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Committee on Environment
and Public Works

Washington, D.C.

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PROMOTING AMERICAN ENERGY SECURITY BY FACILITATING INVESTMENTS AND
INNOVATION IN CLIMATE SOLUTIONS

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The committee, met, pursuant to notice, at 10:02 a.m. in room 406, Dirksen Senate Office Building, the Honorable Thomas R. Carper [chairman of the committee] presiding.

Present: Senators Carper, Capito, Cardin, Whitehouse, Markey, Duckworth, Stabenow, Kelly, Inhofe, Cramer, Lummis, Boozman, Sullivan, Ernst.

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

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

Welcome to each of our witnesses, three in person and one remote. We are delighted to see you all.

At a time when America's energy costs are tied to the whims of dictators like Vladimir Putin, our hearing today will explore how our Nation can promote American energy security by facilitating investments and innovation in among other things, climate solutions.

To help inform our conversation today we will be hearing from a panel of expert witnesses that are joining us in person and remotely. We welcome you, and we thank you for your willingness to participate in what we believe is an important conversation and, frankly, a very timely conversation.

I believe it was Winston Churchill who said, "The further back we look, the further forward we can see." Think about that. The further back we look, the further forward we can see. When we look to find solutions for rising fossil fuel prices here and around the world, it is helpful, I think, to look back at history for some help on those answers.

Since the Arab oil embargo of 1973, many in Washington have argued that if we just drill for more oil, we could be free of the price whiplash caused by international disruptions in the global oil market. That wasn't true during the Arab oil embargo, and it isn't true today. This narrative clings to a hope, I think a false hope, that the oil market in the United States is somehow separate from the

global oil market. Some of us on this committee know better than me, that is not true. They are not separate.

So, let's lay out some facts. One of those is that the oil and gas industry has been slow to ramp up production on the more than 9,000 unused approved permits that they hold to drill onshore. Is it onshore and offshore? Just onshore. I didn't realize that, 9,000 unused approved permits to drill onshore. I had my staff double check that, and apparently that is actually true.

Now, after experiencing falling revenues during the pandemic, many in the industry are more interested in paying back their shareholders, it seems, than taking action to lower gas prices. High gas prices are not a result of this Administration's policies.

Still, the U.S., as I am told, is a net exporter of oil products and is drilling more today than we were a year ago. Our Nation is on track to surpass our historic, pre-pandemic levels of oil production in the next year.

Despite this increased oil production, American energy prices continue to be directly tied to global events, such as Vladimir Putin's unprovoked invasion of Ukraine and the pandemic. In fact, prices at the pump have spiked nearly a dollar since Putin moved his forces into Ukraine.

As long as our economy runs mostly on fossil fuels, energy prices will continue to be vulnerable to forces outside the United States. That is not energy security. For many families, it means energy insecurity.

Let me just say, right here at the outset, we are not going to switch to electric vehicles overnight, or in a year, or two, or five

years, or a decade. As much as I believe in using hydrogen to help provide the propulsion for our vehicles in the future, we are going to be driving vehicles that use liquid fuels for a long time. I would acknowledge that. That is the reality that we live with.

But having said that, our overreliance on fossil fuels is also driving another existential threat, and that is climate change. Just last month, a study by the National Oceanic and Atmospheric Administration, NOAA, highlighted the alarming rates of sea level rise due to climate change.

For people who live on the inland in the U.S. and in the heartland of our Country, they don't have to worry about this as much. Those of us who live on the coast, I think about half of the people in the United States live within 50 miles of one of our coasts, for us, this is real and a matter of ongoing concern.

Anyway, NOAA estimated in the report last month that our oceans will rise as much as a foot in the next 30 years without action. That is more than they have raised in the last hundred years. The trend is going to continue, and if we don't do something about it, it is only going to make it worse. If you happen to live near a coast, that is a matter of real concern for us and our families.

Increased sea level rise is just one challenge of many that Americans will face, and already are facing, because of climate change. The climate economic costs are starting to add up. According to GAO, the Government Accountability Office, the economic impacts that Americans are experiencing from the Russian invasion of Ukraine pale in comparison to the economic devastation we can look forward to if we fail to properly address the climate crisis.

So instead of doubling down on an antiquated energy playbook that doesn't work well anymore, we need policies that help our economy smoothly transition toward cleaner, American-made energy.

In a scenario that is not always good news, here is some good news. We can adopt these policies that I am talking about while also giving consumers more choices to fuel their lives. By giving Americans a choice about how to heat their homes and fuel their vehicles, we can reduce price volatility and energy costs for all Americans. Fortunately, Congress and President Biden have already taken steps to relieve the pressure that high energy prices are putting on families and small businesses.

Thanks in large part to our successful passage of the Bipartisan Infrastructure Law, I would just say to our witnesses today, this is the committee that provided the foundation on which the Bipartisan Infrastructure Law was built, and we are very proud of our colleagues, but the Biden Administration is able to make many significant investments across the Country, from sea to shining sea, in expanding domestic clean energy and infrastructure for zero-emitting vehicles.

These investments include \$5 billion for a national network of electric vehicle chargers. They also include over \$3 billion in the domestic battery supply chain and battery recycling, so U.S. electric vehicle manufacturing does not depend on critical minerals from China or countries in Africa.

While these investments represent real progress, we can and must do more if we are going to meet our energy security and our climate goals. This is the challenge of our time.

Most of us on this committee are married, I think maybe all of us, and our spouses say things to us over and over again, and we do the same with them. One thing my wife tells me is I am too much of an optimist. She says I need to be more of a realist like her. I always say, honey, I love you, but I don't want to be just like you. I want to be an optimist. She rolls her eyes and says, "Oh, well." Why did she marry me, for better or for worse? There you go.

While fossil fuels will continue to power more of the U.S. economy for years to come, many American businesses are already making investments toward a cleaner, more secure energy future. I think they need our encouragement and support to go not slower, but to go faster. With that, there are three things we can do to accelerate our transition to clean energy.

First, we should help ensure that Americans have the choice to fuel their vehicles with electricity from renewable and nuclear energy, from biofuels from our farmers, or clean hydrogen produced by our refineries rather than oil from foreign countries. We can do this through direct investments in clean vehicles and their refueling infrastructure.

Second, we must ensure that all Americans benefit from our investments in clean energy and energy efficiency. More often than not, lower-income families use a large portion of their household income on energy costs. We need to ensure that low-income communities have access to clean technologies and that no community is left behind in the transition of clean energy.

The Marines have a saying, "Leave no Marine behind." Leave no Marin behind. I think we have a moral obligation to leave no community behind in our energy transition.

As my colleagues know on this committee, I was born in West Virginia. Our neighbors were, for the most part, all coal miners. Those jobs are gone. We have a moral obligation, when people lose their livelihood, to help them transition to something new so they can support themselves and their families, and leave no family behind.

Finally, we must redouble our efforts to improve energy efficiency and reduce waste. For example, the oil and gas industry should no longer be able to allow large amounts of our Nation's supply of natural gas to escape into the air as methane, harming our lungs and climate, just because it is inconvenient to capture methane. Encouraging greater energy efficiency in our homes, our federal buildings, and our manufacturing facilities lowers costs and saves energy. That is a win-win situation, where I come from.

If we make these investments, I firmly believe we can break our addiction to foreign oil, we need to. Also to reduce harmful climate emissions, and lower consumer costs. That is a hat trick, where I come from. That is a hat trick. At the same time, we can strengthen our national security and create good-paying jobs across our Country. That is the promise of a clean energy future.

In closing, as one of the strongest supporters of electric vehicles in the Senate, I know it is important to remember that we are not yet in a post-liquid fuel world. I sold, last year for \$1, my 2001 Chrysler town and country minivan that had 600,000 miles on it. Not many people get 600,000 miles out of their minivan, but I did, but

there are a lot of people that have vehicles on the road that maybe have 50,000 miles or 100,000, and they are going to be driving them. They are going to be driving those vehicles like I did for a long time. That is just the reality of what we face.

We must retain our domestic capabilities to produce and refine the motor vehicle fuels that help power our lives and will continue to for some time to come. However, we must also ensure these fuels are as clean as possible, while investing in zero-emitting vehicles.

Investments in clean energy and energy efficiency are the greatest long-term solutions for energy security, domestically and internationally. The United States is at our best when we lead. Now is our opportunity to do so by passing legislation that unleashes the potential of American clean energy, provides a lot of jobs going forward, and benefits all Americans.

That said, we look forward to hearing from all of you. Now, to hear from our Ranking Member, Senator Capito, for her opening statement. I think we are going to start voting. Have we started?

Senator Capito. I don't believe so.

Senator Carper. I think we are going to start voting at 10:30. So we will be going off to the Floor and coming back, so just bear with us, if you will. We will try not to have too much disruption. We are thrilled that you are here, delighted that you are here. We are looking forward to hearing from you.

Senator Capito?

[The prepared statement of Senator Carper follows:]

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

Senator Capito. I want to thank Chairman Carper, and I want to thank the witnesses for coming here today. It is nice to see my former colleague, Jim Matheson. I think we came into the Congress together in 2000. It is nice to see you. Welcome to the committee.

Senator Carper. Senator, Jim Matheson is a gift that keeps on giving. My chief of staff used to work for him. It is a small world. Sorry to interrupt.

Senator Capito. No, that is fine.

Now, as much as ever, promoting America's energy security is of utmost importance. National security is energy security. Not only can the U.S. lead the way on energy development, we can do it responsibly with lower emissions.

U.S. greenhouse gas emissions have steadily decreased, thanks primarily to the shale revolution and America's ingenuity. But to pave the way for another American energy revolution, we need to take concrete steps to look at this Administration's policies that are holding American energy producers back here at home to the benefit of hostile regimes with appalling environmental track records.

More specifically, facilitating additional American energy production will allow us to better assist our allies as they move away from Russian energy sources.

Action to reverse the Biden Administration's regulatory policies will help us combat rising energy prices, ensuring Americans can fill up their gas tanks and keep their homes warm now and in the future.

Over the last year, we have seen an unfortunate pattern from this Administration. The Administration's policies have strained supplies, increased prices for hardworking families, limited and delayed projects, chilled investments that could yield more production, and are threatening the affordability, reliability, and new capacity of our Nation's energy supply.

As a candidate, President Biden promised to drop all drilling on federal lands, and on day one in office, the Administration stopped all new oil and gas leasing on federal lands and killed the Keystone XL Pipeline. They have also backed many challenges to energy projects in court.

On top of these actions, activist judges have halted construction of necessary energy projects across this Country, like the Mountain Valley Pipeline in the region of West Virginia.

As a result, the regular gas price in the United States has climbed to more than \$4 per gallon, diesel is over \$5 per gallon, and in some parts of the Country, I think I saw in California, it is well over \$5, up to \$6 per gallon. These are the highest recorded average gas prices our Country has ever seen, topping even the run-up in 2008.

Now, the Administration is trying to claim, and I think I heard a little bit of this in your statement, that rising gasoline, oil, and natural gas prices is caused by Russia's invasion of Ukraine, but prices were skyrocketing well before this. For example, the week that President Biden took office, the average price of gas was \$2.38 per gallon. It rose to \$3.53 per gallon, an increase of \$1.15 per gallon by February 21, 2022, the date of the last report before Putin invaded

Ukraine. The most recent report recorded prices at \$4.24 per gallon, up an additional 71 cents.

So, the majority of the price increase took place before the invasion. Similarly, natural gas and other commodity prices have skyrocketed. The price of natural gas in New England averaged more than \$20 per million BTU in January, spiking to almost \$30 for several days due to a lack of pipelines in the region, or the equivalent of \$180 per barrel of oil. At the same time, natural gas in my region was about \$5 per million BTU.

In 2021, home electricity bills rose at their fastest rate since 2008. Yet, EPA is working toward a menu of new regulations targeting power plants that will make the problem worse.

This is on top of the record inflation that is impacting West Virginia families who are now paying higher grocery bills, higher gas prices, and facing higher costs to heat and cool their homes, leaving hardworking Americans struggling to balance higher costs in all areas of their lives. This is what we hear when we go home every day.

So, President Biden's attacks on the industry are having an intended effect. He just doesn't like the way it materially impacts voters and taxpayers.

If we are serious about domestic energy security, along with reducing emissions, we need to get back to policies that encourage and utilize American production and innovation. We need to reduce unnecessary roadblocks to vital energy projects and infrastructure. We need an all-of-the-above energy strategy that does include electric vehicles, renewables, and an all-of-the-above hydrogen development, which we see.

It is hard to deliver on American energy security if permitting complexities continue to pose an insurmountable challenge. Regulatory and permitting certainty is essential for building infrastructure to achieve our goals of energy security, whether that is a natural gas pipeline, transmission capacity for solar or wind, or lithium mining.

For too long, States and project sponsors have been stuck in a regulatory purgatory, seeking endless approvals from up to 13 Federal agencies. Additionally, dozens of State and local approvals are typically required before construction.

I don't know how we get to energy security and build out clean energy if a labyrinthine permitting process chills investment in potential new projects.

While we are focused on Russia, Congress can do more to support energy security domestically by expanding our production of our own resources here. We need to support American energy solutions, including coal, nuclear, and oil and gas, as well as critical minerals essential to making those EVs that we wish in our future and other products. These are important to our energy security and are critically important to energy affordability.

So, some of the ways we can accomplish this is providing regulatory certainty by codifying actions that the Trump Administration took to provide certainty under the Clean Water Act. We can expedite permitting and review processes by codifying One Federal Decision, which is in the bipartisan infrastructure package for transportation, providing litigation certainty and allowing federal agencies to use one another's categorical exclusions, and limit red tape for gasoline and other types of fuels by preventing

regulations and new fees that will increase the price of our energy. If the Administration won't take action, the Congress needs to.

I look forward to hearing what the witnesses have to say to bolster our energy security and encourage American investment while moving forward on the environmental issues that we know are so very important.

Thank you very much.

[The prepared statement of Senator Capito follows:]

Senator Carper. Senator Capito, thank you very, very much.

Senator Inhofe. Mr. Chairman?

Senator Carper. Yes, sir, please.

Senator Inhofe. Before going to the witnesses, let me apologize to the witnesses because I am going to go ahead and vote at the top of the votes so we can operate more smoothly here. I think I have already read the information that you have submitted. Thank you so much.

Senator Carper. Thank you, Senator Inhofe. Senator Inhofe is the former chairman of this committee, and also chairman of the Armed Services Committee. His is a distinguished career.

I had breakfast with him, we have a prayer breakfast that is a weekly event. You think Democrats and Republicans don't have much to agree on, but we actually, on a weekly basis, get together, read the scripture, pray, and we sang, what was the hymn we sang? There Is A Balm In Gilead, I don't know if you guys have ever heard that hymn. It is a great hymn. We don't agree on all the issues, but we love each other and try to find ways to work together, especially on this committee. We are pretty good at finding the middle.

Senator Capito, thanks very much for your comments. I know you are going to be slipping out of here in a minute, slip-sliding away?

Senator Capito. Yes, I will slip out first.

Senator Carper. Good enough.

Our first witness today is joining us remotely. He is a former Secretary of the Navy. I first met him when he was Governor of Mississippi. I am the former Governor of Delaware. There is a huge bond between former governors. I have started more sentences here in

the Senate like, when I was governor, and our colleagues get tired of hearing that, as you might imagine.

Ray Mabus, longtime public servant, Governor of Mississippi, Ambassador to Saudi Arabia, Secretary of the United States Navy, he was the 75th Secretary of the United States Navy from 2009 to 2017. It seems like a long time, and it is. He had the longest tenure as the leader of the Navy and Marine Corps since World War I. How about that?

During this time, he officially named one of the Nation's newest naval fast attack nuclear submarines, Virginia class, the U.S.S. Delaware, which was christened a year ago this April, and is going to be making an important call to the Port of Wilmington in about two weeks. We are very excited about that. If that were not enough, he has also been a CEO at least once, maybe a couple times, and currently serves on a number of boards of nonprofits and businesses. He is joining us remotely today.

I still call him governor, so Governor, you are on. Welcome, and thank you for all of your service.

STATEMENT OF THE HONORABLE RAYMOND E. MABUS, FORMER SECRETARY OF THE NAVY

Mr. Mabus. Thank you, Mr. Chairman and Ranking Member. To the Ranking Member, Senator, that is the Shenandoah River behind me. I am one of your constituents now.

Senator Capito. I had better be nice to you, right?

Mr. Mabus. I am a voter.

[Laughter.]

Mr. Mabus. To the members of this committee, thank you for your efforts to strengthen American energy security.

Today, as for several weeks, Americans in the world are intently watching as the brave people of Ukraine fight for their nation, their families, and their freedom against a brutal tyrant. The total motivations behind Vladimir Putin's illegal invasion of Ukraine remain unclear, but nothing could be clearer than his power over Europe because of its dependence on his oil and gas. Europe needs fossil fuels piped in from Russia, so Putin has the leverage and the money to undermine the security and economic independence of our allies.

Putin believed that, because of its reliance on Russia's fossil fuels, Europe would not take any strong, united actions against his unprovoked invasion of a democratic nation. The fact that this was a gross miscalculation by Putin doesn't negate that it was a calculation that helped start an horrific war.

The way to fight Putin, in the long run, is to shift the world economy away from the oil and gas that keeps him affluent, armed, and arrogant. Whatever we do in the days ahead to support our European allies, and we should do everything we can, we must also move swiftly

to end the World's addiction to fossil fuels, and we need to start here at home.

Three issues that we are facing. First, depriving Putin of the power and money that the world's dependence on fossil fuels brings him; second, aggressively attacking climate change that is a huge national security issue; and third, becoming truly energy independent and not subject to big price spikes, are inextricably intertwined. Moving urgently to renewables is the answer to all three.

The price of oil and gas is set world-wide, and even if we imported no fossil fuels, we in America would still be incredibly vulnerable to price spikes. The one thing that drives up the price of oil is instability, the kind that is caused by an irrational war in Europe waged by an unstable leader. Instability can also be driven by climate refugees, hurricanes, famine, and drought, the kind that will be ever more common in a hotter, stormier world caused by climate change.

Climate change is an enormous national security issue. As Secretary of the Navy from 2009 to 2017, I was in a unique position to see this. Climate change affects national security in numerous and profound ways. The storms that are more frequent and powerful, catastrophically damaging our bases, the instability and chaos arriving from storms, droughts, and fires that put our troops at risk when they respond to disasters. The enormous increase in migrations, people flee climate disasters, and the melting of the Arctic and the greatly increased risk of conflict and emergencies there.

I was certainly not alone in this. Every Administration since George W. Bush has called out climate change as a national security

risk. That is why, first as a war-fighting measure, then as an effort to fight climate change, I began to move the Navy and Marines off fossil fuels. Today, two-thirds of the energy on our bases come from renewables, and when I left in 2017, nearly 40 percent.

The economics of renewables are compelling. Today, renewables are considerably cheaper than fossil fuels, even natural gas. We saved taxpayers \$400 million by moving our bases to renewables. If we as a Nation move very fast to clean energy, millions of new, good-paying jobs would be created. As businesses are finding out every day, doing what is right for the planet and the future and doing what is right for the bottom line are exactly the same.

Much of the world's fossil fuels are produced and controlled by countries run by dictators. By continuing to use so much oil, we leave our economy and the pocketbooks of American families subject to the whims of these dictators. Only by pushing our economy to renewable sources like wind, solar, and agricultural biomass, which are controlled locally and essentially bulletproofed from foreign manipulation, can we regain our economic sovereignty.

Europe has begun to move in this direction. Many nations there are getting between a quarter and a third of their energy from renewables. But this change has to be speeded up, since as the invasion of Ukraine showed, we are all still far too vulnerable to dramatic swings in the price of fossil fuels.

Two quotes sum it up. President Zelenskyy, in a recent address to German citizens: "We have warned your politicians that it is dangerous when Moscow decides whether you have gas and how much it costs." James Murray of Business Green: "Clean technologies are

peace-keeping and patriotic. Putin hates them. As such, they need to be deployed at a pace and a scale that is completely unprecedented in the entire sweep of human history. Our climate security, our energy security, and our national security depend on it.”

America will not become truly energy independent until we end our dependence on fossil fuels.

Thank you very much.

[The prepared statement of Mr. Mabus follows:]

Senator Carper. Secretary Mabus, thank you for opening up our witnesses' testimony. Great to see you. Welcome.

Our next witness who will speak is Katherine Stainken, Vice President of Policy of Electrification Coalition. The Electrification Coalition is a nonprofit focused on transportation electrification. It is also the sister organization of SAFE, a nonpartisan organization focused on the nexus of climate change and national security.

You are recognized to speak. Thank you again, so much, for joining us.

STATEMENT OF KATHERINE STAINKEN, VICE PRESIDENT OF POLICY,
ELECTRIFICATION COALITION

Ms. Stainken. Great, thank you. Transportation electrification, that is a mouthful, and so I need to speak fast, so I will just apologize in advance for that.

Chairman Carper, Ranking Member Capito, and distinguished members of the committee, thank you for the opportunity to testify this morning. My name is Katherine Stainken.

Senator Carper. You can slow down just a little bit.

Ms. Stainken. I am the Vice President of Policy at the Electrification Coalition, a nonprofit, bipartisan group that is working to accelerate the adoption of EVs in order to reduce the economic and national security threats caused by our dependence on oil.

Our sister organization is SAFE, who leads a broader approach focused on the supply side with the same core mission. The EC has direct experience working at the local level.

Senator Carper. I am going to ask you, seriously, just slow down just a little bit.

Ms. Stainken. The EC has direct experience working at the local, State, and federal levels that includes acting as the lead implementer for transportation for the USDOT's Smart City Challenge, working with 25 leadership cities through the American Cities Climate Challenge, and working with companies like Pepsi to pilot freight electrification projects. We work also directly with States and provide direct technical and policy support.

I live in a more rural part of Arizona that is 100 miles outside of Phoenix. I mention this to say that I am aware of the struggles facing many Americans and businesses today. I am aware of the gas prices and the implications for that for families and businesses. But I see that even in my community, a place where you wouldn't expect to see many electric vehicles, that they are still growing in number, and we are seeing them on the roads today.

The Bipartisan Infrastructure Law laid critical foundational policies and investments to our transportation electrification future. We applaud this committee, under your leadership, and Congress, for the work done in passing that legislation.

However, we need to recognize the scale of what is at stake in terms of our national security, our economic prosperity, American leadership, and global competitiveness. In short, we need to recognize that our electric transportation future is a matter of national strategic importance. Without aggressive action, the U.S. risks significant job loss by ceding on advanced technology and auto manufacturing to other countries like China, who are moving quickly forward to their own electric transportation futures.

We need a suite of policies adopted today aimed at electric vehicles across all modes of transportation that loosen oil's grip on our national security and our long-term economic prosperity, while simultaneously reducing carbon emissions.

The policies we need can be divided into four pillars. First, vehicle purchase incentives. For example, we need substantial funding for electrification of the medium and heavy-duty sector, including through programs like the Clean Heavy Duty Vehicles Program and the

Diesel Emissions Reduction Act and other EPA grant opportunities, policies which have long been supported by members of this committee.

Secondly, we need additional support for EV charging infrastructure. We support the policies proposed under the jurisdiction of this committee, such as the grant program under EPA that will reduce air pollution at ports through adopting EV technologies and the Greenhouse Gas Reduction Fund Grant Program that will deploy EV charging stations.

Third, we need funding to electrify the U.S. Federal fleet, and fourth, we need incentives for U.S. manufacturing and the supply chain. My written testimony goes into more of those details.

These policies, combined with activity at the State and city levels, will enable a new era of American mobility powered by electricity generated from domestic sources that are readily available, cleaner, and stably-priced. EVs bring a myriad of benefits beyond just these stable prices. They provide fuel and maintenance savings for consumers and businesses, improved air quality and public health, new jobs in the tech and innovation sectors, reduced carbon emissions, and investment in local economies as the fuel source is generated locally.

The mass adoption of EVs also provides the opportunity to address the supply chain issues that we are currently experiencing and highlighted even more by the COVID-19 pandemic, particularly those for critical minerals that are used in the multiple products that drive our economy, not just the batteries used to power EVs.

States and cities are already working to adopt smart and bold policies to accelerate adoption of EVs, whether it be Delaware, West

Virginia, South Carolina, or North Dakota, States are moving forward and forming partnerships and working with stakeholders to prepare for this coming funding to build up the charging along highway corridors.

The EC, my organization, is actively working to assist States to utilize this federal funding so that we achieve an effective, efficient, equitable, and urgent deployment of EV charging infrastructure. In fact, this week, we are launching a series of initiatives to assist States and cities with the coming federal funding, starting with Charging Infrastructure Week.

In closing, while oil has facilitated the rise of the modern era, our overreliance on it creates tremendous energy security vulnerabilities because the price of this critical commodity is subject to manipulations by OPEC and global events that are beyond our control, such as those we are experiencing by the crisis in Ukraine today.

Regardless of your political or technological view on electric vehicles, other nations, especially China, have continued to demonstrate a growing commitment to transportation electrification. The U.S. Government has long supported nascent industries when their success was aligned with a national interest. We urgently need bipartisan support to implement the policies that I have outlined here today and that are further elaborated on in my written testimony to accelerate this future.

Thank you for your leadership and hosting this hearing today, and for the opportunity to provide testimony. I look forward to your questions.

[The prepared statement of Ms. Stainken follows:]

Senator Carper. Thank you for coming all the way from Arizona to be with us to testify.

Next, we are going to hear from a former colleague in the U.S. House of Representatives from Utah, someone who served with our Ranking Member and probably others that serve on this committee. It is great to see you. Thank you for all your service.

Jim Matheson today serves as the Chief Executive Officer of the National Rural Electric Cooperative Association. He is also a longtime public servant and has the rare distinction of being elected as a U.S. Representative from two different districts within his State, the Second District and the Fourth District. In Delaware, we only have one district, so I can't match what you have done.

Jim, great to see you. Thank you so much for coming, and we are anxious to hear your testimony. Thank you.

STATEMENT OF THE HONORABLE JAMES MATHESON, CHIEF EXECUTIVE OFFICER,
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Matheson. Thank you, Chairman Carper and Ranking Member Capito. It is good to see you, and I appreciate the opportunity to participate in the hearing today.

As CEO of the National Rural Electric Cooperative Association, I am here on behalf of the 900 not-for-profit electric cooperatives in 48 States.

I think at the outset, the point I would like to make is a resilient and reliable electric grid that affordably keeps the lights on really is a cornerstone of American energy security and our economy. American electric cooperatives, we actually provide electricity to about one in eight Americans. While we cover that many Americans, we also cover 56 percent of all the landmass in this Country, so we have a lot of territory that we serve.

More importantly, we serve folks that are often in the hardest-to-serve, most expensive places to receive electricity. Electric co-ops, of course, are owned by the people they serve. They operate at-cost, and return any excess revenue to their members. It was about one and a half billion in 2020 alone.

Every action that is taken that has a financial impact on an electric cooperative, it goes straight to the consumer's bill. We have no shareholders. In short, electric co-ops are motivated by people, not by profits.

Electric co-ops are thoughtfully exploring all ideas and potential partnerships as they work to meet the evolving needs of the communities they serve. As I engage with co-ops across the Country, I

have to say one thing is clear, and that is that the ongoing energy transition must recognize the need for time, technology development, and be inclusive of all energy sources to maintain reliability and affordability.

Achieving 100 percent carbon-free electricity generation by 2035 is simply an overly ambitious goal. American consumers expect the lights to stay on, and they expect it to be at a price they can afford. A diverse energy mix is essential to meeting those expectations day in and day out. To do that, America's electric cooperatives depend on an evolving suite of resources.

Natural gas is playing an increasingly important role in co-op reliability and emissions reductions, often replacing coal generation. But even as coal capacity declines, it remains a critical source for reliable, affordable power to co-ops in many regions of the Country.

Co-ops also share ownership in nuclear power plants, and they are exploring the potential of advanced reactor technology. Electric co-ops are leaders in community solar and small-scale wind, and we also are major consumers of federal hydropower. Due in part to the expanse of renewable assets, electric co-ops substantially lowered their carbon emissions by 23 percent between 2005 and 2020. So, we have a diverse mix across our membership.

However, intermittent resources like wind and solar must be supported by always-available resources with an assured fuel supply. A recent long-term reliability assessment by the North American Electric Reliability Corporation sounded the alarm on risks to reliability of too much baseload generation is retired prematurely without replacement capacity that can balance the grid by meeting

short-term disruptions in supply and demand. To avoid these risks and undue economic impacts, policymakers should oppose efforts to mandate energy transformations over unreasonable or unrealistic timelines.

Instead, we can work constructively to achieve environmental objectives while maintaining exceptional reliability and affordability. If we are going to electrify other sectors in the economy to achieve lower economy-wide carbon output, reliability and affordability of the electric sector will be all the more important.

Several programs in the Bipartisan Infrastructure Law provide significant opportunities to electric co-ops and the communities they serve. We certainly appreciate the leadership of this committee in supporting the deployment and permitting of carbon capture technologies as an important element of power sector decarbonization. We appreciate the support for electric vehicle charging infrastructure and grid resiliency programs, which will also support electric co-ops and rural America.

But additional actions are needed. As not-for-profit businesses, electric co-ops cannot access energy tax credits that are readily available to the rest of the electric sector. Allowing electric co-ops to access direct pay tax credits would enhance electric co-op energy innovation investment opportunities.

I want to thank you, Chairman Carper, for your leadership on providing a direct pay option, and also to Ranking Member Capito, for your work on the 45Q tax credit.

Maximizing infrastructure investments also requires coordinated, consistent, and timely agency permitting decisions in a manner that strengthens our economy and enhances environmental stewardship. The

electric sector can play a major role in reducing emissions in other sectors of the economy through increased electrification. However, as a recent National Academy of Sciences report noted, making this transition will require a three-fold expansion, three-fold expansion, of transmission infrastructure in this Country, and a 170 percent more electricity generation supply by the year 2050.

Meeting those two objectives will require tremendous planning, investment, and collaboration among all stakeholders. Reliability, affordability, and flexibility should be the pillars on which any energy transition is built. NRECA and America's electric cooperatives look forward to working with this committee in pursuit of this mission.

I want to thank you. I look forward to your questions.

[The prepared statement of Mr. Matheson follows:]

Senator Carper. We thank you so much for taking time to join us. There used to be a former Congressman, I want to say, from Oklahoma, who sat in your seat and filled your shoes.

Mr. Matheson. That is right, Glenn English.

Senator Carper. Glenn. Do you ever talk to him?

Mr. Matheson. I do, yes.

Senator Carper. Give him our best. He was a great colleague and I very much enjoyed the time that we served together.

Mr. Matheson. I will do that. I am happy to do that.

Senator Carper. Last but not least is the woman whose name has been mispronounced more times than she can count, and her name is spelled S-G-A-M-M-A. So we are going to try to get it right, so bear with us.

President, you are the President, I can tell my wife I talked to the President today, President of the Western Energy Alliance, and you are a former public servant, serving three years as a military intelligence officer in the United States Army.

I was a Naval flight officer for many years. During one of those tours, I was also the air intelligence officer in my squadron. They said that it abused the word intelligence to have my name associated with it. I don't understand how I ended up with that job, but we are delighted with your service.

In this case, Navy salutes Army. Welcome today. Thanks so much for joining us.

STATEMENT OF KATHLEEN SGAMMA, PRESIDENT, WESTERN ENERGY ALLIANCE

Ms. Sgamma. Thank you, Mr. Chairman, Ranking Member Capito, and members of the committee. I really appreciate the opportunity to be here. I have answered from my name mispronounced many times; that is not a problem.

I am really happy to follow up Mr. Matheson, because that realistic timeframe and that realism, I think, is what is called for. When we look at what Europe is facing because of this Russian invasion, it is time to get real about energy.

I have heard today that we need to get off of our addiction of oil and fossil fuels, and that is kind of like an addiction to food or other necessities of life. The reason oil and natural gas are so heavily used is because that deliver such huge value to humanity. So realistic timeframes for some type of transition requires a transition to something that is 24/7 reliable and affordable. So as it has been recognized, oil and natural gas will be part of our energy mix through 2050 and much beyond that because of the huge value they deliver to humanity.

We have also heard about doubling down on certain policies like mass transition to renewables. If that were the answer, then Germany would not be in the situation that it is in, because Germany has spent over \$800 billion since 2000 in its Energiewende, its energy transition, and it is now more vulnerable to Russia than it was before. We in America, in the oil and natural gas industry, and I represent producers in the Rocky Mountain West, we in the oil and natural gas industry provide a specific solution today to making Europe and the United States less vulnerable to Russian oil, and that

is implementing policies that don't require taxpayer subsidies. They just require the government to stop the hostile policies against our industry, and that would enable us to put in private investment and to increase production.

We have been stymied since the beginning of this Administration. It has been policies of overregulation, the leasing ban, which, by the way, continues today, because not a single onshore lease has been offered for sale since the Administration started, despite a judge's order overturning that leasing ban, policies that are meant to deny us of capital. We cannot develop new oil and gas production without investment, without credit. That has been a policy that is holding us back.

We can also deliver the same greenhouse gas reductions that natural gas has delivered in the electricity sector, as Mr. Matheson pointed out. We are the primary reason the United States has reduced more greenhouse gas emissions than any other country. So we provide actual, tangible solutions to reducing greenhouse gas emissions, and we have done that since 2005. We have delivered more reduction than wind and solar combined.

We can help our allies around the world in Asia and in Europe deliver the same types of reduction in greenhouse gas emissions while increasing their energy security if we produce more oil and natural gas here at home. We were very pleased to see the announcement last week from the Administration of approving two new liquefied natural gas export permits. That is very hopeful. I am hoping that is a recognition of the reality of delivering that climate change benefit

around the world that LNG provides. We hope that they will continue to move forward with LNG exports as well.

But it is really imperative to have pipelines in order to deliver the natural gas to those LNG export facilities. Policies to move forward with permitting pipelines and other infrastructure are necessary.

Also, we urge the FERC to overturn its policies on natural gas certification and greenhouse gas analysis on pipelines. Those policies are meant to get to an answer of no on infrastructure. We need infrastructure so that we can export our natural gas and deliver the same greenhouse gas reductions that we have enjoyed here at home while making our allies in Europe and Asia more secure.

Thank you very much; I appreciate it.

[The prepared statement of Ms. Sgamma follows:]

Senator Carper. Ms. Sgamma, thank you for joining us. Thanks for your testimony again, and for the time you spent in uniform.

My first question is going to pick on a guy who is a long way away from us today, and it is Secretary Mabus. In Ms. Sgamma's written testimony, she essentially says that without oil and natural gas, "modern life is not possible."

Too many times to count, I have heard witnesses tell me, and tell us, that the deployment of clean energy was impossible, and transition would result in major disruptions in our energy system. Every time, those predictions have turned out not to be the case.

History has shown us that we should never bet against U.S. innovation and ingenuity. U.S. businesses, and with the support of the U.S. Government, taxpayers, have always figured out how to build it faster, cleaner, and more reliable than before.

As someone who has led clean energy and transition in the Navy and in the private sector, Mr. Secretary, would you respond to Ms. Sgamma's testimony? Do you believe that we can grow our economy while reducing our dependence on oil and natural gas?

Mr. Mabus. Mr. Chairman, I absolutely believe that. I agree that these predictions are always wrong. Just look at Naval energy. The Navy has led the Nation in energy transformation since its founding. We moved from sail to coal in the middle of the 19th century. We moved from coal to oil at the beginning of the 20th century. We pioneered the use of nuclear for propulsion in the middle of the 20th century.

Every single time, every single time, there were naysayers that said, this can't be done, you are taking too big a risk, you are

betting on a new technology, like oil, and that you can never make an atomic reactor small enough or safe enough to put inside a submarine.

The ways we can do this, number one, renewables today are cheaper. It is better for the bottom line. It makes our economy, it makes our businesses much more competitive globally.

Two, it insulates us from these price spikes that basically, today, the American economy, and more importantly, American families are being held hostage by dictators around the world.

Three, if we don't do this, as has been pointed out, other countries will, particularly China. If we lose the leadership here, we are going to lose all the benefits that come from it, particularly jobs. As we move toward more electrification, as we move toward more renewables, just from the things that have already been done, we are going to need a million more electricians just in the next few years. Those are solid, good-paying jobs.

We are going to lose the manufacturing ability, we are going to lose the ability to do the research and development that we need to do to lead in alternative energy. If we ignore climate change and the effects that climate change is having due to human activity, and a lot of that is due to the burning of fossil fuels, and the huge impact it has on our economy, storms and fires and natural disasters that are increasing in severity and increasing in frequency.

Last, I will quote a former Saudi oil minister from the country I was the ambassador to. He said the Stone Age didn't end because we ran out of stones; it ended because we invented something better. We invented something better here, and it is time to move to it.

Senator Carper. Thank you for that. I have a quick follow-up question. Before I do that, I ask unanimous consent to place in the record materials demonstrating the effects of global instability from Russian invasion of Ukraine on energy prices in the United States. Without objection, so ordered.

[The referenced information follows:]

Senator Carper. A quick follow-up question, Mr. Secretary, and then I will yield to others on the committee.

Ms. Sgamma's written testimony also includes concerns about the reliability of clean energy. One of your first acts following your confirmation as Secretary of the Navy in 2009 was the announcement of an ambitious plan to transform the energy use of the United States and move away from reliance on fossil-based energy to cleaner sources.

Question: during or after the transition to clean energy, did the Navy experience any reliability concerns? What underlying factors motivated you to endeavor in this generational transformation of the Navy's energy use from fossil sources to cleaner fuels? I will ask you to be fairly brief in responding, I would appreciate it. Thank you.

Mr. Mabus. We experienced no reliability issues at all. First, I would never, ever, ever do anything to lower the combat readiness or the reliability of the United States military. I did this to give us an edge. I did this as a war-fighting measure. My first two years as Secretary, I had to find \$2 billion in unanticipated price spikes from oil and gas. Even in the Pentagon, finding \$2 billion that you hadn't budgeted for is not an easy thing. And so we had to steam less, we had to fly less, we had to train less, which is simply not acceptable.

Very personally, we were losing a Marine, killed or wounded, for every 50 convoys of fuel we brought into Afghanistan. We began to equip Marines with rollable solar panels to put in their packs with portable solar, so that Marines now make much of their energy where they are and where they fight, and they don't have to be resupplied.

Last, when I was there, we had SEAL teams in the field that were net zero in terms of energy and water. I asked a SEAL commander, what change did he notice. He said, well, we had been using generators, and when you turn off the generators, you can hear when the bad guys are trying to sneak up on you, and second, you take a target off your back. That made him and his team far more combat effective.

Senator Carper. Thank you very much for those insights. We have been rejoined by Senator Capito, and I am going to run and vote. I will be back. Thank you all. Senator?

Senator Capito. Thank you.

Mr. Matheson, one issue I have talked about time and time again is the need to be able to build up our Nation's infrastructure. You talked about this in your statement. What issues are rural co-ops facing with regard to permitting and infrastructure buildout? If we are going to go to all electric vehicles, we have to have capacity. Are these permitting hurdles, are they applied equally to no matter what the generation is, whether it is renewables, or whether it is fossil fuels? What are those challenges?

Mr. Matheson. It is a great question. As I said in my oral testimony, if we are going to pursue any type of transition, we have to be thoughtful about how we can do this and have appropriate time. Sadly, when it comes to permitting, time is a problem. You have heard, I am sure, story after story about the length of time it takes to have, whether it is a generation project or if it is electric transmission line permitted. There have been efforts and talk about streamlining in Congress for years about this, but we don't seem to be solving the problem.

I will mention a particular transmission project we are involved in in the Wisconsin area, the Cardinal-Hickory Creek Transmission Line, where it is over a 103 miles of high voltage transmission line. One point three miles crosses federal land, and between the State and between the rural utility service, the federal level, and between the regional transmission operator, myself, it has taken years and years and years to get this transmission project built.

And this is one that everyone thinks is a good idea. Everybody, wherever they are in their politics or whatever they think about different types of generation, they all agree this transmission line ought to get built.

You would like to think we could have a matter-of-fact conversation about the trade-offs of siting this facility and what the risks are and how to mitigate those risks in a timely way. But that is not the way the process works anymore. There is a lack of coordination across agencies; there is a lack of timeliness in terms of how we get things done, and there are too many opportunities for people to throw a wrench in the gears and stop it.

I know you have looked at opportunities to try to streamline. I really appreciate that. But I can tell you from representing a group of 900 co-ops that are actually in the field trying to make things happen that the frustration is palpable and it is real. Wherever we go with our energy future in this Country, this question of siting facilities is going to be part of the answer, right?

Senator Capito. Right.

Mr. Matheson. So, I do think we have to stop just pointing out examples like I have just done and come up with solutions where we can

have a credible, reasonable, thoughtful approach to getting facilities sited in a timely way.

Senator Capito. I think the One Federal Decision you were talking about, if we can get that running smoothly, it is certainly projected to be able to save time, energy, and at least get an answer. I have always said, if the answer is going to be no at the end, tell me no in the beginning so I can make the adjustments that I need to make, rather than drag it out, cost a lot of money and cost a lot of time.

Let me ask you, quickly, on global supply chains, domestic and international. How is this affecting your co-ops? What are you seeing? Obviously, the price of building and building out, but what are you all seeing throughout your rural co-ops in terms of supply chain issues?

Mr. Matheson. Great question, and it is a big problem, and it is for basic materials. It is across the board. It could be for transformers, it could be on our broadband site for fiber optic cable, conductors, just basic stuff to keep the utility running on a daily basis. We are seeing great extensions of lead time to get these types of materials, let alone cost increases.

Our concern is that as inventories drop, we may be one major storm event away from where we don't have the supplies to bring the system back online in a timely way. I get that supply chain concerns are on all sectors of the economy right now. But the electric sector, which is so vital for the day-to-day actions in our economy, we are feeling the pinch in a big way.

I can tell you, quickly, on co-ops. Some co-ops already had supplies that were primarily domestically sourced. They haven't faced the same challenges as some who had foreign source supply. We are working within the co-op world. We have supply chain co-ops that band together to try to find supplies.

But I can tell you, this is a significant challenge. It is not unique to co-ops, I know. In the investor-owned utility and municipal utility, I talk to the heads of those associations. They are feeling the same squeeze.

Senator Capito. Right. It is up and down, whatever business you are in. We just had a school that had an estimate of what it was going to cost to rebuild from a 2016 flood. I just read they have to redo all their plans, because they can't afford what the new cost figures came in.

Ms. Sgamma, thank you for coming. I did read your testimony; I am sorry I wasn't here for it. Let's talk a little bit about what are the top issues that small oil and gas producers are facing right now, and how can we remove some of those barriers. The Chairman talked about methane. I would like to give you a chance to talk about what your industry is doing in terms of capturing methane emissions and how the improvements have been moving along.

Ms. Sgamma. Sure. We have taken voluntary measures, as well as complied with regulations that require leak detection and fixing of any methane leaks. We have significantly reduced flaring of natural gas. Flaring is really necessary when you don't have the infrastructure in place to capture the natural gas off your oil well. So lack of pipeline capacity and a purposeful policies and opposition

from environmental groups to natural gas pipelines are meant to ensure that we can't move forward with oil and gas development here. If we can't capture that methane, we can't even put that well in place. That is one of the things that is definitely holding us up, is lack of pipeline capacity.

Senator Capito. [Presiding.] Senator Cardin?

Senator Cardin. Thank you, Madam Chair. Let me thank all four of our witnesses for your testimony and for your leadership in this area.

I want to drill down a little bit, Secretary Mabus, on the comments you made on cost. Consumers today are struggling with increasing costs, increasing energy costs, particularly at the pump. We recognize that. I think one of the points that you raised that we should be looking at is the efficiency factor of clean energy, that it is more economical and less costly and less subject to change based upon global conditions, if we can handle the production here in the United States and not depend upon supplies from countries of autocratic leaders that can be disrupted for political reasons or, as we see today in the Russian invasion in Ukraine. That is not even to mention the fact that we provide about \$35 billion a year in subsidies to the gas and oil community here.

My question to you is, you were talking about the cost issues and your budget. We recognize that clean energy is vitally important for us to meet our goals in regard to the climate agenda. That is clearly a driving force. Could you talk a little bit more about the costs and efficiency factors of clean energy as we move forward in this debate?

Mr. Mabus. Thank you, Senator. When we moved to alternative energy on our bases, our Navy and Marine Corps bases, where we now get two-thirds of all our energy from renewables, mainly solar and wind, we saved the taxpayers \$400 million. If you look at businesses today, they are realizing that the same thing that does a good job for the planet does a good job for their bottom line, because the cost of renewables has come down so dramatically, and continue to decrease.

Solar decreases about 10 percent a year, the cost does. All alternative energies are coming down and are now cheaper than traditional fossil fuel energies.

It used to be that you would have to make a decision between doing what is right for the planet in terms of climate change or doing what is right for your bottom line. That is absolutely no longer the case. If you want stability in terms of pricing, to keep it from being dictated, because this is Putin's oil spike, there is no doubt about that. This is Putin's price spike. This is leaving the American consumer vulnerable to dictators around the world and vulnerable to these acts like an irrational war.

If you want to have stable prices for energy, they have to be home-grown and they have to be alternative, because they are bulletproofed from the world events. Oil and gas in the last 40 years, there has been very little correlation, frankly none, between American oil and gas production and the price. The price is driven globally. We don't have very much impact on it.

Senator Cardin. I think that is a very important point about the pricing is not based upon the production here in the United States on oil and gas. Your points are so important.

Jim Matheson, first of all, it is good to see you again, my former colleague. It is nice to have you here.

I want to talk about the source of clean electricity. Fifty-five percent is generated through nuclear, of clean electricity. Twenty percent of our total production of electricity is through nuclear. We don't have a level playing field. Senator Carper and I both serve on the Senate Finance Committee, and we have clean energy provisions that we hope will get to the finish line that have production tax credit for nuclear to have somewhat of a level playing field. I already mentioned we spend \$35 billion a year in regard to the oil and gas.

So, what do we need to do in order to modernize our nuclear fleet to reserve what we have, but to modernize it? Because we know the next generation is so much more friendly in regards to nuclear waste materials and risk factors. What policies do we need in order to accomplish that?

Mr. Matheson. It may be a little out of my wheelhouse, but I will say this: I do think you have to have always-available, fully dispatchable power as part of your grid in terms of reliability. Nuclear is a key part of that today. If you want to have a lower carbon footprint for the electricity sector in the future, nuclear has to be part of the mix then, as well.

Representing the National Association of Rural Electric Cooperatives, we have a position in support of nuclear energy and understanding its value for reliability of the grid. I think that the challenge you have is the limited number of plants that get built in this Country. We do not have much practice of building them. As a result, the cost overruns, as you know, off the charts for the few

that are being built here. We have electric co-op exposure in the plant that is being built in Georgia right now.

I think some type of effort to come up with a plausible step to keep the cost of these resources from jumping and skyrocketing so much would be helpful. I think, on the permitting side that, in reference to what I said to Senator Capito earlier, the permitting of a nuclear facility is exceptionally complicated, drags out the process far longer than it takes in other parts of the world. I think there are steps we could take to try to make this a more efficient process.

Senator Cardin. Thank you, and we have bipartisan support on these issues in this committee. Thank you. Thank you, Madam Chair.

Mr. Matheson. Thank you.

Senator Capito. Senator Inhofe?

Senator Inhofe. Thank you.

Ms. Sgamma, every American has been paying the price at the pump for this Administration's anti-American energy policies that they have, and keep in mind, and I think it was said very well by Senator Capito in her statement that when Biden first took office, the price of gas was \$2.38. It is now at a record high. You hear record high all the time, but in this case, you can document that. The record high prior to today was \$4.14, and now it is \$4.25. So it is these policies that are responsible for this.

This Administration has opposed policies that restrict domestic oil and gas production, including cancelling the Keystone XL Pipeline, also putting the policies as he has on oil and gas leasing permits on federal lands. That has been going on, and that is very intentional, and that is what we are talking about right now.

Ms. Sgamma, do you believe that President Biden's energy agenda has contributed to the major reduction in the domestic oil and gas supply?

Ms. Sgamma. I do. His policies, on a number of levels, have been meant to stymie the American oil and gas producer and to buttress up the oil dictators around the world, like in Russia. So if we talk about not wanting to be dependent on dictators, I think the President has a lot to do with that. He could back off some of the policies that make production difficult in the United States.

I would like to answer that absolutely incorrect statement that American production has nothing to do with the price of oil globally, because when we were able to export oil after 2015, the American producer met the increased demand globally, and we helped to keep the global price of oil down. We are the major oil producer in the world, so of course the statement that our production does not affect prices is completely incorrect.

Senator Inhofe. Thank you. Thank you very much.

Today, what could the President do? What could President Biden do today that would set in motion more domestic oil and gas production and bring relief to the American people at the pump? This is something that everyone is concerned about. You can't turn on a show without people complaining about this, and it is so obvious where it is coming from. Just today, what could we do?

Ms. Sgamma. I think backing off on regulation, like the SEC Rules on Climate Change Disclosure, which are specifically meant to get to an answer of no on any new fossil fuel projects by elevating climate change concerns over real pocketbook issues, over real

production in the United States. Because of course, when we don't produce it here, it doesn't mean we don't use it. It just means we import it from overseas.

Senator Inhofe. We import it from overseas.

Ms. Sgamma. Blocking pipelines, too, is a major problem.

Senator Inhofe. Yes. Well, you expect the tax, then, on methane to lead to the increase in energy prices. You would expect that, wouldn't you?

Ms. Sgamma. Right. The estimates are that about \$9 billion of cost to the economy would result from the methane tax, because it is really basically a tax on natural gas. That could be as much as \$85 to \$240 per consumer. Taxing methane is meant to get less natural gas, and natural gas is used for electricity generation, to heat homes, natural gas backs up renewables, which are intermittent. The cost of renewables is higher because they have to have that backup when they can only operate 20 to 30 percent of the time.

Senator Inhofe. That is right.

Mr. Matheson, America is dependent on countries like China, not only for the list of critical minerals, but China controls the mining and processing for a variety of metals in the electricity sector and used in electric vehicles, whether on the critical list or not.

Mandates to decarbonize the transportation and electricity sectors would increase our reliance on China. I think we all understand that.

But as was pointed out by the Chairman in his opening remarks, I have chaired the Senate Armed Services Committee. I am concerned

about national security in a more profound way than I ever have been before, because we know what China is doing.

We know that back in the old days, we used to talk about how America has the best of everything, and we did, for a long period of time. That is not true anymore, and so that is a very serious thing. Mr. Matheson, how can the utility sector work to ensure domestic sourcing for American-mined minerals?

Mr. Matheson. First of all, since I mentioned in my opening statement, since rural electric co-ops serve 56 percent of the landmass in this Country, we serve most of the areas where we would be trying to secure these materials by mining. So increased domestic production across the board for the various products you are talking about, electric co-ops are in those areas.

We would be serving those mines with electric service, and it is an area that we would value, of course, because it is part of the economic opportunity for rural communities. Since we are owned by the communities we serve, we are always interested in those economic opportunities.

But I don't want to diminish what you raised in terms of national security issues. Greater domestic supply gives us greater opportunity to control the situation. I mentioned earlier to Senator Capito, the supply chain challenges we are facing in the electric sector are much more pronounced for the electric utilities that are more reliant on foreign supply.

A number of our co-ops have domestic supply manufacturing relationships, and they still face supply chain challenges, but they are not as severe. So there is no question that if we can find

production of these minerals or anything else in the supply chain for electric cooperatives, a domestic source is preferable.

Senator Inhofe. Well, you know, that is so obvious to most people.

Senator Carper. [Presiding.] Senator Inhofe?

Senator Inhofe. Sometimes I have a difficult time explaining why that is not the case. Thank you, Mr. Chairman.

Senator Carper. You are welcome.

I have two unanimous consent requests, one to place a Resources for the Future study that shows consumers will not be harmed by methane emissions reduction program. The second unanimous consent request is to place materials on the economic impact of wasted energy from methane leakage in the record, if there is no objection.

[The referenced information follows:]

Senator Carper. I just note for the record that we have been developing bipartisan-based, and some of you call it a methane emission reduction program, Before any oil and gas companies require to pay a fee, they would be offered assistance, up to three-quarters of a billion dollars of money would be set aside to help pay down the cost for actions taken by oil and gas companies to reduce emissions before any fees would kick in. So there you go.

I think next is Senator Whitehouse. Senator Whitehouse, please.

Senator Whitehouse. Thank you, Chairman, and thank you to all the witnesses for being here. This is going to be a lively discussion, because we have dramatically differing views on this committee as to what is actually going on here.

I feel, listening to much of what has been said, like those advertisements that you sometimes see on TV where some old band is selling its CD of its greatest hits, and all the old songs that you are supposed to love. They are selling you the CD package. A lot of what we are hearing today sounds like the CD package of the oil and gas industry's greatest hits. I think the fact of the matter is that sellers in a market economy, which is what we are, set price. The price that the sellers have set is a very high price.

Ordinarily, the market intervenes to put downward pressure on prices. But the market for oil and gas is peculiar, because it is based on an international cartel that sets international prices and a bunch of international speculation, particularly driven by the conflict in Ukraine and the uncertainty in Russia.

So there is an international price that is completely unhinged from cost. We have all seen this slide that the President used that

shows what has happened, as the prices went up, up went the prices at the pump. Then, per barrel prices dropped dramatically, and yet, the industry kept its prices up.

So, this whole red zone is basically excess profit. It is not related to a market economy. It is taking advantage of excess prices from an international cartel.

We have another graphic here that shows the same thing: domestic oil production and the price of gasoline. There just isn't much of a, let me bring it down a little bit so the camera can see it there, there just isn't great correlation between the two. It is not very dynamically connected.

So we have this kind of oil cartel and a very small group of very big oil companies that are setting prices and reaping unbelievable profits. What are they doing with those unbelievable profits? They are not turning them back to people at the pump.

In fact, here is Darren Woods, President and CEO of ExxonMobil, which is the biggest of the lot, and he is saying exactly what he is going to do. He is going to pay back his lenders, he is going to raise the dividend to his shareholders, and he is going to buy back shares, which boost share price, and coincidentally, his compensation.

So none of it is going back to consumers. They are not even mentioned in this statement. But the industry PR machine is out full blast, trying to blame this on people who don't have the power to set price.

It is a little hard to accept that, which is why I have proposed that the companies at least split that excess profit with consumers and send that money back to consumers' pockets for them to spend. If

they want to spend it on more gasoline, great, they will have money in their pockets to do that. If they want to spend it on food or pharmaceuticals or rent or whatever they want to spend it on.

But share the windfall profits. Claw back some of the excess profit that reflects the disconnect between actual domestic production cost and these international cartel-driven, speculator-driven markets that the companies are riding along to pocket tens of billions of dollars. According to Exxon, they are spending \$10 billion just on the share buyback part of this bonanza.

So, there is definitely money there that could be used to reduce costs for consumers, and they are definitely not interested in doing that, and they are definitely not in a real market, because they are dealing with this international cartel, surfing on the cost, on the price that is set by an international cartel full of not-very-great people, Saudi Arabia, Iran, Russia, Venezuela. I am really thrilled that that is the group that is setting domestic prices off of which our oil companies run, and then that our oil companies, when they have that opportunity, don't dial it back to help consumers. They just pocket it. Good for shareholders, good for CEOs, good for stock price, not good for consumers.

That is what we are dealing with. That is the short-run problem. The long-run problem is that here in Congress, we have been buffaloed by the oil and gas industry forever to create a completely unfair environment for renewable energy so we remain hooked on oil and gas.

If we had solved this problem a decade ago, we wouldn't have this vulnerability. If we had solved it 20 years ago, we wouldn't have this vulnerability. If we had solved this 30 years ago when Senator

John Chafee of Rhode Island was holding hearings in this committee pointing out what was driving climate change and how difficult this was going to be, we wouldn't have this problem now.

We are hostages to the oil and gas industry, which is now telling us that the solution for the hostages is to buy more oil and gas. What could be more expected?

I yield back. Oh, I am sorry; I went over. I yield nothing back. My apologies to my colleagues.

[Laughter.]

Senator Carper. You are welcome, thank you for those comments, Sheldon.

Next, Senator Cramer, and then my notes here indicate Senator Stabenow, you follow Senator Cramer. Senator Lummis, I think you are going to follow Senator Stabenow. Senator Cramer, you are recognized.

Senator Cramer. Thank you, Mr. Chairman. Thank you all for being here, witnesses.

I do have to respond a little bit, because Senator Whitehouse I think is wrong. Actually, I think it is dynamically connected. It is not statically connected. When he talks about price, the producer gets paid for producing oil and the price at the pump. It is quite dynamic, but it is not static.

In fact, in response to a question to you, Ms. Sgamma, you referenced the oil export ban being lifted. As I watch the markets today, and I see that WTI and Brent are roughly \$3 apart, I remember that before the ban, they were \$30 apart. In other words, the United States has helped bring down the cost of oil globally. As opposed to being a price taker, we have become a price maker.

That is good for the world. That has enhanced productivity, and it has brought prices down. Frankly, if we do a lot more of it, we could be the price maker yet again. We have this window of opportunity.

Never in my wildest dreams, Congressman Matheson, when I would see my dad come home from climbing poles for Cascone Rural Electric Cooperative, did I imagine I would be meeting on an almost daily basis with European energy leaders pleading with us to help them meet a demand that they have and they have cut themselves off of in Russia. We have a moment to do it cleaner, greener, better by investing more in what we do really, really well.

While I appreciate the illustration of turning albums into CDs into digital music and celebrating the oldies, quite honestly, I don't want to be the leader of a new world order. I want to be the leader of a free world order. That is what the oil and gas industry has provided us in this Country, and what we are able to provide the world today. If we stop -- listen, I am all for long-term aspirational goals. We can have a 2050 fantasy. I don't mind that, but it is being met by a 2022 reality, and we ought to step up to that reality today and enhance the opportunity.

So, Mr. Matheson, with regard to your testimony about rural cooperatives and co-ops not having the commercially available technologies to have baseload electricity generation and have it all be carbon-free, there are some opportunities, and Senator Cardin is right, and Senator Whitehouse is right, and Senator Carper is right. There is a lot of bipartisan support for some innovation and

technological advancement incentives around here. We need to do more of that.

So you know, Minnkota Electric in North Dakota is on the very forefront of a commercial opportunity for carbon capture utilization and storage technologies. But you also, I am sure, know that there are some challenges to that. Could you speak to that just a little bit and how we could maybe do more to provide opportunities to innovate?

Mr. Matheson. Sure. I would be happy to do that, and I appreciate the question. Foundationally, you have to have always-available supply to maintain reliability 24/7, and I know I have said that a couple of times. I can't say it enough.

Senator Cramer. I agree with you.

Mr. Matheson. We need to be thoughtful about how we talk about this in terms of a portfolio approach to all the source of electricity generation in this Country. It is going to transition over time, but the portfolio has got to maintain reliability and affordability.

You mentioned specifically the Minnkota Project. That is right, it is a commercial-sized carbon capture sequestration effort at a coal-fired power plant. It is an exciting opportunity. It represents a commitment by electric co-ops to try to be part of the solution.

What can Congress do? Well, there is this issue of Congress often uses tax credits to incentivize these things. We are non-for-profit electric cooperatives, so we do not benefit directly from those tax credits. I would suggest, whether it is renewables, whether it is carbon capture, or whatever type of tax credit Congress wants to

offer, we and the municipal utilities are on the outside looking in, quite frankly.

So if Congress wants to incent investments in these emerging new technologies, I would suggest you may want to create that incentive for everyone in the electric sector, and it is call direct pay, is the term we use. It is a very popular item. I know it went through the Senate Finance Committee in a marked-up bill late last year. So I think there is an opportunity to help incent that investment on the electric co-op side as well.

You asked a question about what you could specifically do; that would be my number one ask.

Senator Cramer. I am with you. Thank you.

I have five seconds, so Ms. Sgamma, really quickly, what can we do to enjoy this incredible abundance of resources that we have in a way that is both clean but also recognizes America's leadership?

Ms. Sgamma. We produce it here. We produce it here more cleanly than any other country. More greenhouse gas emissions if you import it from overseas, so just produce it here.

Senator Cramer. I worry a lot about the signals being sent by the SEC this week, Federal Reserve nominees and others, we can get into that if we do another round. Thank you, Mr. Chairman.

Senator Carper. You are welcome. Thank you very much.

Next, Senator Stabenow,

Senator Stabenow. Thank you very much, Mr. Chairman. This deserves a lot of debate. We have very, very different views on this.

I just say, coming from Michigan, that in 1914, there were all kinds of articles about Henry Ford and Thomas Edison, who were

creating the first vehicles, and they wanted to do a battery technology. They had to debate about range. But instead of them getting tax incentives to do that, two years later, the Congress of the United States embedded in the tax code, for over 100 years now, major tax credits for oil and gas with no connection to the pollution that it involved.

So here we are today. We picked a winner over 100 years ago. They won. Now we are trying to level the playing field as we tackle the climate crisis because of carbon pollution.

I also just want to indicate, we are the largest oil producing Country. In the last year, the top 25 largest oil companies made over \$205 billion in profits in the United States, Mr. Chairman, and yet our prices are going up at the pump. Our prices are going up, and it is interesting because the last time a barrel of oil was \$96, gas was \$3.62 cents a gallon at the pump. Last week, it was \$96 again. This time, it was \$4.31 cents, not \$3.62, \$4.31. So this is about what the market will bear.

It is really about, in my judgement, there is price gouging going on. We have 9,000 approved leases that we aren't using. So if in fact, supply production does relate to prices, let's use the leases. Let's produce more.

But what I really want to talk about is where we do from here and how we can both support the biofuels that will get us to a cleaner future and electric vehicles, so you can drive by the pump and not worry about what the sign says.

I first have to ask though, I know that in your testimony, Ms. Sgamma, you talked about the fact that electric vehicles won't work

because we don't have the critical minerals, we don't have the capacity to do this. Certainly, this is a challenge we are aware of, but we have our companies that have weighed in, the iconic Ford Motor Company, General Motors, Mary Barra, who is now the chair of the Business Roundtable, saying by 2035 that they are only going to produce electric vehicles. That is what GM is saying. Ford is all in.

Do you think they are uninformed?

Ms. Sgamma. I don't think you have characterized what I said in my testimony correctly. I don't say they don't work, but I said that a realistic approach is to recognize that the increased use of natural gas in the electricity sector has already been the equivalent of 190 EVs on the road. So, we have delivered the same reduction as would 190 million electric vehicles. There are 11 million electric vehicles globally today, and projections that we could get to maybe 145 million by 2030.

Senator Stabenow. So you are saying that natural gas is cleaner than zero emission electric vehicles?

Ms. Sgamma. I am just saying that natural gas has already delivered the equivalent reduction since 2005 of 190 million EVs on the road.

Senator Stabenow. I think it is important to, because I hear this all the time, opponents of electric vehicles saying that electrifying our vehicle fleet will result in us being dependent on China for batteries and rare earth materials. That certainly is something we need to focus on, which is why we need a whole range of

tax credits and strategies to make sure we are bringing those jobs home and supporting people in the vehicle industry.

They are pretty smart. They wouldn't bet the farm. They wouldn't bet the whole company if they didn't think that they would be able to get there.

So I want to just ask, I could go through I am going to run out of time, and go through everything we have already invested, what we need to do. Ms. Stainken, do you agree that a suite of policies and incentives are needed for the U.S. to remain a leader in electric vehicles, and should we be doing that?

Ms. Stainken. Yes, absolutely. I fully support our transition to electric vehicles, and the Bipartisan Infrastructure Law laid that perfect foundation for that. Now it is time to build on top of that for a whole-of-nation approach.

Just to add on to the critical minerals piece here, geologically speaking, China does not have all of the resources or the reserves of critical minerals. In the U.S., we actually have a very robust share ourselves and our allies. So together with bold policy support, the United States and our allies, we can extract in an environmentally safe way, we can process the minerals and make the batteries to meet the demand.

Senator Stabenow. I absolutely agree. We can do it in America, we just need to be bold and focused and invest in America.

Just one other quick thing. Secretary Mabus, how would ceding the clean energy manufacturing sector to China harm U.S. economic and national security?

Mr. Mabus. I think it harms it in so many ways. Our military is dependent on so many of these technologies. If we don't have the capacity to make them here at home, we don't have the capacity to do the research and development here at home, we are going to raise the risk to our national security pretty dramatically.

As you pointed out, we have the ability to do this. We have the minerals. What we lack are the incentives, are the policies to make sure that we keep those manufacturing jobs, the manufacture of those batteries and the precursor materials here in the United States. I think it is incredibly important to our national security.

Senator Stabenow. Thank you. Thank you, Mr. Chairman.

Senator Carper. Thank you, Senator Stabenow.

Senator Lummis is next, and joining us right after Senator Lummis will be Senator Duckworth, who is going to join us by WebEx, then the Marine Colonel from Alaska will follow that. Senator Lummis, please.

Senator Lummis. Thank you, Mr. Chairman. I want to say how nice it is to see my former colleague from the House, Jim Matheson. Great to see you.

Thank you for holding this hearing today, and Ranking Member Capito, thank you for doing this, as well.

One area that I hope to find agreement on this subject is unleashing nuclear energy in America. My first question is for Mr. Mabus. In your testimony, you advocate for prohibiting oil and gas imports from Russia as a means to cut off Russian revenues. Isn't the same true, restricting Russian uranium, which also provides direct revenues to the Russian government?

Mr. Mabus. I think cutting off all Russian energy revenues is incredibly important. Coming from the Navy, where we have used nuclear for propulsion from the mid-1950s until today, safely, with no accidents, I do think that nuclear, particularly some of the new technologies, the small, modular reactors need to be a part of the mix.

Senator Lummis. Thank you. I would note, the last questioner mentioned how incentives were needed, tax incentives. I would argue that regulatory relief is the more important place to look, especially when it comes to rare earth minerals and uranium. These are the products that are held up and stymied in the United States, including in my home State of Wyoming, because it is the regulatory burden and the length of time and the cost to get through all those regulatory hurdles that snuffs out the financial capability and wherewithal for these companies to move forward and develop these rare earth minerals and uranium in the United States. So let's address the regulatory side of it as well.

Ms. Sgamma, my colleague here from North Dakota and I both sit on the Banking Committee. We are aware that the Federal Reserve nominee that was rejected on a bipartisan basis was advocating limiting credit access to energy companies, and her writings were genuinely hostile to the energy industry.

In light of the fact that this became an issue that ultimately caused her to not be accepted, do you think it is appropriate for the SEC to be issuing a climate proposal?

Ms. Sgamma. SEC simply doesn't have the authority to regulate climate change. Congress hasn't even passed a law, why should an agency just assume that regulatory power?

Senator Lummis. We will note that ESG, as BlackRock has asserted, because of its market power, its ESG portfolio demands are really driving the market in that direction anyway. Government doesn't need to do that. Again, Ms. Sgamma, could you expand on the greenhouse gas reduction efforts and outcomes by the oil and gas industry that you detail in testimony?

Ms. Sgamma. I would like to highlight the fact that in the electricity sector, fuel switching to natural gas has reduced more greenhouse gas emissions than wind and solar combined. We have reduced about 3.5 billion metric tons of greenhouse gas emissions, compared to 2.1 billion by renewables. We did that without incentives; we did that without subsidies. We did that through market investment from the private sector investment and just increased use of production of natural gas.

Senator Lummis. Natural gas, especially in this Country, is so incredibly clean that I am actually surprised that climate advocates don't highlight the benefits of natural gas in their agendas. Because climate change is climate-based, and globally based, I would argue that the cost and benefits associated with helping countries like India with their greenhouse gas emissions by helping them switch to natural gas or LNG would globally be enormous, so much bigger than what we could produce here in the United States in terms of greenhouse gas reductions. My gosh, helping India do the same thing with the same amount of money that takes us to get little tiny incremental

benefits, if we would help them with that amount of money, we could have huge, huge incremental benefits for the global climate.

Excuse me, my time has run out. I yield back.

Senator Carper. You can't yield back; you have nothing to yield.

[Laughter.]

Senator Carper. My staff just handed me a note that says, natural gas fracking enjoyed a production tax credit for 20 years from the 1980s to the early 2000s, just for the record.

Okay, let us see who is next.

Senator Markey, somehow you slipped ahead of these folks. I am not sure how you did that, but you are next.

Senator Markey. Thank you so much.

Again, if the oil and gas and coal industry have a tax break for 100 years, all we are looking for is a little equal treatment. If we had the same kind of predictability for 100 years, I think we would feel really good about our future in renewable industry, and if they call that for renewables, socialism, then that is what you call it. Give us whatever the oil, gas, and coal industries had for 100 years in terms of their protections, and we will be very happy with that in terms of the protections.

If we are going to break our dependence upon Putin's dirty energy oil, the oil companies have had years to live up to their promises of affordability and security. But they weren't just selling oil. They were selling snake oil to American consumers. Take their argument, for example, that lifting the export ban would help American energy independence. In 2014, the year before Congress lifted the ban on exports, nine million barrels a day were imported from other

countries. Today, believe it or not, the United States now exports 8.6 million barrels of oil a day. We export it out of our own Country; 8.6 million barrels. That wasn't really what the promise was of the oil industry in 2015 when we lifted that ban. So, we can see increasingly that American consumers are exposed to the global price fluctuation caused by Putin and Chinese energy demands and other external forces.

Secretary Mabus, first, I would like to thank you for your great service to our Country. As the U.S. remains attached to global oil markets and dependent on oil and natural gas as a result of big oil's business decisions, do you agree that we are running a constant risk of playing into petro-states and undermining our security and that of our allies, in addition to fuel instability from climate change?

Mr. Mabus. Absolutely, on both counts, Senator. The fact that we allow these tyrants and dictators like Putin to basically hold our families and our economy hostage for their bad acts, and we are not addressing climate change nearly as strongly as we should in order to prevent some of the really terrible things that we are already beginning to see happen. So I think both the things you said are absolutely true.

Senator Markey. Thank you. By the way, it is great to see my old friend, Jim Matheson, here. A great Congressman and a great friend.

So, here is where we are: we have, right now, 6,000 leases that have been bid for by the oil industry on onshore public lands, so about two bucks a barrel. They are not drilling on those right now.

There are 3,000 leases offshore at about two bucks an acre. They are not drilling on that as well.

But let us just go even further. They have 6,000 leases that they are already drilling on that they have just stopped drilling on that are already about half drilled. They are not drilling on that either.

So I just keep hearing drill, baby, drill, but the reality is that if we want to get real and move to our greatest strength in our Country, it has got to be plug in, baby, plug in. Because for every 16 million all-electric vehicles which we deploy in the United States, we back out all the oil that we import from Russia. That is just the reality. The next 16 million all-electric vehicles would back out the Saudi oil, et cetera, et cetera.

That is why the tax breaks for all-electric vehicles, the batteries, are so important. We can tell Russia we don't need their oil any more than we need their caviar. We can tell Saudi Arabia we don't need their oil any more than we need their sand. We can do it, but we have to unleash this incredible revolution. And that is all in the legislation that is still pending. We take this as our moment, our signal, to be able to move to the future.

EV is electric vehicle, but it can also stand for evading violence, getting ourselves into wars around the world, funding despots, autocracies, where it is completely avoidable because we put 70 percent of the oil we consume into gasoline tanks. It is something that we can cure ourselves of, and also reduce greenhouse gases and also protect consumers from crazy price spikes, the way we see right now.

The National Climate Bank that came out of this committee, that is part of the solution. So are so many of the other programs that we have been considering in this committee and are all ready to be passed.

But if we are going to be serious, we have to do everything we can to pass those tax breaks, pass the Climate Bank, and send a message to these countries around the world, that finally, America as a technological giant is going to rise up, because right now, we have oil companies sitting on 15,000 leases that they are not drilling on because they are saying they are not making enough money.

That just can't be how we protect American security, the American economy, the environment of our Country, and ultimately our moral standing in the world. If we have a capacity to do this, we should unleash that revolution.

Thank you, Mr. Chairman.

Senator Carper. Senator Markey, thank you.

Senator Sullivan, you are next, please.

Senator Sullivan. Thanks, Mr. Chairman, and of course, it is always good to hear from our friend from Massachusetts.

Senator Carper. We thought it would be nice to pair the two of you, side by side.

Senator Sullivan. I don't agree with him on a lot of these issues. Just a reminder, the Administration put a moratorium on any oil and gas leasing, and by the way, any permits to drill, that is a more detailed requirement. They are still sitting on 4,621 permit to drill applications that they have stopped, so we have a lot of difference on this.

But here is an area where Senator Markey and I probably agree: he talked about a revolution. He talked about greenhouse gas emissions. Let's get that up there. I want to talk about this chart for quite some time, because it never gets the attention that it deserves. Right here, this shows that from 2005 to 2020, the United States dropped its emissions of CO2 emission by 970 million metric tons.

Let's start with you, Ms. Sgamma, and Mr. Matheson. That is a pretty remarkable record, isn't it? Look at, relative to China, relative to India, relative to any major economy in the world since 2005, the United States has reduced greenhouse gas emissions by almost 15 percent, best in the world. Isn't that correct? For almost two decades, correct? Everybody agree with that? Those are the facts. How did that happen?

Ms. Sgamma. Increased use of natural gas is the primary reason.

Senator Sullivan. Correct. It was the revolution --

Ms. Sgamma. The Shale Revolution, yes.

Senator Sullivan. -- in natural gas. Had every other country in the world had a record like this, where do you think we would be in global emissions? Again, panelists, you guys can all jump in. These are facts. Nobody ever talks about them, because they are inconvenient truths, as Al Gore said. I was thinking about someone else, but that is a whole other story.

Mr. Matheson, do you want to comment on this?

Mr. Matheson. I think from an electric cooperative perspective, yes, we have seen a reduction of emissions, I mentioned it in my testimony, primarily driven by increased use of natural gas. We also have had --

Senator Sullivan. But I mean, this is astounding, isn't it? I mean, we are the leader in the world by far. Correct?

Mr. Matheson. Yes, the chart says it.

Senator Sullivan. Yes, and China, of course, and India are going through the roof, correct? So, my question always is to the Biden Administration, why would you stop that? Right now, just look at the FERC's latest ruling. They all seem to be focused on shutting down the production of oil and gas. If this is the record right now, do you think it makes sense, Ms. Sgamma, to shut down the production of natural gas in America, or make it harder to produce, like the FERC's latest rule just did?

Ms. Sgamma. It does not. If we really wanted to provide meaningful solutions to climate change, we would look at increasing our exports of natural gas to the world so that they could deliver the same type of greenhouse gas reduction.

Senator Sullivan. That is a great segue, thank you. Senator Lummis, Senator Cramer, and I, we put forward this plan several months ago. We worked on it for many months. It is our American Energy Jobs and Climate Plan, and it would do more than almost anything, because it focuses on that.

Let me give you an estimate. We ran some numbers. If the United States significantly increased exports of a clean-burning American natural gas globally to India, we already export to India, we already export to China, what do you think the global emission reductions would be? Do you have a ballpark figure? I can give it to you.

Ms. Sgamma. I don't have a ballpark figure, but they would go down. But the problem is, we can't build pipelines so that we can supply our LNG export terminals.

Senator Sullivan. The answer is about 9 percent, globally, 9 percent, which is remarkable. That is modeling that we did as part of our plan, and it is based not on some pie-in-the-sky predictions that John Kerry and others make when they go around the world, telling countries not to buy American natural gas, can you believe that? That is what he does, which is, to me, remarkable, almost un-American.

But how could we get to this? What are your recommendations where we can take what we are doing in America, and could you imagine if the rest of the world did what we are doing, what greenhouse gas emissions globally would do? They would dramatically drop. It would empower America in terms of our jobs, in terms of our energy, in terms of lower greenhouse gas emissions here and abroad.

What more can we do to make that a reality, besides adopting the Sullivan-Cramer-Lummis plan, which we know that you are all very enthusiastically supporting?

Ms. Sgamma. Right. I think, and I know it is things you have addressed as well, is we need to stop the overregulation of the industry. Of course, we are heavily regulated, and we should be, but it is the additional regulations that they continue to pile on that are meant to get to an answer of no when it comes to natural gas projects. Move forward with the infrastructure, the pipelines, LNG terminals, so that we can export that same greenhouse gas reduction to the rest of the world.

Senator Sullivan. Great. Thank you.

Thank you, Mr. Chairman, and I would welcome the chance to have a hearing on our plan. We think it would be very bipartisan. Many issues discussed here today are in the plan, and it would have an impact like this.

Who can argue with this? I don't even think my friend, Ed Markey, can argue with this. That is real success, and we need to continue it, not try to curtail it or shut it down.

Thank you, Mr. Chairman.

Ms. Stainken. Mr. Chair, if I could just add one more thing to that?

Senator Carper. Please.

Ms. Stainken. I would like to say, from 2005 to 2020, I personally was working in the solar industry at that time, and that is when we saw the great advent of the renewable energy industry, solar coming online, wind coming online. So those reductions from the United States are all due to great policies that we adopted here to advance renewable energy.

Ms. Sgamma. But not as much as natural gas.

Senator Sullivan. With all due respect, those reductions that I am showing right there almost have zero to do with renewables. I am an all-of-the-above policy promoter in terms of energy, but that chart is due to the revolution in natural gas, and if you are claiming otherwise, you don't know what the facts are.

Thank you, Mr. Chairman.

Senator Carper. Ms. Stainken, do you want to finish your comment?

Ms. Stainken. I would just say, in terms of China here, I mean, I think we need to be really aware of the made-in-China 2025 strategy there, which is advancing them towards transportation electrification. They have their own policies there that want to get off oil for the same reasons that we are seeing here, because of the price spikes and the volatility there. They want to be advancing in electric vehicles because of the critical minerals processing that they control right now, and they want to be looking towards adopting autonomous vehicles and 5G technology, which is the future of a lot of different facets of their economy.

So, I think we really need to keep an eye on China and what they are doing, and if they are moving forward aggressively with transportation electrification, then we need to do the same.

Senator Carper. Thanks so much.

I think Senator Duckworth is trying to join us by WebEx. Senator Duckworth, are you out there?

Senator Duckworth. I sure am, Mr. Chairman. I am so glad we are having this hearing, thank you.

Senator Carper. Thank you, ma'am.

Senator Duckworth. I just want to start off by talking a little bit about oil and the global economy. The narrative that one individual in one country can control the global oil economy is a false narrative. Additionally, the narrative that more leases would decrease today's gas prices and immediately help secure energy independence from Russia is also a false narrative.

There are almost 9,000 leases on Federal lands right now that go unused every year, and new leases take three to ten years to get

online to start contributing to the global market, with little comprehensive effect. In fact, there are 3,000 leases where the oil companies have started drilling, have all the permits, have all the approvals, and they simply have stopped drilling because that was a business decision they made.

For example, Keystone Pipeline, if operable today, would only impact our global production by less than 1 percent. The United States is the largest producer of oil and natural gas and will produce more oil than ever before by 2023, so the ability to produce is not our problem.

The oil market works like most markets. It is impacted by supply, demand, and market speculation on future prices. Recovering from a global pandemic, coupled with the Ukraine crisis, are naturally going to have an impact on our oil futures. We can't control that.

However, one of the major contributors to the oil market that we do control is production or supply. Selling SPR is helpful, but without supply to meet the demand, prices will rise. That is simple economics.

Unfortunately, big oil controls production, and these private businesses are choosing to spend their capital elsewhere. This attitude of using their funds to pay high dividends rather than increasing production of oil is incredibly upsetting. They could increase production, start drilling again in those 3,000 leases that they already have permission and have already begun production on, but they choose not to.

We had big oil's back when disaster hit, and it is time now for them to repay taxpayers with an increase in supply, which is very much

within their control. Taking advantage of a global crisis to the financial benefit of an industry is immoral behavior. It reminds me of some oil companies' actions immediately following Hurricane Katrina, where they hiked up rates while people were drowning. Excessively increasing oil prices and unreasonably decreasing or halting supply to increase your profit margins is shameful.

That is why I am introducing the Gas Price Gouging Prevention Act, making it a federal crime during a period of an international crisis affecting the oil markets to sell oil at a price that is unconscionably excessive and indicates the seller is taking unfair advantage of the circumstances related to an international crisis to increase prices unreasonably. Protecting hardworking American families from corporate greed, in my view, should be a bipartisan goal, as I hope this bill will be.

Of course, the legislative process can be difficult and lengthy. We all know that. And we must also push the Federal Government to exhaust all existing authorities to crack down on greedy price-gouging practices.

That is why I called on President Biden to direct Attorney General Merrick Garland to establish a gasoline price gouging enforcement task force to carefully monitor and investigate oil and gas markets for potential violations of criminal or civil laws, including gasoline price gouging. These actions will signify that Congress will not sit idly by and allow any corporation to abuse their power by unfairly taking money from hardworking American families.

Saving families money at the pump is also why I joined forces with my Republican Colleague, Senator Ernst, to introduce the

Homefront Energy Independence Act, that will incentivize biofuel production and allow for the year-round sale of E15 fuel. This will give families a significantly cheaper fuel option at the pump, saving more than 50 cents per gallon, which leads, finally, to my first question.

Secretary Mabus, I have been a huge fan of yours over the years. I think that if we have learned anything from the market these last few years, it is that we must lower our dependence on fossil fuels and shift to renewable energy, because if we remain fully and solely dependent on the oil market, we will continue to have an erratic future.

While you were Secretary of the Navy, part of your admirable goal to decrease the Navy's petroleum consumption was the use of ethanol blends and E15. As gas prices continue to increase and American families are left paying unbelievable prices at the pump, do you think, Secretary Mabus, that having E15 fuel as a choice during the coming summer months will be a helpful alternative to combat high gas prices and reduce petroleum production?

Mr. Mabus. Senator, I think in the near future, that is one way we can reduce what people are paying at the pump. You are right, we went to flex fuel vehicles, we went to agricultural biomass, which is what these things come out of. As you look to the future, when you get to second generation biofuels, you are going to be able to use the corn stalks, the stover, the wheat stalks, to do fuel so that you can sell the corn or the wheat for one thing, you can sell the stover for energy, and it will not only lower the price at the pump, but it will

give American farmers a whole new energy stream, which a lot of them desperately need.

Senator Duckworth. Thank you, Mr. Secretary.

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

Senator Carper. Thanks so much for joining us, Senator Duckworth, by WebEx.

Second round for Senator Markey, and then we are going to have to wrap up. I need to leave fairly soon, but go ahead, go right ahead, please. You are recognized.

Senator Markey. Thank you. I appreciate that, Mr. Chairman, very much.

Again, I just want to come back to the point that I had made earlier, which is that there are 9,000 leases on Federal lands, offshore and onshore, that the oil and gas industry have already won and purchased. If they wanted to drill, they should have been drilling.

Of course, they didn't, but to come in then and say they need more leases, when they haven't even used the ones that they have already purchased from us, that would be foolish on the part of the American taxpayer, because they should either use it or lose it. Use the ones you have or lose them, give them back to us, before you start asking for more leases that you are going to be using.

Again, there are 6,000 other partially drilled operations all around the Country that they have just stopped. They are already permitted, those 6,000. They are not drilling on them right now, either.

So just show us some good faith and start drilling there. You already got the permits. If you really care about it, stop asking for more when you haven't even used what you have already got, especially the ones that are already half drilled, already partially drilled. Get to work. Get us that oil and gas, but don't say we are stopping you. The Democrats on this committee are not stopping you. Go and do it anytime you want.

Again, when it comes to the renewable revolution, which we keep hearing is not the answer, well, here is the good news: renewables are cheaper, and their prices are stable. We actually can't say the same thing about oil and gas that we can say in terms of the pricing. Ninety percent of electricity waiting to be connected in the United States is renewables. Can I say that again? Ninety percent of all electricity waiting to be connected in our Country is renewables right now.

So if I may, because I can see you have a superior educational background at Boston College, Ms. Stainken, could you comment on that? Am I accurate in my analysis?

Ms. Stainken. Yes, Boston College is a great university. Go Eagles. I appreciate your accent, too; it takes me right back.

Yes, absolutely. Renewables, they are ready to be connected to the grid right now, and that is going to power our electric transportation future.

I would just like to point out, too, you were talking about the level playing field. Well, the United States spends, annually, \$80 billion defending our oil investments, and China right now has invested \$60 billion over the past decade for their transportation

electrification future. So we have \$80 billion in one year here and \$60 billion over the decade that China has been doing to take the commanding lead with transportation electrification. Let's talk about the level playing field.

Senator Markey. So, what you are saying is, when you are deploying wind and solar here in the United States, we actually don't need the United States military deployed, as they are in the Middle East, to make sure that those tankers can come?

Ms. Stainken. That is exactly what I am saying, absolutely.

Senator Markey. That doesn't fully get factored in at all, or it doesn't get factored in at all. They want to pretend it is so; that is just some, like greenhouse gases are an externality, they really shouldn't be counted. So too is the military budget of our Country, so much of it disproportionately targeted towards the Middle East where, coincidentally, the oil that we import is coming from.

So, can you expand upon that just a little bit more?

Ms. Stainken. Sure. The electricity that is powering electric vehicles, that is being generated domestically here in the United States. It is cleaner; it is safer; it is more reliable here. We are creating great, excellent jobs here by expanding, Jim can say it too, by expanding our electric generation here.

There was actually a report done by the Department of Energy in 2019 that showed that annually, we are putting on about an additional 12 gigawatts of electricity generation onto the grid that can more than meet the demand of electric vehicles coming on.

Senator Markey. I agree with you 100 percent. We now actually generate 200,000 megawatts of renewables a year in the United States.

Back in 2009 when Joe Biden and Barack Obama were being sworn in, it was 2,000 megawatts of solar total in history and 25,000 megawatts of wind. Now, we are up to 200,000. It wasn't as though, all of a sudden, it got windier or sunnier, it is just that we got a lot of those obstacles at the State and federal level out of the way.

There is still more work to be done, but it includes ensuring that we are incentivizing transmission lines so we can get it from where it is being generated, wind and solar, to where it is needed, and that we also pass those tax breaks for the generation of wind and solar, onshore and offshore.

I will add that we also passed the bill that is still pending, President Biden's bill for about \$40 billion worth of tax breaks to actually manufacture the wind and solar here in the United States. That is critical as well, so that we can just say "made in America" for wind and solar as it comes down and we capture it. Then, the workers actually manufacture all of the technologies that accomplish that goal. It is all there, and it has nothing to do any longer with Russia or with the Middle East. We are energy independent if we do that.

But of course, that is going to be blocked. And who will be blocking it? Who will be trying to stop it? It will be the oil and gas and coal industry, because they know that if we get the same subsidies, the same opportunities that the other industries did, that we will see this technological revolution unfold.

I thank you, Mr. Chairman, very much for the opportunity to have a second round. I yield back.

Senator Carper. You bet. Thank you so much for joining us for a second round.

Baseball is about to get started. Folks are showing up for spring training. We are going to start playing real games in a couple of weeks. They have a term in baseball when a pitcher telegraphs his or her pitch. What it means there is something in the way they hold the ball or the way they wind up, release the ball, tells you whether or not they are throwing a split finger fastball, a curveball, a slider, whatever.

I am going to telegraph my pitch. The last question I am going to ask of this panel, including Secretary Mabus, is where is some consensus? Where do you think there is agreement?

One of the things this committee is very good at, when you look at the Bipartisan Infrastructure Bill, roads, highways, bridges, transportation infrastructure, we reported out of this committee unanimously. Water, wastewater, sanitation, flood control, we reported out of this committee a year ago unanimously.

I sense there is a fair amount of consensus here. We may not recognize it all during the course of this hearing, but there is consensus here. I am going to ask us to come back to that. I have a couple other questions I am going to ask, but I wanted to think about telegraphing that pitch and think about what you might want to say in response, okay?

This first question is a question for Ms. Stainken. It deals with short-term solutions. I think all of us know and realize that many Americans are hurting right now. They are feeling pain at the gas pump when they fill up. They are paying higher home energy

prices. It is only right that we discuss the long-term solution to this situation, in order to prevent it from happening again and to improve our Nation's energy outlet for the long run.

However, it is also important that we explore short-term solutions that could provide more immediate relief for consumers who are struggling right now under the burden of unpredictable costs.

My question, Ms. Stainken, is would you please take a minute for us to discuss any short-term solutions you think might encourage us as lawmakers to consider as we look to address the crises that our Country is facing, please?

Ms. Stainken. I am happy to answer that. I mentioned some of this in my testimony there, but just to elaborate on that, we really do need a suite, a robust set of policies that complement what was done in the Bipartisan Infrastructure Law. Those are the foundational policies, but we need to invest further than in the vehicle purchase incentives, things for building further out with the EV charging infrastructure, electrifying the federal fleet there, and then also providing a robust set of incentives focused on the manufacturing and ensuring that that is done here in the United States and also with our critical minerals.

Senator Carper. Okay, thank you.

This is a question for Secretary Mabus, and I think maybe also for you, Ms. Stainken. The question is, how important is it for the United States Government, including individual agencies such as the Postal Service, General Services Administration, and the Department of Defense, how important is it for entities like that to lead in the

fight against climate change and support an expeditious transition to a cleaner economy? That is the first part of the question.

And in your view, this is for Secretary Mabus, in your views, can U.S. businesses, States and local governments help to transition our economy without the assistance from the Federal Government? Two questions, Secretary Mabus, would you take those, please.

Mr. Mabus. I will concentrate on your first question with DOD. DOD absolutely has to take the lead. They are the largest users of fossil fuels on Earth. They can bring a market, they can accelerate this change exponentially, and it will help our national security. It will help us in terms of making us better war fighters and making us more secure.

The DOD has always led in technological revolutions. You look at the internet, you look at GPS, you look at flat screen TVs. Those all came out of Defense. And this is one place; Secretary Austin says that there is nothing that Defense does that is not impacted by climate change.

To answer your second question, I think the States and local governments are doing a lot right now, but they don't have the scope, they don't have the scale that the Federal Government does. The Federal Government can accelerate this so much by policies and by the things that we incentivize.

This is going to happen. It is very clear. We have passed the tipping point in terms of moving to renewables. It is a question now of how fast we are going to go and how well we are going to do it. I think that you have to have the Federal Government taking the lead in that, particularly DOD, in order to succeed.

Senator Carper. Great, thank you for that.

Again, Ms. Stainken, same two questions. I am going to repeat the two questions, just for clarification, here. How important is it for the U.S. Government, including individual agencies like the Department of Defense, General Services Administration, to lead in the fight against climate change and to support an expeditious transition to a cleaner economy? That is the first question. Go ahead and answer that, and then I will give you the second one.

Ms. Stainken. Great. Yes, it is absolutely critical that the Federal Government leads by example in this. The Electrification Coalition, we are huge supporters of electrifying the federal fleet. They are, as Secretary Mabus was pointing out, they are the largest single fleet operator here. The U.S. Postal Service alone has 190,000 vehicles within their fleet, and I can certainly elaborate more on the U.S. Postal Service and them going electric.

But you know, this represents significant savings to the American taxpayer by going electric. Electric vehicles save 50 percent on the maintenance costs compared to an internal combustion engine, and same thing with the fuel savings. That is significant. Studies have shown, you know, that we are talking in the billions in terms of the savings. That was when gas prices were at \$2.50 a gallon, and now that they are up at \$4, \$5, we are talking significantly more savings.

Senator Carper. Yes, thanks. The second question, again, any of you, can U.S. businesses, States, local governments transition our economy without the assistance from the Federal Government?

Ms. Stainken. We have been without leadership from the Federal Government prior to this Administration. So States have moved forward

with doing what they can in advancing the right policies and putting forward significant investments in this sector. But we definitely need the support of the Federal Government to be at the right scale that we need.

Senator Carper. Yes. I am not going to dwell on the Postal Service, but I would just offer this: roughly 200,000 vehicles in the postal fleet may be the largest fleet of vehicles in the Country. Today, they are almost all gas and diesel. If there is someplace in the Country where, frankly, that makes sense, there are vast expanses in this Country where there aren't a lot of people living, and the Postal Service still has an obligation to deliver to every mailbox six days a week. So in some cases, it makes sense to have liquid fuel vehicles for maybe a good long while.

A lot of places, that doesn't make much sense. I fear if we don't take at a time when the Postal Service's fleet of almost 200,000 vehicles is about 25 years of age, if we don't use this as an opportunity to upgrade and move into the future, we will live to regret it. When you look at what they are doing in FedEx, what they are doing in UPS, when we look and see what Amazon is doing in terms of moving to more energy efficient, clean delivering, low or no emissions, it is time for us to act.

Last question I would ask of one of you, just one of you, then I am going to ask a question of all of you that I telegraphed, but this is for Congressman Matheson. This deals with support for electric cooperative transition. If the Postal Service makes the transition from gas and diesel to more energy efficient, low emission vehicles, the Federal Government has an obligation to help write down the cost

of those vehicles to help the Postal Service. They have an obligation to help with fueling stations, whether it is hydrogen or be it charging stations, as well. It is not all on the Postal Service.

Congressman Matheson, how necessary is the Federal Government support to help the electric cooperative transition from older, inefficient power plants to cleaner, efficient energy generation?

Mr. Matheson. I appreciate the question. I would say, first of all, we have been making investments all along in our plants, so I would suggest that we have been making investments in efficiency. I would not describe the whole fleet of generating assets owned by co-ops as particularly old or inefficient.

That being said, I do think that there are a couple things the Federal Government can do that would be helpful. One, you have heard me say two or three times, and that is the direct pay provision in terms of the tax credits that have been provided to the rest of the electric utility sector for a long time now, the federal level for investing in new energy technologies, renewables production tax credit for nuclear, tax credit for carbon capture sequestration.

We don't get the benefit of that. So the way it works is, if we want to be involved with, let us say, a solar plant, a third party build the solar plant. They take the tax credit; they take a profit; they sell the output to us. That works, and we have those relationships.

But in terms of the value of that Federal Government support going to consumer at the end of the line, that doesn't happen because there is that third party in the middle of that transaction. So I think you would see a significant increased investment out of electric

cooperatives when the direct pay provision goes through. I know you are familiar with it. You have been active on it. I don't want to sound like a one trick pony, but that really is something that is right in front of us here that Congress could do that would really help in terms of electric cooperative investment in this energy transition. I think it is the most important thing I can emphasize.

The second thing I want to mention though, and it has been talked about a lot, about electrification, is that as we move to a more electrified economy in the future, which I believe we are going to do, the delivery of that electricity, and I am not a transmission engineer, but the delivery of that electricity creates new challenges for the grid. We need to be thoughtful about looking for how we make sure the grid can meet this need to charge a whole bunch of electric vehicles, where consumers may want rapid charging.

That creates, that is technologically feasible, don't get me wrong, but that creates a new set of operating dynamics that we need to think about. What investments do we need to make in the grid to meet those needs? I find that a great opportunity to have a conversation where there may be a federal role, with advice from the labs, quite frankly, because it is a huge resource the Federal Government has at its disposal. That could be an area where we should have a conversation about grid modernization to meet this more electrified economy of the future.

Senator Carper. Great. Thank you. I like to quote Einstein, who said, among other things, in adversity, lies opportunity. There is actually, when I talked to the utilities around the Country, they

talk about where their growth is going to be for selling electricity, and most of them point to mobile fleets.

Now, the pitch I will telegraph. I am going to go to Secretary Mabus first on this, then Ms. Sgamma, we will ask you, then Congressman, and then Ms. Stainken.

The question is, as we have gone through, we have been here a couple hours now, so people listening to us might say, well, they don't agree on anything. Actually, I think there is quite a bit of consensus on a lot of what we have talked about here. I am just going to ask if, Secretary Mabus, you could lead us off and say where you think some of that consensus might be, and where might it lead us, please. You are first.

Mr. Mabus. Senator, thank you again for allowing me to testify. I think we have got some real agreement, and it is important, that climate change is real and that we have to, have to reduce emissions. That is one message that has come out of this hearing loud and clear that everybody agrees on.

Secondly, that the solutions going forward have to be domestically based, that we can't allow ourselves to be held hostage by international events. Finally, that we need to take immediate steps to ease the pain for consumers at the gas pump right now for the American family.

Senator Carper. Thank you for those comments.

Ms. Sgamma?

Ms. Sgamma. I think there is probably consensus that the regulatory environment needs to change so that we can site new mines for rare earth minerals, so that we can produce oil and gas, so that

we can site those transmission lines. Because the process right now is so cumbersome that, I mean, we talk about producing those rare earth materials here in the United States, but good luck to anybody who wants to start, open up a mine. You can't get it done with the process.

Senator Carper. Okay, thank you, ma'am.

Congressman?

Mr. Matheson. I think there is consensus that we are entering a phase of transition. I would like to think there is consensus that we all agree that supporting reliability and affordability in our energy sector is important to the foundation of how our economy operates.

In terms of this transition, I think we need to be thoughtful about where we are in terms of the state of technology and the timing in which it can be deployed in an appropriate way, and the investments in infrastructure it is going to take to make that transition successful.

I think there is consensus, while in the details we may have differences of opinion, we want to approach it in that way to be thoughtful, to make this transition be less disruptive, more productive, and more successful.

Senator Carper. Thank you, sir.

Ms. Stainken?

Ms. Stainken. Great, yes. I have got a couple takeaways today where we found agreement.

Senator Carper. You can talk more slowly.

[Laughter.]

Ms. Stainken. From the east coast, originally. First of all, there is pain at the pump. We are all recognizing that, and something needs to be done here. Secondly, we need to protect the consumers from the volatility of oil prices spiking, and that this hasn't happened before. This happened in the 1970s, the 1980s, the 1990s, again and again and again. As Jim was just saying here, it is time to do something about this. It is time to make a change and transition.

I think a lot of us agree here that electric vehicles are the future, and it is not a matter of if, it is just when. We are of the nature that we need to be adopting the right policies now, and I think, probably others here disagree about when, but longer-term, like this is the solution, it is the solution right now and also longer term.

Finally, I think we need to be watching what China is doing for various points that you can come at it from, but certainly watch what China is doing. My personal takeaway from you, Chair Carper, is that EVs are the hat trick. I am going to use that in the future.

Senator Carper. Thank you for that. Yesterday, Senator Young, one of our colleagues in the Senate, and I were invited to address the Nation's business leaders at the Business Roundtable. Jamie Dimon was the immediate past chair, and the current chair of the National Business Roundtable is Mary Barra, who was also the CEO for General Motors.

I have known her for a while, and a couple of years ago, to meet one or two years ago, I was talking with her, trying to urge General Motors to join four or five other auto companies, along with California and maybe 20 or so States on greenhouse gas emissions, like

the timeline in reductions and time, and to see if maybe GM wouldn't join the half dozen auto companies that already had come to agreement with a bunch of States, including California.

At the time, she said that GM was not ready to do that, but she said, I am all in on electric vehicles. She said, I am all in, that is where we are going. She said, not only are they fun to drive, but they are a lot cheaper to maintain. She added to that, she said, there are three things that we need at General Motors, and she said, other American auto companies. There are three things that we need in order to be able to sell the vehicles if we build them. Number one, 300-mile range on recharging. Number two, the ability to recharge batteries in minutes, not hours.

She said the third thing that we need is for there to be charging stations throughout the Country where people are driving, to the extent we can do that. Those are the three things we need. She said the first two are on us, GM, 300-mile range, the ability to recharge batteries in minutes, not hours, and they have met that challenge.

My wife and I own an electric vehicle now to replace my 2001 Chrysler Town and Country Minivan, with 600,000 miles. We have an electric vehicle that gets past the 300-mile range, and we can charge the battery in minutes, not hours. The industry has come a long way in that regard.

The Federal Government, we put a lot of money in the infrastructure package to help with charging stations for, among other things, school buses, electric buses, and just general electric vehicles. We still have some ways to go, we still have some ways to go.

We have a lot of hearings in this committee here. I have been on this committee for, gosh, 20 years. This is probably as important and timely a hearing as we have had. It has been just a superb one.

I bragged on you a little bit when I introduced you at the beginning of the hearing. It is an excellent hearing. We are grateful to those who come from Arizona and from Utah, sort of. Kathleen, tell us again where you live now.

Ms. Sgamma. I am in Denver.

Senator Carper. Denver.

And my friend Ray Mabus. Ray was Secretary of the Navy. For 100 years, there has never been a ship, submarine, or aircraft carrier named after the State of Delaware. We are the first State, and we hadn't had a ship or anything named after Delaware for a hundred years.

About six, seven years ago, I called Secretary Ray Mabus, and I said, Mr. Secretary, it has been a hundred years or more since a ship, submarine, or aircraft carrier was named after my State. In the meantime, almost every other State and a lot of cities have had ships named after them, vessels named. I said, do you think we could do something about it? I will never forget what he said. He said, let me think about it, and give me a couple of months. I will call you back. And I am thinking, sure.

A couple months later, he called me back. He said, the Navy is going to contract to build four or five fast attack Virginia-class nuclear submarines. The first one will be the U.S.S. Delaware. One week from this coming Saturday, he is going to join us in Delaware with the ship's sponsor, the submarine's sponsor, the First Lady, Jill

Biden, and I think she may bring a date, I am not sure. But we will have a couple thousand people there to welcome the U.S.S. Delaware and celebrate the fastest, most modern fast attack nuclear submarines in the world.

Secretary Mabus, you are a hero for a lot of Americans, and we are grateful for all of your service and for being with us today. I will see you in maybe 10 days or so.

With that, I think I have to do some housekeeping here. Before we adjourn, Senators will be allowed to submit written questions for the record through close of business on Wednesday, April the 6th. We will compile those questions, send them to our witnesses. We will ask you to reply to us by Wednesday April the 20th; that is two weeks.

I am by nature an optimistic person. I come out of this hearing more optimistic, not less. What were the words of Henry Ford, founder of Ford Motor Company? I will give Ford some equal time here after talking about GM. The founder of the Ford Motor Company was Henry Ford, and among other things, Henry Ford said these words. He said, if you think you can, or you think you can't, you are right. Think about that. If you think you can, or you think you can't, you are right.

On this point, on these issues, I think we can, and I think your testimonies today have brought us closer to the point where we will, so thank you very, very much.

With that, this hearing is adjourned.

[Whereupon, at 12:22 p.m., the hearing was adjourned.]