessels Act.

Thank you, Chairman Capito and Ranking Member, for our hearing today. I look forward to continuing to work on this.

Senator Capito. Thank you. We will submit those, without objection.

[The referenced information follows:]

Senator Capito. Senator Blunt Rochester?

Senator Blunt Rochester. Thank you, Chairman Capito and to the Ranking Member. And thank you to the witnesses for being here today.

Although as written, I cannot support the Renewable Fuels for Ocean-Going Vessels Act, I want to recognize the bipartisan effort to focus on legislative solutions that support decarbonizing the marine vessel industry. I hope that we can continue the conversation by focusing our efforts on bipartisan solutions that make significant reductions in pollution for maritime fuels.

During my time in the House, I fought for the EPA Clean Ports Program, which was based on my Climate Action Planning for Ports Act. That program was an important step to help ports decarbonize by investing in climate action plans and zero emissions port equipment infrastructure. Decarbonizing marine vessels is another critical component to reducing air pollution at ports and in coastal communities like those outside the Port of Wilmington.

Congress established the Renewable Fuel Standard to reduce greenhouse gas emissions and help expand the renewable energy industry. Mr. Pavlenko, can you discuss to what extent the Renewable Fuel for Ocean-Going Vessels Act will help reduce greenhouse gas emissions at ports and in coastal communities?

Mr. Pavlenko. Sure, thank you for the question, Senator.

I expect that the effects of this bill as proposed will be minimal. On its own, this bill only allows maritime fuel producers to tap into the RFS, but it at its core is fundamentally a mandate for road-sector biofuels. It does little to stimulate demand. All it does is narrow the price gap somewhat between producing a fuel for the maritime sector and producing one for the road sector.

However, absent some kind of outside policy, say, IMO's net-zero framework, or a separate, dedicated maritime fuel policy here in the U.S., it just won't make very much economic sense to sell fuels into the maritime market, because you're losing out on incentives from west coast cap and trade policies, from west coast low carbon fuel standards.

Furthermore, it also, by including this within the RFS, you are leaving a few very important options off the table. So for example, onshore power supply, using electricity to power ships when they are at berth is a relatively low-hanging fruit to reduce emissions at ports. It is cost-effective, reduces climate impact significantly, not eligible in the RFS.

Similarly, e-methanol, e-ammonia, those are not biomass based in many cases. Therefore, they are not eligible.

So based on that, I don't expect this to have a very meaningful impact on port emissions.

Senator Blunt Rochester. Thank you. In your testimony, you drew a comparison to a similar provision in 2014 that expanded the RFS program by including jet fuel. You noted that the provision was not successful in materially affecting sustainable aviation fuel production.

What else can we learn from this provision in helping to support the decarbonization of the maritime industry and encouraging the production of renewable energy fuel?

Mr. Pavlenko. Definitely. So the jet fuel often has not really lifted the SAF market in the U.S. But I would say that SAF is a bit easier than biomass-based diesel for the maritime sector. Because when you produce renewable diesel, you get some SAF anyway as a co-part for the process. That provision at least helped them monetize a little bit.

But what we can learn from the aviation sector is that you need a stable source of demand. It is not nearly enough to allow a fuel to opt in for the program. The aviation sector is very price-sensitive. The maritime sector as well. Without a meaningful lever to create a market for those fuels, in most cases those consumers won't purchase them unless you subsidize it down to parity.

This bill, and the RFS opt-in for jet don't fully subsidize fuels down to parity. Hence, their uptake has been small.

Senator Blunt Rochester. And I know I have about 28

seconds, but I will leave this question for you and you can answer later. Expanding renewable maritime fuel production is just one way to support decarbonization in the maritime industry and at ports. Mr. Pavlenko, can you discuss other steps that Congress can take to support maritime decarbonization, in 7 seconds?

[Laughter.]

Mr. Pavlenko. I am happy to follow up.

Senator Blunt Rochester. Thank you so much, and I yield back, Madam Chairman.

Senator Capito. Thank you, and thank all of you. I would like to just, since I am the only one left here, ask Mr. Sabo, as really the practitioner in your State, as the State forester, how long have you been the State forester?

Mr. Sabo. September 1st was a year, and I was a deputy prior to that.

Senator Capito. Kind of to respond to Senator Kelly's questioning, in my view it sort of left an impression that as a State forester, that you would try to take advantage of loopholes and just go full forward and controlled burns and have it be -- I don't know. That is not in Georgia's best interest. I mean, do you want to make a response to that?

Mr. Sabo. Thank you, Madam Chairman.

Absolutely, as a prescribed fire practitioner, we really

try to uphold that practice to the highest standard. We don't want smoke in population centers; we don't want to take advantage of any rules or loopholes. We really just want to keep our citizens safe and our forests healthy.

All WEPA does from how I read it is ensure that we keep that practice. I have heard today that it is already there and it is approved. But I go back to Georgia submitted 129 exceptional events and are yet to hear back. Other than the one that was in, I believe, Nevada County, California, nothing has ever been approved. And that was a single fire.

In Georgia, on a good prescribed burn day, so a good winter day, good dormancies and burn, there is nothing to have hundreds of fires going on around an area at any given time. So when we look at that, and all those practitioners are managing their smoke, they are keeping it off of roadways ,they are using firing techniques that don't impact communities or homes, they stop their practice early enough to where the smoke dissipates before nighttime settles in, so we don't have smoke on the road issues, everything is like that.

Nobody wants to be a bad actor in the prescribed fire community. Because to a degree, there is kind of a social license to do it, right. We have a culture of fire in Georgia. Other States, like Mr. Wood here alluded to it, is they start getting into it, there will be a little bit of, how do we get

into it, what is accepted, what is not.

And so we don't even want to lose that social license, if you will, to continue to practice prescribed fire.

Senator Capito. Thank you. Thank you very much.

So, with no further questions, I would like to thank the witnesses and all of my colleagues for your participation in today's hearing. Senators who wish to submit written questions for the record have until 5:00 p.m. on Wednesday, September 24th, to do so. The witnesses' responses to those questions are due back to the committee no later than close of business on Wednesday, October 1st. And those will be submitted for the record.

So, with that, this hearing is adjourned. Thank you all again very much.

[Whereupon, at 11:19 a.m., the hearing was adjourned.]