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RPTR WARREN

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AMERICA LEADS THE WAY: OUR HISTORY AS THE

GLOBAL LEADER AT REDUCING EMISSIONS

WEDNESDAY, NOVEMBER 29, 2023

House of Representatives,

Subcommittee on Environment, Manufacturing, and Critical Minerals,

Committee on Energy and Commerce,

Washington, D.C.

The subcommittee met, pursuant to call, at 10:03 a.m., in Room 2123, Rayburn House Office Building, Hon. Bill Johnson [chairman of the subcommittee] presiding.

Present: Representatives Johnson, Carter, Palmer, Crenshaw, Joyce, Weber, Allen, Balderson, Fulcher, Pfluger, Miller-Meeks, Obernolte, Rodgers (ex officio), Tonko, DeGette, Schakowsky, Clarke, Ruiz, Barragan, and Pallone (ex officio).

Also Present: Representatives Duncan, Curtis, Pence, Dingell.

Staff Present: Kate Arey, Digital Director; Sarah Burke, Deputy Staff Director; David Burns, Professional Staff Member; Nick Crocker, Senior Advisor and Director of Coalitions; Sydney Greene, Director of Operations; Nate Hodson, Staff Director; Tara Hupman, Chief Counsel; Daniel Kelly, Press Assistant; Patrick Kelly, Staff Assistant; Sean

Kelly, Press Secretary; Alex Khlopin, Staff Assistant; Peter Kielty, General Counsel; Emily King, Member Services Director; Elise Krekorian, Professional Staff Member; Drew Lingle, Professional Staff Member; Mary Martin, Chief Counsel; Brandon Mooney, Deputy Chief Counsel; Kaitlyn Peterson, Clerk; Karli Plucker, Director of Operations (WA-05); Peter Spencer, Senior Professional Staff Member; Michael Taggart, Policy Director; Dray Thorne, Director of Information Technology; Timia Crisp, Minority Professional Staff Member; Waverly Gordon, Minority Deputy Staff Director and General Counsel; Caitlin Haberman, Minority Staff Director, Environment, Manufacturing, and Critical Minerals; Emma Roehrig, Minority Staff Assistant; Kylea Rogers, Minority Policy Analyst; Andrew Souvall, Minority Director of Communications, Outreach and Member Services.

Mr. Johnson. The subcommittee will come to order.

The chair now recognizes himself for 5 minutes for the purposes of an opening statement.

And good morning. And thank you all for joining our hearing today entitled, "America Leads the Way: Our History as the Global Leader at Reducing Emissions."

I am excited for this opportunity to highlight America's global leadership and success in both emission reductions and energy production. I also look forward to discussing how we can build off this success to expand our leadership around the world.

The United States is the country it is today, not because of heavy-handed regulatory policies that have driven industries out of business and manufacturing overseas, but because of the Nation's longstanding entrepreneurial culture that has provided the freedom and flexibility for businesses to deploy innovative technologies across our energy and industrial economy.

As our economy continues to grow and our energy demand and use increase, our environmental stewardship continues to improve as well. In fact, the EPA has air quality data showing that, as of 2022, the total emissions of the six major air pollutants have dropped by 73 percent since 1980. I can remember when it was 68 percent just a few years ago. So we have already done 5 percent better just in the last few years.

During this same period, gross domestic product increased 196 percent. Vehicle miles traveled increased 108 percent. Energy consumption increased 29 percent. And the U.S. population grew by 47 percent.

Why is this important? It shows that becoming more prosperous and secure as a Nation is possible while also decreasing emissions. We have proven it. We have done

it. We don't have to throw the baby out with the bathwater.

In fact, during this time, America has flexed its muscles as a global energy production superpower. The American shale revolution is a prime example of this entrepreneurial spirit. Pro-growth energy policies have taken U.S. energy dominance to new levels. Innovation in the energy sector has increased the standard of living for many Americans by boosting productivity, reducing energy prices, and cutting emissions. It is estimated that the shale revolution saved U.S. consumers $203 billion annually, breaking down to $2,500 per family of four. It also lowered energy-related greenhouse gas emissions by 527 metric tons per year.

I saw the benefits of the shale revolution firsthand. My district sits on top of the Utica and Marcellus shale regions. Eastern and southeastern Ohio have helped the United States become the world's leading producer of oil and natural gas. The shale revolution not only made energy -- American energy dominant, but it also provided America with geopolitical advantages and the ability to export clean energy to our allies across the globe, what we would call the U.S. LNG revolution.

H.R. 1, the Lower Energy Cost Act, has passed twice on the House floor now because it recognizes the successes of the past, and further built on those successes to unleash American energy. My bill, which was included as part of H.R. 1, lifted all restrictions on the import and export of natural gas. It is a proven fact that American LNG exports reduce carbon emissions by replacing huge quantities of dirtier fuels harvested overseas.

Despite this fact, the Biden administration and the environmental left aren't interested in this progress. Why? Because increasing LNG exports, which we can do easily with our vast quantities of natural gas, would not, and I repeat, would not require a

radical reordering of American society and a reduced standard of living for the people that we call citizens here, because that is the true goal of this radical climate agenda. It is a missed opportunity not to exploit America's vast reserves of cleaner energy resources.

The Biden administration's, quote, whole-of-government climate agenda, forcing rapid vehicle electrification and renewable energy, will only serve to move our energy industry and other American industries overseas, strengthening adversaries like Russia, China, and Iran.

Friends, we should not apologize for America's prosperity. Instead, let's recognize the progress we as a Nation have made in both environmental stewardship and energy leadership.

And with that, my time has expired. And I am going recognize the ranking member, Mr. Tonko from New York, for his opening statement.

[The prepared statement of Mr. Johnson follows:]

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Mr. Tonko. Thank you, Mr. Chair.

And welcome to our witnesses. We appreciate your time and your input.

America has made undeniable progress in reducing air pollution. This should be celebrated. The Clean Air Act is an incredible success story. But as the 28th U.N. Climate Change Conference of Parties begins, today's hearing should be an opportunity to be clear-eyed about what we have achieved, how we have achieved it, and how much more work is left to be done, because there are still big challenges.

For example, despite a 78 percent reduction in criteria pollutants, since the enactment of the Clean Air Act, according to the American Lung Association's 2023 State of the Air report, nearly 36 percent of Americans, almost 120 million people, live in places with failing grades for unhealthy levels of ozone or particle pollution. And we know there is a similar story for climate pollution. There is a clear, scientific consensus about the threat of unmitigated climate change. And we are already experiencing environmental, public health, economic, and national security impacts from it.

To avoid the worst consequences of climate change and stay well below a 2 degree global temperature increase as agreed upon in the Paris Agreement, the United States must do its part by achieving net-zero emissions around mid-century. Yes, there has been a 17 percent reduction of domestic greenhouse gas emissions from 2005 to 2021, but this has generally been the easiest 17 percent. It is obvious that we require much deeper and more rapid decarbonization than what has been achieved since 2005.

The good news is more progress will likely be achieved in the near term thanks to the work led by Democrats to enact the Inflation Reduction Act and the Bipartisan Infrastructure Law, which are supporting clean energy technology deployment and

manufacturing all across our country. And while these incentives are important, innovation is often not -- is often not possible without a mix of carrots and sticks. Air quality improvements brought about by the development of pollution-controlled technologies and less polluting alternatives can often be directly traced back to EPA regulatory actions.

Does anyone honestly believe that major reductions in tailpipe pollution would have happened absent regulations, or that the progress we have made to reduce particulate matter in ozone were not in large part a result of the NAAQS, or that EPA's Acid Rain Program was not a factor in reducing sulfur dioxide? There are countless examples of EPA rules playing a driving factor in emissions reductions.

Another recent example has been the AIM Act to phase down the production and use of super-polluting hydrofluorocarbons. American chemical and equipment manufacturers recognize that the United States could be the global leader in the next generation of less polluting alternatives to HFCs, and these entities wanted regulatory certainty to make that transition happen in an orderly manner.

The AIM Act is proof that Democrats and Republicans and industry and environmentalists can still come together to support a flexible but also ambitious regulatory framework that will guarantee major air pollution reductions, while spurring innovation and creating American jobs. So there is no reason why we cannot do the same for other pollutants, including carbon dioxide.

Finally, I appreciate the majority's hearing memo's acknowledgment that many American industries are cleaner than their foreign competitors. Thanks to efforts by congressional Democrats and the Biden administration, we are ushering in a manufacturing renaissance which will build American supply chains for the key strategic

industries that will be part of the global clean energy transition.

We are set to witness major growth in energy-intensive industries such as direct air capture, electrolytic hydrogen production, and semiconductor EV and battery manufacturing. We must support these emerging industries and their efforts to produce the most climate friendly version of their products. If U.S.-made goods have lower-embodied carbon, we should recognize and promote that.

This committee could play its part in expanding buy clean procurement policies and understanding the issues around carbon border adjustment mechanisms. Smart climate policies can and should be designed to promote the competitiveness of U.S. energy-intensive industries, ensuring that American manufacturers play a critical role in the global transition to a cleaner economy.

So, Mr. Chair, while I certainly appreciate us taking the opportunity to celebrate America's successful environmental laws, we would be remiss if we believed the job is done. I hope we can work together to help chart a course to achieve further pollution reductions.

With that, I thank you and yield back, Mr. Chair.

[The prepared statement of Mr. Tonko follows:]

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Mr. Johnson. The gentleman yields back.

The chair now recognizes the chair of the full committee, Chair Rodgers, for 5 minutes for her opening statement.

The Chair. Thank you, Mr. Chairman.

And welcome to our witnesses.

Today's hearing is an opportunity to celebrate American energy and environmental leadership. We are going to explore our legacy as technological innovators to solve tough problems around energy and environmental protection, without sacrificing our economic development or national security. This is the message that Energy and Commerce plans to celebrate on the world stage at COP28.

For decades, America has led the way. We have harnessed the power of nuclear energy, electrified millions of rural American homes with clean hydropower, and ushered in the shale revolution, which continues to create millions of new jobs, bring manufacturing back to the U.S., and revitalize communities across the country.

America is more energy secure today than ever before, and it is thanks to this legacy which was built on the foundation of free markets, entrepreneurship, and giving people the opportunity to choose which energy sources best suit their needs.

Today we are the number one producer of oil and natural gas in the world. We have become the top energy exporter, which is helping to shift markets and bolster our security against countries like Russia and Iran. This shale revolution and the affordable and reliable natural gas that American workers are now producing has also enabled America to reduce emissions more than any other Nation in the world, and we have had the capacity to continue helping countries reduce their emissions even further.

American energy leadership is critical to ensuring we are not reliant on China, a country that maintains some of the worst environmental and labor standards in the world. It is clear by their actions that China does not share our concerns about climate change risk nor our value of environmental stewardship.

For instance, China-related emissions of CO2 increased by almost 80 percent, 80 percent between 2005 and 2021. They are responsible for 28 percent of the world's greenhouse gas emissions, making them the world's largest producer of greenhouse gases by far. And this is more than GHG emissions of the entire developed world combined.

In the U.S., on the other hand, CO2 emissions from energy sector have declined by 14.5 percent just since 2007. Since 2005, U.S. CO2 emissions from the electric sector alone have declined by more than 28 percent. Between 1970 and 2020, the U.S. reduced emissions for criteria air pollutants by 78 percent. And since 2000, fine particulate matter, or PM2.5, air quality has improved 44 percent. All told, U.S. air quality is the best in the world, and it is getting cleaner.

Furthermore, China's supply chains, which rely on slave labor, control the vast majority of critical mineral processing and refining for electric vehicles, wind turbines, and solar panels. Moving to 100 percent wind, solar, and battery-powered energy, as some have proposed, will cede our energy future to China and could have perverse effects on increasing emissions.

We should instead be working to build on our remarkable legacy which has transformed the human condition, helped lift people out of poverty, and raised the standard of living. The best way to do that is with a strong energy mix that takes advantage of the resources we have here at home, lower costs for Americans, and

prevents us from becoming more reliant on China for our energy needs. Intermittent renewable sources like wind and solar have a place in this mix, but they need dispatchable energy, like clean natural gas, nuclear, hydropower, to back them up.

By standing up for American values of free market competition, innovation, and environmental stewardship, we can continue building on this legacy which will drive down emissions and make our energy affordable and reliable.

These are achievable bipartisan goals that will help us beat China and our foreign adversaries. This is the best path, rather than the market distorting subsidies and grants for, quote, green technologies, which some have suggested, or the punitive environmental restrictions that force mining and manufacturing out of the U.S., while banning people from using gas-powered cars and natural gas appliances.

This forced transition will leave our economy dangerously dependent upon supply chains from China and make energy less affordable, less reliable for Americans. With the right policies in place, however, America can lead the way in energy expansion and the transformation of our energy mix. Our economy, our national security, and the stability of global markets and the environment will only benefit from continued American leadership.

Thank you. I yield back.

[The prepared statement of Chair Rodgers follows:]

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Mr. Johnson. The gentlelady yields back.

The chair now recognizes the gentleman from New Jersey, the ranking member of the full committee, Mr. Pallone, for an opening statement.

Mr. Pallone. Thank you, Chairman.

Today we will examine America's leadership in combatting the worsening climate crisis as we head into the 28th U.N. climate summit known as COP28. And we need to demonstrate our Nation's commitment to standing with our allies in the fight against climate change. After all, we are out of time for denialism and obstruction. The science on climate change is indisputable.

Earlier this month, the Fifth National Climate Assessment underscored the need for urgent action to combat this threat. And while the United States has taken steps to dramatically cut greenhouse gas emissions, more action is needed now to avoid the most catastrophic consequences associated with climate change. We can and must protect our communities from the devastating impacts of the climate crisis, while growing our economy and cutting costs for consumers as we lead the way in the global clean energy transition.

Yet time and again House Republicans have prioritized their polluters over people agenda. They have tried to undermine and repeal critical climate programs established in the Bipartisan Infrastructure Law and the Inflation Reduction Act, despite these programs helping communities and their districts. And Republicans have also attacked the Biden administration for proposing regulations to address carbon pollution from the oil and gas industry, power plants, and vehicles. And while Republicans tout an all-of-the-above energy approach, they continue to push back against policies that

accelerate clean energy development and reduce emissions.

So I think it is time for my Republican colleagues to change course because their polluters over people agenda is costing taxpayer dollars and lives. Our Nation now experiences an extreme weather event with damages over $1 billion once every 3 weeks. These events are deadly, and they are destroying homes and livelihoods.

Now, COP28 provides an opportunity for the United States to demonstrate climate leadership on the international stage. Climate change is a global problem, and that means we need both domestic solutions and international cooperation. This year, countries will participate in the first global stock take, the most extensive assessment of global climate action. This will help inform future commitments by parties to the convention, including India, Russia, and China. America's participation in COP is essential if we are to hold Nations accountable to their Paris commitments, while driving more ambitious actions moving forward.

The Biden administration has already displayed climate leadership in preparation for this year's conference. China and the United States recently agreed to set reduction targets for all greenhouse gases, marking the first time that China has committed to addressing super pollutants like methane and hydrofluorocarbons. And this is critical since China is the world's largest methane emitter.

Democrats understand the seriousness and urgency of the climate crisis. That is why we passed historic climate legislation last Congress, and these policies are already creating new jobs, cutting costs for working families, and advancing homegrown clean energy, all while tackling the climate crisis.

The downpayment in these laws, along with a strong regulatory framework proposed by the Biden administration, will complement our Nation's international efforts.

We simply must use every tool in our toolbox if we are going to stop the worst-case climate scenario.

Now, many States, local governments, and individual businesses are already moving forward to reduce emissions. It is imperative that the Federal Government lead the charge and help them in these efforts and spur further action in communities across the country. We must discuss ways to help communities better adapt to the changes that we are already seeing. We need to modernize and upgrade our infrastructure to ensure vital services like water, sewer, electricity, telecommunications, and transportation are more resilient. And this important work will make our communities safer and better prepared for extreme weather events and will provide good-paying jobs and the modern flexible infrastructure that will help us grow our economy for the future.

So as we move forward, we would hope that this is a bipartisan effort. We join as partners amongst Democrats and Republicans to address climate change and take climate actions because, after all, the worsening climate crisis affects all of us.

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

[The prepared statement of Mr. Pallone follows:]

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Mr. Johnson. The gentleman yields back.

And we will now introduce our witnesses for today.

Thank you all, by the way, for being here.

First, we have the Honorable Mark Menezes. Mark is the President and CEO of the United States Energy Association; Ms. Amanda Eversole, the executive vice president and chief advocacy officer of the American Petroleum Institute; Mr. Karl Hausker, senior fellow at the World Resources Institute; and Mr. Mark Mills, senior fellow at the Manhattan Institute.

Mr. Menezes, you are now recognized for 5 minutes for your testimony.

STATEMENTS OF MARK W. MENEZES, PRESIDENT AND CEO, UNITED STATES ENERGY ASSOCIATION; AMANDA EVERSOLE, EXECUTIVE VICE PRESIDENT AND CHIEF ADVOCACY OFFICER, AMERICAN PETROLEUM INSTITUTE; KARL HAUSKER, PH.D., SENIOR FELLOW, WORLD RESOURCES INSTITUTE; AND MARK MILLS, SENIOR FELLOW, MANHATTAN INSTITUTE;

STATEMENT OF MARK W. MENEZES

Mr. Menezes. Chair Johnson, Chair Rodgers, Ranking Member Tonko, Ranking Member Pallone, all members of the subcommittee, thank you for the opportunity to testify before you today. I am Mark Menezes, president and CEO of the United States Energy Association.

USEA, a nonprofit educational organization, fosters the advancement of U.S. technology and know-how in the United States and in the developing countries in partnership with USAID, the State Department, and DOE. Throughout the world, we develop clean, sustainable, cyber-secure energy, integrated energy systems, and create environments for private investment. In the U.S., USEA works with communities and Native American Tribes to deploy efficient, cost-effective energy and carbon management technologies.

To achieve these missions, two lessons have been learned. One, successful lasting projects were built from the ground up, not top down, with community involvement and acceptance. And, two, capacity building is necessary to ensure the continued operations and maintenance of energy systems.

Our EPC board members say it will take time to build out the energy infrastructure to meet net-zero goals. Whether solar or wind farms or new hydrogen facilities, it takes time to design, permit, and construct these projects. It requires permitting, process improvements, and an increase in the supply of qualified workers, engineers, critical materials, and supply chains necessary for emission-reducing projects.

As has been said, the U.S. continues to be a world leader in emission reductions. EPA reports U.S. net greenhouse gas emissions have fallen by 17 percent and CO2 emissions by 18 percent since 2005. Now, importantly, by 2030, EIA forecasts that U.S. energy-related CO2 emissions will decrease in the range of 25 to 45 percent below the 2005 levels, depending on low or high economic growth. EIA attributes these decreases to increased electrification, equipment efficiency, and renewable electricity. All will require deployment of U.S. technology.

It was the U.S. innovation that drove the shale revolution, and it will be the U.S. innovation that drives deployment of emission-reducing technologies.

U.S. solar companies are producing new solar panels and components more efficiently, cheaper, safer, and more environmentally friendly than the crystalline silicon photovoltaic imports we rely on today.

Our long-duration battery manufacturers have developed technologies free of the critical minerals and materials required for lithium ion batteries. These batteries are water-based, safe, 100 percent recyclable with low carbon production.

Advanced small module nuclear reactors, like high-temperature gas reactors, fluoride salt-cooled high temperature reactors, and molten salt fast reactors, are being developed for deployment.

Wind companies have improved energy output and are developing lighter rotor

blades and high-performing -- high-performance optimizing control systems to increase production and decrease capacity factors.

U.S. companies are advancing commercial deployment of CCUS technologies to better detect, measure, and reduce methane emissions. Our natural gas companies produce the most environmentally compliant natural gas in the world and seek to develop differentiated gas markets.

Pipeline companies, utilities, and distribution companies are developing ways to increase hydrogen use. Traditional hydrogen and industrial gas producers are bringing their expertise to use hydrogen as an energy source.

Finally, Mr. Chairman and Ranking Member, as we look toward COP28, the committee should be aware of the international forecast for future energy use, those from the EIA, OPEC, and the IEA. The EIA forecasts growth of renewables, increased electricity demand, yet the continued use of fossil, mainly natural gas, in the countries that will experience increased populations: Southeast Asia, Africa, India. These increasing populations and income levels will offset the effects of both energy efficiency gains and emission reductions.

OPEC forecasts an increased use of oil from today's demand of approximately 100 million barrels per day to 116 due to projected increases in global population and economic growth.

IEA's net-zero roadmap takes a different approach. It assesses what must happen to meet net-zero goals by 2050, not what current trends forecast. Reducing meat consumption, adopting more energy efficient practices, and changing transportation habits will help the world's demand for oil to peak this decade due to the rapid adoption of electric vehicles, energy efficiency, and more cleaner and renewable

energy resources.

Whatever the path, Mr. Chairman, USEA will be part of ensuring U.S. technologies and know-how will lead the way.

Thank you, Mr. Chairman, and I look forward to your questions. And I ask that my written statement be included in the record. Thank you.

[The prepared statement of Mr. Menezes follows:]

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Mr. Johnson. The gentleman yields back.

And now, Ms. Eversole, we will go to you for 5 minutes for your testimony.

STATEMENT OF AMANDA EVERSOLE

Ms. Eversole. Thank you very much, Chairman Johnson, Ranking Member Tonko, and members of the subcommittee. Thank you so much for the opportunity to testify this morning. My name is Amanda Eversole, and I am the executive vice president and chief advocacy officer of the American Petroleum Institute.

API represents all segments of America's oil and natural gas industry. Our approximately 600 members from large, integrated companies to small, independent operators support nearly 11 million jobs across all 50 States.

The subject of today's hearing, highlighting America's leadership in reducing global emissions, is an important topic and one that should be celebrated. America has led the world in reducing CO2 emissions over the past two decades, even as our industry has made the United States the world's number one producer of oil and natural gas.

The air Americans breathe is cleaner because of innovative improvements to the way energy is produced, transported, refined, and consumed. These improvements have driven significant declines in greenhouse gas emissions, as well as criteria pollutants. We are also tackling the methane challenge head on. Yet we are at a crossroads, and how we work together going forward will determine our energy future.

Today I am going to talk about how our industry has done three things: decreased emissions while meeting the energy trilemma, increased innovation, and

advanced America's national security.

First, since 2005, the United States has reduced CO2 emissions more than any other country in the world. Industry employees go to work every day to meet the energy trilemma. That means the need for energy that is affordable, reliable, and cleaner. While many insist that energy demand is declining, the International Energy Agency actually expects new record demand for oil and natural gas in the coming years as the global population surges to nearly 10 billion people by 2050.

My second point is that innovation is core to our success. It wasn't long ago that energy scarcity dominated the debate. Yet something happened in Ohio, in Pennsylvania, West Virginia, Texas, North Dakota, New Mexico, Colorado, and so many other places that dramatically altered this trajectory. Industry innovation -- modern horizontal drilling and hydraulic fracturing -- launched the shale revolution that transformed America's energy future. We stopped talking about scarcity and ushered in an era of energy abundance and new possibility for us and for our allies.

As a result, U.S. oil and natural gas production have surged to new records of 13.2 million barrels per day and 100 billion cubic feet per day, respectively. We were previously one of the world's largest energy importers, and we are now one of the world's largest energy exporters, a reversal that comes with enormous benefits; notably, the increased American energy production that happened in conjunction with environmental stewardship.

Over the past decade, methane intensity of oil and gas produced in the seven major U.S. basins has fallen by 66 percent, and that is primarily due to industry-led efforts like API's environmental partnership. There are other success stories everywhere you look. CO2 emissions from the domestic power sector have fallen to their lowest levels

since the 1980s. World-class innovation and standards has resulted in U.S. Gulf of Mexico oil production ranked among the lowest globally for CO2 intensity, and cleaner fuels have contributed to a 99 percent drop in vehicle tailpipe pollutants since the 1960s.

Our industry's approach extends to emerging technologies, including hydrogen, carbon capture and storage, which are key to a lower carbon future.

My third point is that energy security is linked to national security. Oil and natural gas are traded globally, and the United States is not an energy island. Russia's war against Ukraine created new and uncomfortable norms for energy and foreign policy. America must lead on energy.

Our allies know this well. The European Union's commitment to eliminating the reliance on Russian natural gas represents the biggest fundamental shift ever in global natural gas markets. Fortunately for them, American producers quickly stepped up and became the largest LNG supplier to Europe. We must also not forget the vital role that U.S. LNG played in meeting soaring energy demand in Asia and the rest of the developing world.

The bottom line is clear. America's global energy leadership has never been more important.

In conclusion, America's energy solutions are right under our feet. Our industry can and will produce the energy the world needs, while also continuing to lead in reducing emissions and investing in the technologies of the future.

Mr. Chairman, Mr. Ranking Member, and distinguished members of the committee, thank you for the opportunity. And this concludes my prepared statement.

[The prepared statement of Ms. Eversole follows:]

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Mr. Johnson. Thank you, Ms. Eversole.

Mr. Hausker, you are now recognized for 5 minutes.

STATEMENT OF KARL HAUSKER, PH.D.

Dr. Hausker. Thank you, Chairman Johnson, Ranking Member Tonko, and members of the subcommittee. Thanks for this opportunity to testify in a very timely hearing as we head into the COP28.

I first want to say there is complete agreement, I think, among all the witnesses and in the opening statements of the members on our triumph over conventional air pollutant problems. It is almost miraculous what has happened over the last 30 years. But I also want to associate myself with the remarks of Mr. Tonko that the cause of that was our collective choice to solve these problems through laws and policies and then turn over to the private sector the job of inventing the solutions. That is how those two things worked together, and we can apply those to the climate problem too.

The first four pages of my testimony recap two points. Climate change is happening now. It is causing major damage in the U.S. and around the world. These are the impacts we are experiencing at warming of a little over 1 degree centigrade.

And we are at a crossroads. We can choose to ignore the climate problem and just keep using fossil fuels at current rates or even higher rates, and we can warm the planet to 2.5, 3 degrees, or more, and we will experience the escalating damages that come with that to our health, to ecosystems, to the economy, and to our national security. Or we can choose another path. We can forge ahead with the transition to

low and zero-emission energy sources and stabilize our climate, grow our economy, and enhance our security. That is the crossroads, in my view, that we are at.

Now, if we choose that latter path, the transition requires us in the coming decades to ultimately take our GHG emissions all the way to net zero. The transition will be challenging to be sure, but it is a far better choice than experiencing the damages in store for all of us if we continue to recklessly change our climate which has otherwise been stable for thousands of years as our civilization developed.

So how do we get to net zero? The Intergovernmental Panel on Climate Change, or the IPCC, has looked at hundreds of scenarios that could take us to this transition. All of these scenarios require sharp decreases in unabated fossil fuels, meaning fossil fuels without significant carbon capture. And they require major increases in zero or low emission sources, such as solar, wind, hydro, geothermal, nuclear, and some fossil fuel use with carbon capture.

Figure 5 on my testimony, which you can look at, looks at a scenario like this.

The basic story of all these scenarios is massive increases in electricity use which can displace fossil fuels across transportation applications, industry, buildings, et cetera. We can also use electricity to produce hydrogen and other zero and low-carbon fuels.

The IPCC has not found any plausible or credible scenario that lets us continue to burn fossil fuels at our current rates while solving the climate problem.

The good news is we have peaked emissions in the U.S. They are going down. They are about 2 percent below 1990 levels. And, again, we are all working from the same set of facts on that. Unfortunately, we have lots of work ahead of us, as Mr. Tonko said, to take those down further and work with other nations to do the same.

The good news also is we have put in place a framework for developing the key

technologies we need. We have passed the Bipartisan Infrastructure Law, the CHIPS and Science Act, the Inflation Reduction Act. Together these form a comprehensive program of research, development, demonstration, and deployment of clean energy technologies. In there is support for R&D, for the technologies we need to bring out of the lab to commercialization. We have support for demonstrations of technologies that need just a little bit more of a push, and we have support for deployment of more mature technologies that can lower costs as they get to higher and higher scales.

We have support for the key infrastructure in terms of transmission, hydrogen hubs, carbon dioxide hubs for capture, EV charging. And most importantly in my mind, the IRA takes a technology neutral approach to incentivizing these technologies. We are not picking winners anymore. If you have a zero-carbon electricity source, you get an incentive.

This program is already working. It has spurred hundreds of billions of dollars of investment, and it is bringing new jobs. And we are also tackling the problem of low-end communities and energy-impacted communities. We have extra incentives to locate these projects in those communities.

So, yes, we have come a long way on conventional air pollutants. We have a long way still yet to go on climate change, but we have a framework in place. We will need additional things as we meet our -- look for our 2030 and 2050 goals.

Thank you, Mr. Chairman. And I look forward to our discussion and questions.

[The prepared statement of Dr. Hausker follows:]

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Mr. Johnson. Thank you, Mr. Hausker.

Mr. Mills, you are now recognized for your 5 minutes.

STATEMENT OF MARK MILLS

Mr. Mills. Good morning. Thank you, Chair Johnson and Ranking Member Tonko, for the opportunity to testify.

Permit me to begin by contrasting rhetoric with reality. The phrase "an energy transition," the goal to replace hydrocarbons, has origins that trace back to a 1977 speech by President Jimmy Carter. That speech had a lot of familiar rhetoric such as, quote, "the greatest challenge that our country will face during our lifetime," and, quote, the need to act quickly in order to have a decent world for our children and our grandchildren, end quote.

This was all motivated back then, of course, by the belief that the world was running out of hydrocarbons. In our time, the transition rhetoric is directed at replacing an overabundant supply of hydrocarbons in service, of course, of reducing carbon dioxide emissions. The reality, despite decades of spending and policies on the transition, oil, gas, and coal today supply about 82 percent of global energy.

To put that reality into more resent context, the past two decades have seen over $5 trillion of spending globally on wind and solar and similar efforts to avoid hydrocarbons. And this did reduce hydrocarbons' share of energy but just by 2 percentage points. And the quantity, not share of hydrocarbons, consumed globally has increased by an amount equal in energy equivalent terms to adding six Saudi Arabias

worth of oil production.

Today, solar and wind combine to supply under 4 percent of global energy. And for context, burning wood, oldest energy source known to mankind, still supplies 10 percent of global energy.

But energy transition has now claimed this time is different. There are differences. Costs of wind and solar and batteries are radically better, but another key difference is a shift in the nature and location of critical upstream industrial infrastructures.

Because of the underlining physics realities, fabricating wind, solar, and battery hardware entails a radical increase in the use of a range of minerals from copper and nickel, to aluminum and graphite, and rare earths such as neodymium. Increases range from 700 percent to 4,000 percent more minerals per unit of energy production. This will require an astonishing and unprecedented increase in global output from old school industries of mining and mineral refining.

And while the U.S. is the world's biggest hydrocarbon producer, China is the world's biggest producer of energy minerals and has a global market share at least triple the U.S. share in hydrocarbons. China produces over 60 percent of the world's aluminum, refines over half of the world's copper, 90 percent of rare earths, 60 percent of refined lithium, 80 percent of lithium battery graphite, and 50 to 90 percent of the chemicals and polymer parts used in lithium batteries. That dominance will not be easily or quickly altered.

And because energy minerals are incredibly energy intensive, China has a profound advantage with its low-cost electric grid that uses coal for two-thirds of power production. And China is building more coal plants at the rate of roughly one a week

and will do so for close to a decade. Those additional coal plants will lead to an additional 2 gigatons of CO2 emitted per year from China.

Meanwhile, energy transitionists estimate that the U.S. CO2 emissions will decrease at most by only 1 gigaton after the U.S. Inflation Reduction Act deploys over $1 trillion on alternative energy that will require directly or indirectly purchasing energy minerals from China. Seems like a bad trade.

The U.S. already saw 1-gigaton-per-year reduction in CO2 emissions over the past decade without massive subsidies or increased imports due to the well-known shale revolution that collapsed the cost of natural gas, making it cheaper than coal. The key effect of that brought huge economic and geopolitical benefits for the United States.

All these realities point to some more sensible options when it comes to a goal to reduce global carbon dioxide emissions. Rather than subsidize U.S. assembly of batteries using imported materials, instead, encourage, even subsidize if we have to, domestic production of pipelines imports to export more liquified natural gas. That would yield greater emissions reductions per dollar by encouraging other nations that are now planning to burn more coal to instead import U.S. LNG. It would also benefit domestic industries and the balance of trade, as well as yield nontrivial geopolitical benefits.

A start would be to change the mission of the DOE office that regulates permissions to export LNG and instead repurpose it as an office of export assistance. Other options would be more cost effective than those driven by the IRA subsidies could include a more sensible and expansive posture towards nuclear energy, pursuing improved combustion efficiency, and engaging serious efforts to resolve the barriers to reshoring far more U.S. mining and refining.

Thank you, Chairman, thank you, Ranging Member, for the opportunity.

[The prepared statement of Mr. Mills follows:]

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

Mr. Johnson. The gentleman yields back.

And we will now begin questioning, and I recognize myself for 5 minutes.

Mr. Mills, I know you have been talking for 5 minutes, but I will go straight to you right now.

You know, earlier I discussed how the shale revolution has saved American families thousands of dollars while simultaneously reducing emissions dramatically. And I am afraid those savings and accomplishments are being disregarded because of rush-to-green policies.

Earlier this year, economists from Wood Mackenzie estimated the cumulative cost of the Inflation Reduction Act's energy subsidies at $2.7 trillion by 2060.

So, Mr. Mills, in your opinion, does the IRA ignore affordability and reliability in favor of the green mirage of environmental sustainability?

Mr. Mills. Well, the short answer is yes. The magnitude of subsidies and mandates -- and, of course, the Wood Mackenzie analysis included off-budget mandates that have a real cost to the economy. The magnitude of this amount of spending means by definition it is antiproductive. We are getting the same product, the same energy delivered to society, the same mile of driving the same unit of heat, the same hour on compute time at higher inherent costs to society, not lower costs.

Mr. Johnson. Well, here is -- and this is an obvious answer. We know the answer to this question. But where are the energy resources such as wind, turbine, solar panels, batteries and their raw materials produced? And is it fair to characterize the IRA as a taxpayer-subsidized transfer of American environmental leadership to China and other global polluters? So where are they produced? Right. Just would you

affirm that for us?

Mr. Mills. Well, I think -- we know, as I pointed out in my testimony, the underlying production of the key input materials and minerals are overseas, dominantly in China. We are exporting carbon dioxide. We are exporting pollution. We are exporting labor challenges. We are exporting not leadership. We are exporting the inverse. We are actually pushing challenges into fragile economies in Africa, Indonesia where ecosystems are not protected the way ours are.

Mr. Johnson. Ms. Eversole, since 2016, the United States has increased its daily LNG exports from zero to over 12.1 billion cubic feet per day, a tremendous success for stamping out global energy poverty, asserting U.S. strength, and reducing global emissions. Yet as your testimony points out, approximately 40 million tons per year of LNG export capacity is currently languishing in the Department of Energy's permitting process.

Can you discuss the global benefits to energy affordability, reliability, and the environment if we were to expand domestic LNG exports?

Ms. Eversole. Absolutely. Thank you for the question, Mr. Chairman, and we appreciate your leadership on H.R. 1130.

The amount of natural gas that is sitting, languishing at the Department of Energy is equal to the entire usage of the country of India. I mean, contextually that is an enormous amount that we could put into the global markets.

And the important part about what America's leadership is, is we are a market stabilizing force. The global market for LNG is actually quite stable, even amidst a very challenging geopolitical world. And that is the role that America can play but needs to have -- we need to continue to play that role.

I will remind you that this is a depletion business, right. We have to continue to invest today to be able to produce tomorrow.

Mr. Johnson. Okay. You mentioned my bill, my Unlocking Our Domestic LNG Potential Act. It would remove antiquated trade restrictions and grant the Federal Energy Regulatory Commission exclusive authority for permitting LNG export terminals.

Do you think such a policy is a pro-growth policy, and would it help to aid in the export of clean burning American natural gas?

Ms. Eversole. We certainly do, and we appreciate your leadership, sir.

Mr. Johnson. Okay. Thank you.

Mr. Menezes, you have expertise here. Should we wait any longer to pass this LNG legislation, especially with its strategic and emissions-reducing benefits?

Mr. Menezes. Thank you for the question. Well, as I mentioned in my testimony, we need to reform permitting processes where we can. We need to, you know, not lessen the standards but to look at the timetables.

And with respect to the current authorization process at DOE, really the law when we -- when Congress amended it back in 2005, really did not put any timelines or anything in place that would compel the agency to act within a certain timeframe. At that time, Congress focused more on what was happening at FERC.

Mr. Johnson. My time has expired, Mr. Menezes. So let me rephrase that question and ask it one last time quickly. Yes or no? Should we wait any longer to pass this LNG export ban lift? Should we move forward with it?

Mr. Menezes. I mean, the short answer is no. I think today we have heard urgency --

Mr. Johnson. Okay.

Mr. Menezes. -- as to what needs to be --

Mr. Johnson. Okay. Thank you.

I yield back.

And I now recognize the ranking member, Mr. Tonko, for 5 minutes.

Mr. Tonko. Thank you, Mr. Chair. And thank you again to our witnesses.

Dr. Hausker, members have already mentioned that the United States has reduced greenhouse gas emissions by 17 percent from 2005 levels up to 2021. But the U.S. nationally determined contribution under the Paris Agreement is some 50 to 52 percent below 2005 levels in 2030. And the Biden administration is also committed to economy-wide net-zero emissions by 2050.

So, Dr. Hausker, can you give us a reality check here? Despite some progress, how well is the United States doing to achieve its targets?

Dr. Hausker. The most recent estimates for where we will be in 2030, given the passage of the three laws that I mentioned, is that we will be close to a 40, 42 percent reduction in emissions below 2005 levels. So these bills, plus other trends like that all of our witnesses here have described, are taking us closer and closer to our 50 percent goal for 2030. However, we will need to take additional actions, and the Biden administration has some of those in the works. And I know some of them are also being proposed up here on the Hill that can take us and meet that 50 percent goal.

Mr. Tonko. Thank you. And so that it's clear, there's more that must be done.

How is that incentive-based strategy to reduce pollution working included in the Inflation Reduction Act and Bipartisan Infrastructure Law to keep those targets within reach? And if you could also include projections to see increased deployment of clean energy technologies -- solar, wind, electric vehicles, et cetera -- to replace fossil fuel

power equipment in our energy system over the next decade.

Dr. Hausker. Yeah, the Inflation Reduction Act, in particular, has put in a set of incentives that is already generating waves of investment across the U.S. And it is great to see they are happening in red States, they are happening in blue States, they are happening in purple States, hundreds of billions of dollars of investment in the works that will ultimately, by one estimate, create I think 1.5 million jobs, new jobs by 2030.

We are seeing -- and we are also seeing, because of the structure of the incentives, we are also seeing more onshore manufacturing, which will hopefully counter the trend that Mr. Mills was pointing to. We are seeing development of lithium mines. I think there was just an announcement -- announcement earlier this week on the Salton Sea project. That is a very positive development.

So all of these -- all of the incentives in the IRA across nuclear, across carbon capture, across renewables, across the infrastructure hubs for hydrogen and carbon dioxide pipelines, they are all -- you look at a map of the U.S. and that has identified where these projects are, and they are literally covering the country. It is very encouraging.

Mr. Tonko. Thank you. Thank you.

Dr. Hausker, again, can you give us a sense of whether complementary regulatory policies could help maximize uptick of these incentives?

Dr. Hausker. Yes. Mr. Tonko, as you said earlier, public policy is often most effective when it is a combination of carrots and well-designed sticks, meaning intelligent, effective policy. And the incentives are really jump-starting a lot of the new technology development. But to get the deployment that we need, we will probably also need intelligent regulatory policies. And the Biden administration has those under

development for the power sector, for various transportation applications as well.

Mr. Tonko. And when we look at these regulatory trends, has this been true in the power sector in the past? And when we talk about the title of this hearing, "Our History as the Global Leader in Reducing Emissions," have EPA standards helped spur the deployment of scrubbers and other pollution controls for traditional air pollutants?

Dr. Hausker. Absolutely. There are very few instances of pollution control technology or other environmental technology being developed purely by -- purely without public policy driving it, because the benefits are not captured by the businesses that would develop them and deploy those. So it is a very simple recipe that when we collectively decide to attack an environmental problem and reduce it, we set standards. We set performance goals. And then the incredible scientific and engineering talent of the United States comes into play and develops those technologies.

True for scrubbers. True for selective catalytic reduction. True for something as simple as baghouses and on and on, catalytic converters for automobiles. All of those were driven by policy. They didn't just appear magically or organically in the marketplace.

Mr. Tonko. Thank you so much. I yield back, Mr. Chair.

Mr. Joyce. [Presiding.] The gentleman yields.

The gentleman from Alabama, Mr. Palmer, is recognized for his 5 minutes of questioning.

Mr. Palmer. Thank you, Mr. Chairman.

I constantly hear my colleagues on the other side mention extreme weather events. And I just want to point out that the Intergovernmental Panel on Climate Change, their annual -- I mean, their Assessment Report Six makes this statement: The

IPCC has concluded that a signal of climate change has not yet emerged beyond natural variability, what would normally occur, for the following phenomenon: river floods, heavy precipitation and pluvial floods, landslides, droughts of all types, severe windstorms, tropical cyclones, sand and dust storms, heavy snowfall and ice storms, hale, snow avalanche, costal flooding, marine heat waves.

So I just hope that -- this report is kind of their Bible. They need to adhere to scripture.

I am going to ask you some questions, Mr. Mills. The Energy Information Administration just released a report in October that said heating homes with natural gas would be 40 percent less expensive than electricity.

Is that part of -- should that be an objective of this Congress to try to ensure that American citizens, particularly people on low income, senior households on fixed incomes are able to afford their household utility bills?

Mr. Mills. Only in the broadest sense, in the sense that the goal in energy policy should be first and foremost is adequate, affordable supply of energy.

Mr. Palmer. Right.

Mr. Mills. The definition. But I am a -- color me a deep doubter of the logic underlying that claim in the EIA, I am sorry to say. They often do excellent work. It is not cheaper. On average, it is more expensive for many markets. And the problem is all the policies are being put into place.

Mr. Palmer. For natural gas or --

Mr. Mills. Financial cost of electric heat over gas heat.

Mr. Palmer. No, no. It is natural gas is less expensive than electric.

Mr. Mills. Oh, it is, yes. Absolutely. Natural gas is less expensive, on average,

and has prospects for staying cheaper far longer, given current policies.

Mr. Palmer. Right. And it also, natural gas that we use here in the U.S. has fewer emissions issues than, say, Russian gas.

The reason I bring that up is I keep trying to make -- raise this point, especially to my colleagues across the aisle, is that as Europe has made this massive transition to renewables, it has resulted in unaffordable household utility bills. And last winter, there were 68,000 people died -- it was attributed to excess winter deaths -- because they couldn't afford to adequately heat their homes.

I do not consider that collateral damage. I think maybe some people would think that that is acceptable in this battle over climate change.

I am also very concerned -- and you have raised some excellent points in your report. I have read your reports, and it is not just an economic issue when you start talking about supply chain issues. It is also a national security issue, and I think you all have made those points very well.

I think that is something that this committee should take seriously, is that when we are dependent on an adversarial nation for critical minerals, for rare earth elements, all of which you absolutely have to have to even -- we don't make batteries here. We assemble batteries.

And one of the points I have tried to make to some of the folks that I talk with from Europe is that the war in Ukraine not only did not cause the energy crisis, it exposed it. But it also exposed something else.

No nation should be reliant on an adversarial nation for something that is critical to its economy and its national security as energy. And when you go 100 percent renewable or 80 percent renewable, you choose the number, you become reliant on an

adversarial nation.

How would you respond to that, Mr. Menezes?

Mr. Menezes. So what we have seen in the United States, I mean, we are -- because of the shale revolution, we have an abundance of affordable, cheap, natural gas which we are using. And in the electricity space, it complements the growth of renewables very well, because as you grow renewables more and more, electricity is used during the times. And you need -- when they ramp down, you need -- you need to be able to ramp up to keep the system operating 24/7. People don't expect to go into brownouts and blackouts. And what we have seen is natural gas complements that nicely.

So we are doing two things in the United States. We are using natural gas to replace coal for electricity generation, and it is complementing the increased use in renewables. That can be replicated not only here in the United States but all across the world.

Mr. Palmer. Well, in the last few seconds here, I just think that we need to have a people-first policy and do what is best for people.

On that, Mr. Chairman, I yield back.

Mr. Joyce. The gentleman yields.

The chair now recognizes the gentleman from California, Mr. Ruiz.

Mr. Ruiz. Thank you, Mr. Chairman.

Yesterday, the Department of Energy's Geothermal Technologies Office released results of the most comprehensive analysis to date quantifying the domestic lithium resources in California's Lithium Valley region in my district. The analysis found that Lithium Valley's total resources could produce enough lithium to support over 375 million

electric vehicles' batteries. This is more than the total number of cars currently on the roads in the U.S.

Lithium Valley is essential for the Biden administration's plan to meet 50 percent electric vehicle adoption by 2030. Developing our domestic lithium supply chain at Lithium Valley will play an integral role in decarbonizing the economy, creating good-paying jobs, and strengthening our national security. And the kicker is that this is the cleanest way of extracting lithium from the Earth. It is filtered out of the brine of geothermal production in a closed-loop circuit.

So I am proud that this report confirms what I have been saying all along, that my district will play a critical role in reaching these goals.

Dr. Hausker, can you discuss the importance of developing a secure domestic supply chain for critical minerals like lithium and how these efforts will contribute to reaching our climate goals?

RPTR ZAMORA

EDTR ROSEN

[11:03 a.m.]

Dr. Hausker. Yes, absolutely. Sorry. Absolutely. It is really encouraging, the report that you cited, and lithium batteries are going to be critical to the electrification of transportation. And we know that those vehicles are going to be cheaper to maintain than internal combustion vehicles, and we know that they will have a much smaller carbon footprint overall once we can shift light-duty fleet and increasingly like medium-duty vehicles as well.

The incentives in the Inflation Reduction Act also will lead us to be on-shoring other critical mineral production as well as manufacturing capabilities here. I agree with the other witnesses, we want to minimize as much as possible our dependence on adversarial countries for any kind of -- any kind of products. We are seeing the world remains a dangerous place. So every step in that direction will be a good one.

Mr. Ruiz. Thank you. And while this DOE analysis has made it clear that Lithium Valley there around the Salton Sea can significantly bolster our Nation's lithium supply, we need to ensure that we meet all of our critical mineral needs for clean energy development and deployment. This means fostering relationships with allies to develop robust and sustainable critical mineral supply chains with high environmental labor standards.

Dr. Hausker, how can the U.S. leverage our position as a global leader to meet our critical mineral needs with the highest standards possible?

Dr. Hausker. Yes, we do have very high standards for production of minerals now and other extractive industries in the U.S., and that is, again, where I think all the

witnesses here are on the same page. So to the extent that we can maximize that production, great. To the extent that when we do purchase overseas we can also put conditions and incentives for those countries also to adhere to similar standards, that will also improve the situation.

Mr. Ruiz. And so how does robust U.S. engagement at the COP position us to achieve our clean energy and climate goals?

Dr. Hausker. Yeah. It is very refreshing that we are back in a leadership position and that our negotiators can go to the COP holding their heads high, having passed the Inflation Reduction Act and these other laws, and resuming the leadership position that we have had in the past. It is going to be a difficult COP, as many issues on the table, as always, but it is refreshing that the U.S. is there as a leader.

Mr. Ruiz. Thank you. Look, we have a once-in-a-lifetime opportunity to produce a battery supply chain that is 100 percent American. And isn't that what this hearing has been about, the need to invest in domestic energy? And the DOE report on domestic lithium at Lithium Valley confirms that we can do just that. Further, this report confirms everything we have known, that the need to invest in domestic energy and in critical minerals and better technology is critical, not pollutants like fossil fuels.

So I would like to personally invite Chairwoman McMorris Rodgers and Ranking Member Pallone to Lithium Valley for a field hearing. Have a field hearing in my district that will allow members of this committee to see firsthand the progress that we are making in investing in domestic energy and critical minerals. The investment in the future of energy is in Lithium Valley, and the more we invest in domestic energy here, the faster we will achieve our net-zero emissions economy.

So I will follow up. We will do it during the winter when it is 70 degrees in my

district and like 15 degrees here. Thank you. I yield back.

Mr. Johnson. [Presiding.] The gentleman yields back.

The chair now recognizes the chair of the full committee, Chair Rodgers, for 5 minutes for questions.

The Chair. Thank you, Mr. Chairman.

So my colleague, Mr. Ruiz, thank you for the invite. I think it is very important that we explore supply chains and the realities of what it is going to take to meet some of the goals around mining and processing. Unfortunately, we continue to see where this administration is shutting down the mining and the processing permits in the United States of America. And so for those who are suggesting that this can be all done in America, I am waiting for the administration to start saying "yes" to securing the supply chains that are truly American-sourced and uphold the high environmental standards that we have come to cherish in the United States.

The United States has been leading. The United States has led, continues to lead, and our record of environmental stewardship, whether it is air quality, cleaner waters, it must be recognized. It must be celebrated. And I grow weary of my colleagues ignoring the success and what America has done. The entrepreneurs, the innovators here, our energy producers in industries have made these achievements possible, and it is so important to our security and to the productiveness of our Nation.

We have done this while improving the efficiency of energy production, the efficiency of everyday products that people rely on while continuing to lower greenhouse gases more than any other nation in the world. So we should examine the ingredients of this success and the lessons it holds for enabling the delivery of affordable, reliable energy, and we must look at what it means for advancing environmental progress.

So, Mr. Menezes, I want to start with you. The United States Energy Association has decades of experience working with developing nations. Would you speak briefly about the needs for communities within these nations to provide reliable, affordable energy to their people?

Mr. Menezes. Thank you for the question. You know, unlike the U.S., where we are replacing different types of energy with others, in the developing countries they are looking for electricity. They are looking for energy for the first time. So typically, a successful program cannot show up and say we are here in the United States and we are going to impose on you what we think that you need to have, if it is 100 percent renewables or not. Our experience shows it has to be community involvement, it has to be acceptance, and it takes time to get the communities to embrace what forms of energy they are going to have.

And it is important that a couple of things happen: It has to be reliable. Once they are getting electricity they do not want to have it intermittent. Two, it has to be affordable. And you need to make sure that you bring the resources for capacity building to make sure that when they operate that system and they figure out how they have to do it, that when you leave, they will continue to operate that system.

The Chair. Thank you.

Ms. Eversole, increasing people's capacity to thrive and prosper is a good thing, both here in America and around the world. If we build on our shale revolution, export more of our energy, our technology, our know-how, will that help or harm people?

Ms. Eversole. It will absolutely help people. Thank you for the question. You know, like you, I am a military spouse, and the men and women of this industry feel deeply, not only about producing affordable, reliable energy, but about serving our

country. And for us, it is about a pragmatic approach going forward. It is about not 2- and 4-year political cycles, but it is really about using our engineering know-how and capacity to deliver, not just for Americans here but for our allies around the world and look no further than what we have done for our allies in Europe just over the last 2 years.

The Chair. Thank you.

Mr. Mills, we celebrate the highest environmental standards here in the United States of America, anywhere in the world. Would you speak to how prosperity helps advance environmental stewardship in other places?

Mr. Mills. Well, there is a lot of good scholarship on this, Madam Chairman. There is a direct correlation between wealth and improving the environment. It is a direct correlation between wealth and affording healthcare and affording all the luxuries in life that we have in the Western world. And wealth doesn't come from increasing the cost of energy. So a primary goal of governments for most of history has been to drive down the cost of food and fuel, to free up wealth for protecting the environment and other luxuries that we enjoy in the West.

The Chair. That is right. And especially on the world stage, like at COP28, we must be honest about the reality and the risk of following an energy path in the name of greenhouse gases that cedes American leadership, and by all accounts, runs right into the control of China, which is the world's largest polluter.

So, Mr. Mills, we have discussed with you before how a rush to green agenda drives reliance on renewables that really aren't green, and especially when China is in control. But just, would you speak to that briefly in the time remaining?

Mr. Mills. Just to restate, China is the utter dominant supplier of energy minerals, refining and producing the products. It took them two decades to build that

industrial infrastructure. We will not reverse that with a few million dollars in a few years, not even a decade. I applaud efforts to re-shore American manufacturing and mining, but they are grossly insufficient, and they run headlong into the third rail, which is environmental laws, in particular, NEPA.

The Chair. Thank you. I yield back.

Mr. Johnson. The gentlelady yields back.

The chair now recognizes Ranking Member Mr. Pallone for 5 minutes.

Mr. Pallone. Thank you, Mr. Chairman.

To meet our ambitious climate goals of reducing greenhouse gas emissions by 50 to 52 percent by 2030 and shifting to net-zero emissions economy-wide by 2050, the Federal Government needs to use a three-pronged approach. We must incentivize American innovation and broader deployment of clean energy; set a strong regulatory framework to drive down emissions here at home; and thirdly, foster domestic and international partnerships to meaningfully address the global climate crisis.

So my questions are of Mr. Hausker. Do you agree that all three of these elements are necessary to drive down emissions and meet our climate goals?

Dr. Hausker. Yes. I think that is -- you know, by the end of the hearing I will learn to turn this button on. Just in time.

I think the three-pronged strategy outline is the correct one. I would add to the innovation strategy also the deployment, and how I describe the provisions of the three bills that we now have in place as laws. They work across research and development, which is innovation, demonstration, taking things out of the lab and demonstrating first of a kind, second of a kind, and then, fourth, deployment. And depending on the state of the clean energy technology, one wants to focus incentives across that valley of -- or

that spectrum of technology development, so I would add deployment to your innovation first prong.

Regulatory framework, we talked a little bit about previously where you often need a regulatory framework to accelerate the deployment of key technologies across key end uses to decarbonize the economy.

And finally, the international partnership piece is very important. No one country causes climate change. No one country can solve it. That is why we have a climate treaty. That is why we are working with 190 other countries collectively to try to find the path forward. And those partnerships take many, many forms. Sometimes they are provisions of the climate treaty commitments so that -- sometimes they are groups of countries that will get together outside of the climate treaty.

We have the Project Phoenix effort to advance small modular reactors. We have methane initiatives. We are looking forward also, of course, to whatever industry announces at the COP in terms of private-sector initiatives to reduce greenhouse gases. Those are often catalyzed with government partners as well.

So yes, we need all sorts of partnerships across the international sphere to address, again, a very complex and global problem.

Mr. Pallone. I think you actually answered a lot of the other questions I was going to ask, but let me just combine a couple here and ask one more thing. First -- well, how do incentives like those Congress enacted with the Inflation Reduction Act help accelerate climate action? And then, if you could speak to how EPA regulations complement the IRA's climate in clean energy investments and the importance of EPA's regulations for driving down emissions.

Dr. Hausker. Yeah. When you look at the Inflation Reduction Act, it is really a

visionary bill that has a set of tax incentives across all the important end uses of energy use, and they also have a structure to them where you get additional tax benefits for domestic manufacturing or content, you get additional incentives for locating a project in either a low-income community, or perhaps an energy-impacted community, like Kanawha, West Virginia, that is on its heels because of a closed coal mine or something like that.

So it is really a great structure to advance our climate goals, our domestic manufacturing goals, and improving equity across society.

Mr. Pallone. And what about the EPA regulations as a complement to that?

Dr. Hausker. Right. Right now we have -- let's look at cars. We have a set of tax incentives for electric vehicles, and that will induce a certain level of purchasing over the coming years, but EPA is also looking at a set of performance standards for vehicles that would not require all EVs but would require the fleet to move to an average of less and less greenhouse gas emissions. So there would still be rules for plug-in hybrids, there would still be rules for very efficient internal combustion engines, and so, a well-crafted regulation can move the whole fleet closer and closer to zero emissions as the tax incentive lowers the cost to the consumer.

Mr. Pallone. Thank you.

Thank you, Mr. Chairman.

Mr. Johnson. The gentleman yields back.

The chair now recognizes the gentleman from Georgia, Mr. Carter, for 5 minutes.

Mr. Carter. Thank you, Mr. Chairman.

And thank all of you for being here. This is extremely important. This is an issue that all of us are concerned about. I have the honor and privilege of representing

the entire coast of Georgia, over 100 miles of pristine coastline. I am very proud of that, as you can tell, and love the environment and want to protect our environment. It is very important.

But, you know, I always feel like we -- and I have been very involved in environmental issues, obviously, as I should, representing the entire coast of Georgia. But I have always felt like we have not gotten the credit here in the United States that we deserve in decreasing our greenhouse gases and decreasing our carbon emissions. We have decreased our carbon emissions more in the last decade than the next twelve countries combined while growing our economy. It can be done.

I have always said the greatest scientists, the greatest innovators are right here in the United States of America. That is why we have got to get out of the way and let them do their job. They have proven they can do it. They have proven if we get out of their way, "we," being the Federal Government, and let them do their job that they can innovate, and that they can decrease carbon emissions and they will do that.

I have been on the petroleum, on the fossil fuels -- I have been on their back telling them, You need to take more credit for the progress that you have made, and I feel like they do. They have made good progress. I have served on the Select Committee on Climate Change and on the Conservative Climate Caucus, had the opportunity to travel to Europe, and I saw mistakes that they made in Europe. They have allowed their policies to get ahead of their innovation, and it has caused them to have to backtrack.

And I think that is an important lesson we can learn here in America not to let that happen, this rush to green that we are having. We all want clean energy, and that is very important, but this rush to green is going to bankrupt us for one thing, and it is also going to cause us to have to backtrack like they have in Europe where they are now going

back to coal power plants, because they have already closed some of their nuclear plants, because they have let their policies get ahead of their innovation. So I hope that is an important lesson that we can learn.

Ms. Eversole, I want to ask you, you know, obviously you have heard from me, you have heard from everyone up here, at least on this side of the aisle, that our fossil fuel industry has allowed us to be a leader in emission reductions while growing our economy. Is it true that natural gas is responsible for 58 percent of the U.S. greenhouse gas emission reductions?

Ms. Eversole. Congressman, thank you for your question. I grew up in Georgia and spent a lot of time in the summer down in your district. It is a beautiful place and --

Mr. Carter. Thank you.

Ms. Eversole. -- appreciate your leadership.

Look, I also just want to remind us the problem that we are trying to solve, right, very frequently the debate gets around this false choice of either/or, either we can be cleaner, or we can continue down a path of using fossil fuels. This industry has proven that we can do both. And so, if what the problem we are trying to solve is that we are trying to maximize the reduction of emissions from our atmosphere, for the minimum cost to society, I think everybody in this room can agree on that. If, on the other hand, the problem that we are trying to solve is pick winners and losers among sources of fuel --

Mr. Carter. Absolutely.

Ms. Eversole. -- obviously that is going to create a problem. So this industry has demonstrated that we can continue to do both, and we look forward to doing so.

Mr. Carter. But specifically on natural gas, because I am a big proponent of natural gas here in America. It is cleaner than the natural gas coming out of Russia. It

is cleaner than anywhere else in the world. How can we duplicate that? How can we replicate that, if you will, globally?

Ms. Eversole. The innovative spirit of this industry is really -- is something that is the envy of the world. Look no further than what we have done in helping our allies in Europe in delivering LNG at a time when they had to completely reroute the global supply chain, because American gas, in our view, is a whole lot better than gas from Russia.

Mr. Carter. Absolutely. I couldn't agree --

Mr. Mills, let me go to you real quick, because nuclear is a big part of our energy portfolio in Georgia, as you know, I am sure. We just started up the reactor number three and Plant Vogtle in Georgia, and reactor number four will start hopefully the first quarter of next year. And I have Plant Hatch in my district that has been in operation since 1975. What role can nuclear play in meeting future energy demands?

Mr. Mills. Certainly a very significant one, and I think the key here is to get realistic about doing what France is doing and Finland, and now Sweden, which is to accelerate the regulatory structure permitting the construction of what we already know how to build, which are the classic nuclear power plants like Vogtle. Time matters in those. And then simultaneously, accelerate programs that can bring next generation, smaller nuclear plants online.

Mr. Carter. How can we get away from the negative connotations, if you will, of nuclear?

Mr. Mills. That is --

Mr. Carter. I mean, it is baseload clean energy. We need to be using more of it.

Mr. Mills. That is certainly a subject that will take more than one hearing to

address, Congressman.

Mr. Carter. Good. Thank you all for being here.

And thank you, Mr. Chairman. I yield back.

Mr. Johnson. The gentleman yields back.

The chair now recognizes the gentlelady from Colorado, Ms. DeGette.

Ms. DeGette. Thank you so much, Mr. Chairman.

Mr. Hausker, in your written testimony you mentioned that carbon emissions have decreased substantially since 2007 largely because of cleaner electricity generation. Is that correct?

Dr. Hausker. That is correct.

Ms. DeGette. But, however, just by what is happening now, carbon emissions still are not projected to decrease sufficiently to meet the global standards that they need to meet. Isn't that right?

Dr. Hausker. That is also correct.

Ms. DeGette. Now, do you think that industry can reach these goals completely on its own, or does government need to work with industry to try to help generate cleaner energy?

Dr. Hausker. Yes. As we have said, in the history of environmental problem-solving, leaving industry and business alone to come up with a solution, or to do them on their own has typically does not work. We need policy frameworks. Businesses welcome policy frameworks that are smart, effective, and flexible, and that is what the Biden administration is attempting to put in place and what Congress has done with the three laws that we have been discussing.

Ms. DeGette. And as a matter of fact, I meet with industry quite a bit, and this is

what they say to me, it would be really helpful for them if they had clear guidelines that they could follow. Any of the three industry witnesses who are here today, do you disagree with that?

Okay. They are shaking their heads no.

So the other thing I want to ask you -- oh, you do disagree with that. I am sorry, Mr. Mills.

Mr. Mills. Well, it is an important subject, but I --

Ms. DeGette. Right.

Mr. Mills. -- do disagree with the category -- it is called a category error, to assume that regulations can create solutions that --

Ms. DeGette. I never said that.

Mr. Mills. Well --

Ms. DeGette. I said, does industry want to work with policymakers to make standards so people would know what they had to do?

Mr. Mills. They always prefer to know what they have to do, absolutely --

Ms. DeGette. Right.

Mr. Mills. -- Congresswoman.

Ms. DeGette. Right.

Mr. Mills. Yes, that is for sure.

Ms. DeGette. So also, Mr. Hausker, would you say that -- as my colleague from Georgia, I am sorry he just left, he said the rush to green energy is hurting the economy. Is that correct?

Dr. Hausker. I don't think that is correct. I think we have seen, again, continued economic growth, continued job growth certainly over the last couple of years,

and so, the policies have been put in place have not hurt growth or employment in the last couple years. And I think -- I forget, maybe it was Mr. Menezes' testimony or other recounting, when we look at the whole history from 1970 on after we pass aggressive environmental laws, we don't see the economy tanking. We see that economic growth and environmental protection can go hand in hand.

Ms. DeGette. And in fact, what we have seen, at least in the short period, since we have passed this landmark legislation the last few years, is that the green jobs and the economy and the green energy industry are really growing substantially, and even traditional fossil fuel companies are using some of the benefits to refocus and to hire and develop. Isn't that right?

Dr. Hausker. Correct.

Ms. DeGette. Thank you. Now, I would also ask you, do you think that we -- that limiting non-CO2 emissions, including methane, is important to staying within the necessary warming limits?

Dr. Hausker. Absolutely. The non-CO2 gases represent about 80 percent of the warming that is occurring, so we need to reduce methane emissions, nitrous oxide emissions, and the other trace industrial gases, many of which were addressed under the Kigali amendment ratification that was discussed earlier.

Ms. DeGette. Okay. So do you think the -- just to put a finer point on it, the Methane Emission Reduction Program, or MERP, is going to help put us on track to meet the commitments under the global methane pledge, which is to cut methane emissions by 30 percent by 2030?

Dr. Hausker. Yes, absolutely essential.

Ms. DeGette. So I know we have been talking -- and I apologize, I was late. I

had to be a teller in one of the Democratic elections that we were having. But the U.S. and China came to an agreement to prioritize increasing renewable energy sources to displace energy created by fossil fuels. And China, as we know, is the world's largest methane emitter. This is the first time that they have agreed to limit non-CO2 emissions. How does this agreement between the two largest greenhouse gas emitters set the stage for similar efforts at COP28?

Dr. Hausker. This is a classic example of good diplomacy, in this case, bilateral diplomacy by the U.S. and China, getting them to get on board on reducing methane, not just focusing on CO2 emissions. I hope I addressed the thrust of your question.

Ms. DeGette. Right. That is great. Thank you very much. I yield back.

Mr. Johnson. The gentlelady yields back.

The chair now recognizes Dr. Joyce from Pennsylvania for 5 minutes.

Mr. Joyce. First, I want to thank Chairman Johnson for holding today's important hearing, and thank you to the witnesses for appearing with us.

It should be no surprise to anyone that America is leading the way on emission reduction. We are showing the world how to continue to grow economically, how to provide affordable and reliable energy to our citizens, and how to reduce our greenhouse gas footprint.

Between 2005 and 2021, America's greenhouse emissions were cut by 17 percent according to the EPA. Was this due to some new emerging green technology or scientific breakthrough? No. It was achieved by using the resources underneath the feet of my constituents and unlocking the natural gas potential in places like Pennsylvania.

Let's be clear, there is some exciting and innovative developments happening in

the energy sector, specifically in my home State of Pennsylvania. Two new hydrogen hubs have been established in the State where we hope to utilize our nuclear and natural gas resources to produce and ultimately unlock a new future of hydrogen power.

Companies like Westinghouse are working on the future of nuclear power and hope to provide new reactor options to the market. Recently, I visited the quarries at Specialty Granules in Franklin County in my district in Pennsylvania, where they are actually looking to use emerging technology to take part in the carbon capture right at the quarry.

Despite all this innovation, the core of what has made Pennsylvania an energy superpower are the coal and natural gas energy sources. These resources have provided firm, 24/7 resources to Americans across our Nation and keep the heat on during the winter storms.

Renewables may be an exciting trend to some, but what we need is the dispatchable power capacity fossil fuels provide. That is why we must focus on incorporating coal and natural gas into our future emission plans instead of waging war on these industries. China and India alone have built hundreds of coal power plants over the last decade. There is no green argument that is going to convince China and India to shutter these facilities.

The only way to tackle the emissions that these plants cause is to develop effective and affordable carbon capture, and the Nation that can develop this technology is the United States. We need a strong domestic coal industry that can work with the Department of Energy to develop and deploy this technology. Instead, by attacking the coal industry, government policies are making tackling global emissions much more difficult.

Natural gas is the other great resource in Pennsylvania. It is the Marcellus Shale revolution that has led our country to dramatically cut emissions while continuing to provide reliable and affordable energy. The emerging problem that we are facing in this industry is a struggle to build new pipelines. That is why I introduced the Mountain Valley Pipeline Completion Act to bring Pennsylvania natural gas to the Energy Star in southeastern United States.

Thankfully, this bill was signed into law as part of the Fiscal Responsibility Act. The sad fact is, without specific legislation approving a project, it is almost impossible to build a pipeline in the United States. To truly unlock Pennsylvania and America's energy potential, we need to have the pipeline capacity to deliver significant quantities of natural gas across our Nation and to increase our liquid natural gas exports to our friends and allies.

My first question is for you, Ms. Eversole. A large portion of people in northeast United States still rely on heating oil for their homes during the winter. The region is also forced to import foreign liquid natural gas during particularly cold periods. This situation, it is actually bizarre. Given the potential of the resources that Pennsylvania has just a few States away, can you discuss the reasons standing in the way of building a new pipeline in the northeast?

Ms. Eversole. Dr. Joyce, thank you for the question. Yeah, it comes down to this: It is very hard, if not impossible, unless -- it takes an act of Congress to build a pipeline in this country. It is wrong. Even if we were to move forward with a lot of the CCS technology, we need 50,000 miles of pipe for the CCS technology to really achieve the scale we need. We need to build more --

Mr. Joyce. Do you see that there would be economic benefits and

environmental benefits to the northeast from a hypothetical pipeline from Pennsylvania?

Ms. Eversole. Significant benefits.

Mr. Joyce. Mr. Chairman, my time has expired. I thank the witnesses for being with us here today.

Ms. Eversole. Thank you.

Mr. Johnson. The gentleman yields back.

The chair now recognizes the gentlelady from California, Ms. Barragan, for 5 minutes.

Ms. Barragan. Thank you, Mr. Chairman.

The cause of climate change -- one of the main causes of climate change is the greenhouse gas emissions from burning fossil fuels. The solution, I believe, is to reduce and eventually end our reliance on fossil fuels. This must be the focus of the 28th United Nations climate conference that will begin later this week. However, the Republican message today around energy and climate is focused on increased fossil fuel production and liquefied natural gas exports.

I would like to enter into the record a preprint copy of a research study by Dr. Robert Howorth at Cornell, which shows that when accounting for emissions across the entire natural gas supply chain, LNG exported to and burned in other countries is worse than coal for the climate. Mr. Chairman?

Mr. Johnson. Without objection, so ordered.

Ms. Barragan. Thank you.

Mr. Johnson. We will look at that.

Ms. Barragan. I want to enter it into the record.

Mr. Johnson. Without objection, so ordered.

[The information follows:]

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

Ms. Barragan. Thank you.

Dr. Hausker, is reducing U.S. and global reliance on fossil fuels critical for any successful climate strategy?

Dr. Hausker. Yes. As I described earlier, every IPCC scenario for meeting our climate goals requires sharp reductions.

Ms. Barragan. And Dr. Hausker, the world is off track to avoid the worst effects of climate change. The U.S. has made progress. We expect a 3 percent decline in emissions this year, but we need 6 percent reductions each year through 2030 to meet our commitment under the Paris Climate Accord. Much of our reductions so far has come from the power sector, while transportation is now the largest emissions source. Is the transition to zero-emissions vehicles a critical part of any path to meet U.S. climate goals?

Dr. Hausker. Yes, the transportation sector is critical. And if you look at the sectorial breakdown that I put in my written testimony, what is really fascinating about it is that the power sector has carried almost the entire burden of our reductions to date from that 2007 peak. Residential, industrial, commercial, agriculture, transportation have almost all been flat or just varying, fluctuating a little bit. So, yes, we need to get the other sectors on downward trajectories as well.

Ms. Barragan. Great. The EPA has proposed new regulations for cars and trucks that will accelerate the transition to zero-emissions vehicles. How important is it that the EPA finalize the strongest possible rules for emissions reductions from cars and trucks?

Dr. Hausker. Yes. A smart, effective regulatory policy combined with the

incentives of the IRA is, in my mind, the best road forward.

Ms. Barragan. Thank you.

Dr. Hausker, the Department of Energy has proposed several long, overdue updates to efficiency standards for washing machines, dryers, water heaters, stoves, and other appliances. These standards will reduce emissions and save Americans money on their energy bills. How important are these standards for the U.S. to meet its climate goals?

Dr. Hausker. Yes. Efficiency standards have a long history, and DOE has done an excellent job over the years of creating these regulations for efficiency that save customers money, save energy, and reduce greenhouse gases. And I am certain that -- I am sure this next wave will be equally effective, and again, will combine with IRA incentives for things like heat pumps.

Ms. Barragan. Thank you.

My last question is, recently the United States and China announced a new joint commitment on climate, including a goal to triple global renewal energy capacity by 2030. Does U.S. leadership on climate through investments in Inflation Reduction Act, which you just mentioned, help to bring countries like China and India to the table for these commitments?

Dr. Hausker. Yes, I think by showing leadership on climate domestically, that puts us in a much stronger position to work with other countries also, to ensure that they set good targets and meet them.

Ms. Barragan. Well, thank you. Is there anything that you want to add that you maybe haven't been asked about today?

Dr. Hausker. Can I take a rain check on that?

Ms. Barragan. Okay. Sounds good. All right.

With that, Mr. Chairman, I yield back.

Mr. Johnson. The gentlelady yields back.

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

Mr. Weber. Thank you, Mr. Chairman.

I am going to ask the witnesses some questions. And, Mark, is your last name pronounced Menezes?

Mr. Menezes. Menezes.

Mr. Weber. Menezes, that is what I was going to say.

Mr. Menezes. Thank you.

Mr. Weber. Mr. Menezes, quite frankly, as just kind of a survey, the vehicles that you personally drive, and we are going to go right down the line here, gas, diesel, hybrid or EV? Would you --

Mr. Menezes. I have owned a hybrid since 2002.

Mr. Weber. Good. How about you?

Ms. Eversole. You won't be surprised to hear that I have an internal combustion engine that runs on gas.

Mr. Weber. Okay.

Dr. Hausker. My vehicle runs on wood. Just kidding.

Mr. Weber. Okay. All right. Well, where the wood meets the road is -- so do you -- gas vehicle, diesel, EV, or --

Dr. Hausker. I drive an internal combustion engine. I hope soon to move to either a plug-in hybrid or an all-electric vehicle.

Mr. Weber. Okay. Mr. Mills?

Mr. Mills. I have a hybrid. I was a hybrid bull 20 years ago and published leading research on that. It is also partly fueled by corn, as you know.

Mr. Weber. Okay. All right. So let the record show, only the two middle are anti-EVs, you know. Just a little fun there.

Dr. Hausker. API and WRI, we agree on everything.

Ms. Eversole. True bipartisanship.

Mr. Weber. We do have some bipartisanship.

Mr. Menezes. Mine is battery electric, not plug-in.

Mr. Weber. Okay. All right. Mr. Menezes, say your name again?

Mr. Menezes. Menezes.

Mr. Weber. Menezes. I can do this. I want to echo a quote from your written testimony. Quote, "Successful lasting projects were built from the ground up, with community involvement and acceptance, not imposed on them because the U.S. thought it was a good idea," end quote. I think this is something unfortunately the Biden administration has not been doing but should take into consideration as they actively tried to pick winners and losers in many sectors from the stuff that you actually talked about, Ms. Eversole.

Mr. Menezes, you note that U.S. CO2 emissions may decrease as much as 45 percent below the 2000 level. And you are doing your part.

Mr. Menezes. That is EIA.

Mr. Weber. Yeah, you are doing your part for that, by the way.

Mr. Menezes. Thank you.

Mr. Weber. Innovations, in large part, due in reduction -- innovations in fracking and increased utilization of natural gas. U.S. and natural gas is the most

environmentally friendly in the world -- that has been noted -- and demand for it is skyrocketing, as it should be.

And my district is seeing this firsthand with the three LNG export facilities along the Gulf Coast. How do you see U.S. natural gas exports playing well in developing nations to provide clean and reliable energy, while at the same time, lowering their emissions by moving on from biomass and other inefficient high-emission systems?

We do want to note that it is not by driving wood-burning vehicles, Mr. Hausker.

Go ahead.

Mr. Menezes. Right. Well, in the developing countries, including India, for example, you know, they have always been looking at ways to import U.S. LNG, because in a lot of these developing countries, they have access to coal, so they know they can develop coal. But they are looking at alternatives, and U.S. LNG is an alternative. And so you see a lot of the development really all over the globe of trying to be able to import the U.S. LNG. And of course, it is over the, you know, pipeline Russia gas we see in Europe, so you see Europe growing. Those are developed countries, but also in the developing countries as well.

Mr. Weber. Well, thank you for that. And I want to move on just a little bit. The pledge made by the U.S. to reach net-zero emissions -- back to you -- by 2050, in my opinion, is just totally unrealistic. Next thing you know, the California Governor will be calling for no charging electric vehicles between the hours of 9:00 and 3:00. Oh, wait, that has already happened. But primarily it is because of the permitting process.

You raised a great point in your written testimony, quote: Today it takes much longer to obtain permits than it does to actually build the projects seeking government permission. It takes longer to get those permits than it does to build those projects.

Let that sink in.

So we have seen this with the EPA backlog of class six wells, which are critical for CCS projects, which we have probably the largest carbon capture sequestration and storage facility in the country, in Port Arthur, Texas, which the administration is saying it is a priority for them. Can you speak to how burdensome a permitting process could conflict with the goals of actually lowering emissions? That is you.

Mr. Menezes. Right, and Congress recognized this in the debt limit bill. Congress actually amended NEPA and put timelines around environmental assessments and environmental impact statements required by NEPA. Congress recognized it is important to be able to put reasonable timelines in place.

All applicants for these permits; these are very sophisticated applicants; they understand Clean Air Act requirements; Clean Water Act requirements; they understand NEPA; they do want certainty. And to the extent that you can do a comprehensive review within those timeframes helps us bring these emission reduction facilities online.

Mr. Weber. It is commonsense. And I want to say real quick by saying, Ms. Eversole, you said that the energy industry is extremely good at innovating and making these things work in the most efficient manner.

Mr. Chairman, I yield back.

Mr. Johnson. The gentleman yields back.

The chair now recognizes the gentlelady from New York, Ms. Clarke, for 5 minutes.

Ms. Clarke. Good morning. And thank you, Chairman Johnson and Ranking Member Tonko, for holding this hearing today.

I want to also thank our witnesses for being here to testify on our Nation's ongoing efforts to reduce carbon emissions, the work that still remains, and the United

States role as a global leader in this space.

This week, the U.N. Climate Change Conference of Parties, COP28, will meet to continue global cooperative measures to address the climate crisis and set new targets to reduce global emissions. That is why it is so imperative today to accurately evaluate the climate crisis, the work we must do to moving forward in the fight against climate change while keeping equity at the forefront of our efforts.

Despite contributing little to the climate crisis, the devastating effects of climate change are felt hardest on communities of color and low-income communities. Even more concerning, environmental justice communities experienced the least amount of investment in clean energy technologies. If we only focus on our previous success in emissions reduction, it will be these communities who continue to bear the heaviest burden of climate change.

Dr. Hausker, can you speak to why investing in clean energy, like wind and solar, rather than focusing solely on fossil fuels for electricity generation is critical for a cleaner climate future and the promotion of environmental justice?

Dr. Hausker. Yes. The increased use of solar and wind will further reduce emissions from the power sector, and that will benefit, I think, all citizens, but particularly, reduce some of the higher concentrations in some of the urban areas that have environmental justice impacts.

I also want to observe that the Inflation Reduction Act has a program of environmental justice grant-making that is unprecedented in scope and size, and it also can bring jobs and clean energy projects to low-income communities through the added bonus tax incentives based on location. And I think that will also be very helpful to the communities you describe.

Ms. Clarke. As you rightly stated, last Congress, Democrats made historic investments in clean energy and the environment saving families money in tackling the climate crisis. The Inflation Reduction Act alone provided $369 billion in investments for clean energy and reducing greenhouse gas pollution.

But despite the success of the IRA and the bipartisan infrastructure law have had on the environment and the economy, my colleagues, Republican colleagues, continue to support efforts to undermine the Environmental Protection Agency, and the Department of Energy and refuse to put forward any meaningful climate solutions. The status quo of environmental regulation is not enough to meet our climate goals.

So, Dr. Hausker, your written statement, as well as the World Resource Institute State of Climate Action 2023 report, notes the progress made thus far toward reaching the goal set in the Paris Agreement of limiting global warming to 1.5 degrees Celsius by 2023. Can you share a bit more about our current emissions trajectory and what other steps the U.S. can take to combat the climate crisis and meet this goal?

Dr. Hausker. At the global level, the emissions trajectory, as I put a figure in my written testimony, indicates that, as a globe, we are just beginning to perhaps flatten the global emissions. And if countries do meet their nationally determined contributions, we can begin to bend that curve a little bit. Obviously, and again, as the figure indicates, we need to be at a much steeper downward trajectory to have any chance of meeting a 1.5 or 2 degree goal.

In the United States, as all witnesses agree, we peaked emissions in 2007, and we have been on a slight downward trajectory. The Biden administration has set goals of roughly 50 percent reduction by 2030 and net zero by 2050. That, again, will require additional steps beyond what Congress has enacted and the administration has taken so

far.

So we have a lot of work ahead. But again, I just want to emphasize, this is challenging. No one is saying this is easy. But it is either this path or a path to 2.5, 3, 3.5 degrees warming, and the acceleration of all the impacts we have been seeing over the last couple of years.

Ms. Clarke. I couldn't have said it better.

And I yield back, Mr. Chairman.

Mr. Johnson. The gentlelady yields back.

The chair now recognizes the gentleman from Georgia, Mr. Allen, for 5 minutes.

Mr. Allen. Thank you, Chairman Johnson, for holding this important hearing. And there has been a lot of conversation about actually who is in control of the temperature of this planet. As many of our witnesses have mentioned, the United States has been through the free market and innovation, a world leader in reducing emissions, and we want to be good stewards of the environment. And we are leading the rest of the world. The U.S. produces some of the cleanest oil and gas in the world.

I was interested in reading that report that says that our natural gas, that we are told, burns 42 percent cleaner that what they are burning in Europe right now is how that, you know -- why that now is -- our natural gas is producing more carbon emissions. This whole subject is all over the board, and it is not science-based. It is based on projections that frankly, I mean, when you look at our planet compared to the entire system, I mean, you know, if you look at it with a telescope the other way, I mean, we are gnats compared to the whole universal system.

So obviously, one of the things we have done in our district, and of course to Southern Company's credit, we have got Plant Vogtle first units, three and four. Unit

three is fully operational and online, but it has been over 30 years. And unit four is coming on next year.

We know that nuclear energy is clean, reliable, affordable, and we know that over a period of time, it is very efficient. Department of Energy says that Vogtle's 3 and 4 will generate more than 17 million megawatt hours of clean energy and prevent 10 million metric tons of carbon dioxide emissions annually.

Mr. Mills and Mr. Menezes, can you speak to the importance of these new units at Plant Vogtle, and as well as looking at additional nuclear possibilities as far as reducing emissions in this increasing demand for electricity? And, Mr. Menezes, you could go first, and then Mr. Mills.

Mr. Menezes. Thank you very much. I agree with you on the use of nuclear for emission-free dense energy over time. With respect to in the United States, however, Vogtle, because Southern Company is not in a bid-based electricity market and is in a regulated utility, that that plant is going to be hard to replicate in our bid-based electricity markets. It is very, very difficult in the United States for price formation at first, to allow a plant of that size in any of the other RTOs. So that is something the committee should look at.

And so, as a consequence, the industry is moving to small modular reactors actually, not of the size of Vogtle, different technologies. And we have seen that there is some exciting opportunities here in the United States. Although, NuScale recently, you know, pulled out of their project with UAMPS, or UAMPS pulled out which caused NuScale to --

Mr. Allen. Right.

Mr. Menezes. But the future of nuclear is great. We see globally the

acceptance really of nuclear more than we do in the United States for the aforementioned reasons. It is very difficult to be able to place and build now in the bid-based markets and nuclear facilities?

Mr. Allen. Mr. Mills?

Mr. Mills. I would just like to reemphasize that the challenge that the nuclear industry has is essentially a structure regulatory, as Mr. Menezes has pointed out. Building big reactors is what we know how to build, and we need to build a lot more of them faster. I think France will do that. Sweden is going to do it.

The small reactors don't have a regulatory problem as much right now as the technology timeline problem. It will take some years to build enough of them to know how they work and how to build them at scale. I am sure it can happen. A different incentive structure is required for that, and I see very little evidence of that being put in place.

Mr. Allen. Well, there is really no incentive from the Federal Government to build these. In other words, it is disincentive. In other words, the larger the regulatory impact, you know, it is hard to raise the capital to build these things, and like you said, because of our situation there.

Ms. Eversole, your testimony talked extensively about how the late 2000s private sector developed fracking and horizontal drilling and unlocked vast quantities. Can you discuss how lifting the oil export ban allowed the U.S. to will more influence and really drive this economy?

Ms. Eversole. I certainly can appreciate the question. Look, I mean, we have had an incredible influence on stabilizing the markets as a consequence of lifting the oil export ban in 2015. Production increased by a total of 1.8 billion barrels of oil as a

consequence of lifting that ban. We see roughly an increase on an annual basis of 48,000 jobs as a consequence of this, and we have helped to rebalance the trade deficit in our favor by $178 billion.

Mr. Allen. And these are all -- I mean, to have a successful economy, and of course, with the government spending. We spent trillions of dollars on this of late. And with that, Mr. Chairman, I yield back.

Mr. Johnson. Would the gentleman yield?

Mr. Allen. Yes.

Mr. Johnson. Mr. Menezes, I wanted to take up the remainder of Mr. Allen's time.

Did you already clamp it down? Okay. I will do it later.

The chair now recognizes the gentlelady from Illinois, Ms. Schakowsky, for 5 minutes.

Ms. Schakowsky. Thank you so much, Mr. Chairman. Let me get my mic over here.

And I want to ask and direct my attention to Dr. Hausker. So tomorrow begins the COP28 Climate Conference, and I know that their goal is to actually triple the investment in renewable energy and capacity by 2030, which we certainly talked about as a goal. But it seems to me that that is doable if you talked about the challenges that we have, if we are up to actually doing that.

And I know that there are some things that are barriers in a way. For example, we have to do some streamlining of the permitting process. We should do more when it comes to investing in transmission, those kinds of things. But I am wondering what you think are the most important steps that we need to take right now. What are the kinds

of barriers that we have to knock down? What are some of the most important investments? I know you have talked about the three things, the three bills that we have passed already. But going forward, what are the most important steps that we need to take?

Dr. Hausker. Yes, thanks for that question. You touched on permitting, and again, I think that is something that I think all four witnesses have touched on, that there is bipartisan support for improving our permitting system, maintaining protections, but making things faster and eliminating duplication and needless delay. And we need that permitting reform for transmission lines, for various kinds of pipelines, and for basically clean energy projects of all types, whether it is renewables or small modular nuclear, or what have you. So permitting is extremely important.

I think moving forward on intelligence, smart, flexible regulation in certain transportation applications and in industry, we mentioned DOE appliance regulation, all that would be extremely important to move forward and hopefully not be endlessly challenged in court or struck down because of, I think, very shortsighted Supreme Court principles that seem to be bouncing around on regulation these days. Those are the ones that come to mind.

But I also want to second something that my colleague said about problems in the bid-based markets, or another way to say that is the restructured markets where we have regional transmission organizations. He put his finger on a problem of how the markets are not designed to accommodate large projects or risky projects or, you know, perceived financial technological risk, and yet, we need to move forward in those markets as well as our traditional vertically integrated markets. So we need to rethink market design, in my view, in those areas.

Ms. Schakowsky. Thank you. Yes or no, you think this is doable, however, right?

Dr. Hausker. As I said, it is challenging to do the clean energy transition as I have described and as laid out in various scenarios. And there are going to be -- it is --

Ms. Schakowsky. I am running out of time. Let me ask you one more question. You have mentioned the three bills, the Inflation Reduction Act, et cetera, and I know that you had in your testimony some talk about jobs that are created. And I wanted to focus a bit on that, because I think that is so important for the American people now, the impact of these bills that got passed and what it means when we go to renewables and job creation.

Dr. Hausker. Yes. Often clean energy solutions are going to be more capital-intensive and less fuel-intensive and also more labor intensive for the construction and the operation, so I think we are going to largely see employment benefits in this shift. And as in my testimony, I noted a group led by former Energy Secretary Moniz estimated that we could create an additional 1.5 million jobs by 2030 by fully implementing the provisions of these three bills.

RPTR WARREN

EDTR ZAMORA

[12:00 p.m.]

Ms. Schakowsky. Thank you.

And I yield back.

Mr. Johnson. The gentlelady yields back.

The chair now recognizes the gentleman from Ohio, Mr. Balderson, for 5 minutes.

Mr. Balderson. Thank you, Mr. Chairman.

And thank you all for being here today.

My first question is going to be for Ms. Eversole, and thank you for being here.

We have discussed the many environmental benefits from the switch to clean American natural gas. As a result of the shale revolution, America is the global leader in exporting LNG in emission reductions. Beyond strengthening our national security and the corresponding environment benefits, the shale revolution has been a game changer for local communities and areas like southeastern Ohio.

Just a few weeks ago, the Muskingum Watershed Conservancy District, which covers most of my and Chairman Johnson's district, released a report showing revenues from Utica shale leases have bolstered the region's economy by nearly $1 billion. These leases have allowed the district to invest in upgraded recreation and camping facilities, new conservation programs, efforts to improve water quality, and have supported thousands of new jobs.

Mr. Chairman, I would like to submit this report for the record. Thank you.

Ms. Eversole, can you discuss the efforts that API's member companies have taken to be responsible stewards of the environment and investments they have made in local

communities and where they operate?

Ms. Eversole. Absolutely. I appreciate the question, Congressman.

And I think that there are more than 8,000 jobs directly from our member companies in your district, and that doesn't take into account all the other jobs and through small businesses and restaurants and local retail that thrives as a consequence of having that level of investment and good wages in the district. It is extremely important.

You know, we have talked about the energy trilemma. But the impact, the real world impact on the ground -- and you get to see it every day that you are home -- is significant. We care deeply about the environment and we care about conservation.

You know, we have talked about hydraulic fracturing. That alone has allowed this industry to reduce our surface footprint by 70 percent. That means that the campgrounds that you talk about, that means that the land is there for folks to enjoy. And it is really, it is a pleasure to be able to serve the people of your district, sir.

Mr. Balderson. Thank you. And we are proud.

And I should mention that Craig Butler leads the Muskingum Watershed Conservancy District, and he has done a fantastic job, has an understanding of what this is and the importance of, you know, putting it back in.

Followup, Ms. Eversole. This committee has outlined concerns with various policies from the current administration that threaten grid liability, hurt domestic producers, and will increase energy costs for consumers. But I am interested to hear your thoughts on past policies that have encouraged private sector innovation. Can you discuss a few things -- can you discuss a few times you think States or Washington, D.C., has gotten things right? And then a followup to that would be: And how can this

committee work to strengthen pro-growth policies moving forward?

Ms. Eversole. Right. You know, innovation is one of those things where, you know, we have been the envy in the world across so many different areas, including in this industry, and innovation is very hard to regulate, right. The private sector has a key role here. Of course, we support sensible regulation, efficient and effective regulation. But I do think that it really comes as a consequence of a partnership between the public and private sector, and it gets back to really the shared goals.

Our shared goals should be to figure out how to produce more American energy for the benefit of our people, ensuring that it is affordable, reliable, and cleaner energy. And that is very important to the industry. It is very important to what we will pursue going forward.

Heavy-handed mandates like what we are seeing by EPA's tailpipe regulation, for example, it just -- it is the wrong way. There is a right way and a wrong way to consider regulation.

And I am encouraged by some of the bipartisan discussions that we have had here today, but there is a lot more to do, because what we haven't talked about today is that this isn't an either-or. This is not about fuel switching. This is about a massive increase in energy demand globally, 35 percent over the coming decades, more energy. This isn't about either-or. This is about addition, and we look forward to meeting those energy demands.

Mr. Balderson. Thank you so much for that response. That is very well done.

I am going to try this. Mr. Menezes, I hope I don't cut you short, but I will be cautious of my time.

I will run out of time. I better not. So I apologize. Thank you.

I will yield back, Mr. Chairman.

Mr. Allen. [Presiding.] Thank you.

And now I yield to my friend from Idaho, Mr. Fulcher, 5 minutes.

Mr. Fulcher. Thank you, Mr. Chairman, and to the panel for your testimony today.

A number of you have, at least Mr. Mills, Mr. Menezes, talked about small modular nuclear. And that is something that is of interest to me in particular. I know national lab is in my State and is a source of information and a lot of work on the small nuclear reactors.

And I wanted to just address a question to Mr. Mills with this backdrop. Internally, we have likened the potential of the small modular nuclear reactor, kind of like what the Boeing 727 was to the aviation industry. It kind of revolutionized it, provided service to smaller regions, smaller airports. And it seems like the small modular nuclear reactor could be the same for energy. Yet our current Federal promises to COP, the Climate Change Conference, and administration timelines are really driving some windows and constraints on this that skew the priorities for the development of these technologies.

And I just wanted to, first of all, get your -- Mr. Mills, get your input on two things. Number one, do you see the parallel that I just described with what the potential of the small modular nuclear reactor could be, number one? Number two, are we putting artificial timelines, are we prioritizing those incorrectly for development?

Mr. Mills. I think, as is probably clear from my testimony, I think the priorities are incorrect. And the priorities require putting as a primacy costs, ultimate costs to consumers.

As far as nuclear energy is concerned, I think the biggest challenge is a failure to recognize, again, the timelines. One has to be more patient than current laws and regulations would imagine it will take to build new generation, new class of nuclear power plants. You have to build them first. We have not built any of them at scale. Have to operate them for a number of years to see how they work and how you build more of them.

There is 72 different designs for small reactors in the world. Probably 70 of them will work technically. If I were guessing today, a couple dozen will be economically feasible, but we won't know that for at least a half dozen years. Might be 10 years.

Mr. Fulcher. So on a related note -- I am just going to stay with you just for a moment -- uranium is something that is necessary for this development. And my understanding is 24 percent of our supply is currently dependent upon Russia, which, for one, makes me nervous.

Is there a reason why the administration has not put more emphasis on sourcing the uranium domestically? We have got it in multiple places right here in the U.S.

Mr. Mills. The uranium mining and refining and enrichment processes, all of which are critical for nuclear fuel and then fuel production, are central to the future of nuclear power. We made some epic mistakes in those domains in legislation over the last couple decades that I don't see efforts commiserate with the challenge yet.

Mr. Fulcher. Nor do I. I thank you for that, Mr. Mills.

I am going to shift gears. I would like to talk to Mr. Menezes just for a second.

Another interest in my home State of Idaho has to do with geothermal, and that is -- we are a pioneer in that. We have currently got more than 70 direct-usage geothermal sites. Our State capitol has been powered by geothermal or at least has

used geothermal energy dating back to 1892. That is not 1992 but 1892. And so I try to promote this as much as I can just because of what I believe are the benefits to that.

I would like to ask you: Do you see an opportunity for the U.S. to become a leader on a global basis here? Just talk to that for a moment, if you would.

Mr. Menezes. Yeah, the short answer is absolutely. I mean, geothermal is there right in plain view, if you will, for us to actually develop and to deploy. This has been an area of priority obviously in Idaho and with the national lab. Department of Energy has also elevated this as a great opportunity right here in the United States to develop this technology. It needs to be economical. You know, there are some physics that need to be applied to it. But it is -- it is a -- an abundant source. We have plenty of places in the United States where we can do this. We do need to get the permitting in place so that we can go forward on this, but it is a plentiful source and it is one that we should be looking at very closely.

Mr. Fulcher. Thank you for that.

And I am about out of time. But I want to take the last few seconds, rather than ask a question -- I have got plenty more questions -- but just to make a note, too, for the record.

Hydro in the Pacific Northwest is also a very reliable, inexpensive, efficient baseload. And I think that it is suffering some of the same discrimination in terms of priority certainly within our region of the country, as perhaps some of the nuclear or even geothermal energy sources are.

So, with that, I am out of time. Mr. Chairman, I yield back.

Mr. Allen. Thank you, Mr. Fulcher.

Now I yield 5 minutes to Mrs. Miller-Meeks from Iowa.

Mrs. Miller-Meeks. Thank you, Mr. Chair.

And I thank all of our witnesses here today.

As you have already heard, the United States is a leader in reducing greenhouse gas emissions, all while increasing energy production. Extremely important point. We have reduced emissions and increased production.

Since 2005, the United States has reduced net greenhouse gas emissions by 17 percent, and this reduction occurred while primary energy production in the country increased by 48 percent. Even at COP, which I went to in 2021, 2022, and will be going in another several weeks, it is widely acknowledged that energy demand is not going down and it, in fact, it is going up, if not doubling over the next decade.

I am proud to say in Iowa that the State that I represent has slashed its carbon intensity from electricity generation more than any other State between 2000 and 2020. My home State generates nearly two-thirds of total electricity net generation from renewable sources, including over 60 percent from wind energy. Additionally, Iowa produces more fuel ethanol and biodiesel than any other State in the Union.

Meanwhile, China emits more greenhouse gas emissions than the entire developed world combined. In fact, China's carbon emissions increased this year by 4 percent in the first quarter of this year, reaching the highest first quarter number on record, which is why it is problematic that the Biden administration is continually turning to the Chinese Communist Party to produce energy components. Meanwhile, they increase coal-produced energy.

Additionally, America's air quality also surpasses the rest of the world. I remember growing up as a child that we were going to die of acid rain. We couldn't fish in the river. If you fished, you couldn't eat the fish because of mercury and

pollutant -- air pollution was cause of asthma.

U.S. levels of fine particulate matter are far lower than the world average and lower than Europe and Southeast Asia. In fact, the United States' manufacturing industries are often environmentally cleaner than the global average. If environmental regulations on particulate matter currently being pursued by the EPA are put into place, this could have unintended effects of increasing greenhouse gas emissions and criteria pollutants by having to rely on products manufactured overseas.

Mr. Menezes, how does the Biden administration's tunnel vision on an electric-vehicle-only future jeopardize U.S. energy security?

Mr. Menezes. Well, thank you for the question. I think, well, what we have been discussing here is that, you know, that people are not going to necessarily choose that there is going to be a one option for them. So they are going to want options.

And so if you put all your eggs in one basket, you are probably going to get some pushback. And so I would just say that you need to keep a broad view. There is going to be many component parts of trying to get to reduce emissions in the transportation space. We have talked about, today, the transportation sector now, you know, leads, if you will, in emissions over the power sector where we have gotten tremendous drop.

So but it will be the consumer that is going to be driving these choices. I think they, all consumers, you know, wish to produce less emissions. But whether or not you are going to be forced to buy an electric vehicle is something to have --

Mrs. Miller-Meeks. Does it put the U.S. at a disadvantage, more to my point, when component parts, battery parts, minerals are developed, processed, mined, refined overseas, coming into the United States?

Mr. Menezes. Yes, indeed, particularly with the EVs, because we know China

produces all the parts. And by embracing, you know, EVs, it is China that leads the world in producing EVs. And so you see pushback in Europe. Germany, for example, you know, the internal combustion companies of Mercedes Benz and Porsche, you know, they are pushing back on Europe's attempts to go to 100 percent or zero emission vehicles. They do not want to give up the global leadership in those technologies, nor do the U.S. manufacturers of these automobiles.

And so I see China is sitting there. They cannot compete in the internal combustion engine automobiles. They dominate electric vehicles. So why wouldn't they support a global push for electric vehicles?

Mrs. Miller-Meeks. Thank you.

And I say that as having owned two Honda Civic Hybrids, which my hybrid was an excellent blend between the two.

Mr. Mills, can you discuss the important role U.S. manufacturing plays in reducing global emissions?

Mr. Mills. Well, the U.S. manufacturing sector is obviously central to prosperity. Germany is a manufacturing giant, as is China. Germany is in danger of deindustrializing. It has been widely covered now, because of their energy policies, not because of environmental policy but because of energy policies.

United States would follow Germany's path now, apparently, which would be destructive to our industry and, therefore, destructive to general environmental goals because the manufacturing will occur in China and in India, which are expanding their coal production. And, frankly, their environmental practices are substandard from our perspective, to put it politely.

Mrs. Miller-Meeks. Which then undermines the United States' security and leads

to great disruption.

So thank you.

With that, I will yield back.

Mr. Johnson. [Presiding.] The gentlelady yields back.

And the chair now recognizes the gentleman from Texas, Mr. Pfluger, for 5 minutes.

Mr. Pfluger. Well, thank you, Mr. Chairman. What a great hearing.

I represent the Permian Basin. The shale revolution that we talked about, you know, has largely emanated from there, the innovation that we have all talked about that has lowered emissions.

You know, what really saddens me today is that I don't know that there is any other way to look at it but to think that my colleagues who talk about this narrative, polluters over people, actually just hate American companies, and that just saddens me. They hate American innovation because they haven't proven anything else. That is the only way to look at it.

We are doing more of everything, more production, more building, more of everything, and yet less emissions, less harmful toxins, less particulate matter, less methane intensity, less CO2, less, less, less. And the facts are there, and yet they still demonize American companies. And that is really sad to me.

Let's talk about the Methane Emissions Reduction Program, which my colleagues said that they talked to industry about, yet the industry that I represent in the Permian Basin, not a single person out there was consulted on this. Nobody was consulted on what this tax looks like. The ultimate goal was just to produce less, to tax it so they would produce less.

I will start with Mr. Menezes. Talk to us about private sector innovation reducing emissions and the threat if we do the MERP, if that goes into effect, what that -- what is the effect going to have on emissions ultimately?

Mr. Menezes. We talked about the innovation on emission reductions. With respect to, you know, your comments about methane, methane is not defined as a pollutant because we know that natural gas is actually an energy source. So it is not actually defined as a pollutant, although it is now cast as a pollutant, and indeed it does have, you know, repercussions on emissions along with CO2.

However, if you look today at the development of these new technologies to detect, to measure, monitor, and reduce methane emissions, it is all private sector. In some respects, when you look at what EPA is now representing, they have to acknowledge now that the industry -- these are industry that is leading this.

So if the government just lets the industry continue, remember, this is a product. They have an interest in making sure that leaks, that now they can detect, they are going to capture and they are going to use. So it works that way. You don't have to look at regulation every time as a solution. In fact, at the Department -- when I was at the Department, we had a saying. It was: Innovation over regulation.

Mr. Pfluger. So let's take that innovation, Ms. Eversole. Talk to me about the 600 companies that you represent and their desire to capture it just for financial interests.

Ms. Eversole. Right. You know, as Mr. Menezes said, this is our product. Methane is our product. It is in not only our financial interest to keep, to capture it and sell it, it is also in our interest in serving our communities and our employees.

You know, I think it is very important. We have talked about the 66 percent

reduction in methane emissions. That is not because we had, you know, a heavy-handed approach like the MERP program. It is because of the American ingenuity represented by the member companies, many of whom operate in your district.

But that 66 percent reduction across all seven major U.S.-producing basins came at the same time as an increase in production of 179 percent. We can do both. This is just -- it is a false choice that we have to pick either-or. And it is in our interest to do it, and the industry's going to keep at it.

Mr. Pfluger. The implementation of subpart W and through the Clean Air Act is an ill thought of and very harmful policy that will harm our national security, that will harm our economic security.

Mr. Hausker, thank you for being here. What city would you recommend in the United States that we try the experiment of going solely to unreliable forms of energy? And I am talking renewables here. Which city should we try this on?

I noticed at the back -- and maybe he is still wearing a jacket. But when we first got in here, you might have noticed it was a little bit cold in this room. Which city would you recommend in the United States that we try the experiment of no natural gas, no coal, no nuclear -- nuclear if you want, if we can get it passed, but --

Dr. Hausker. I wouldn't recommend that experiment for any city. And I don't think in my testimony or anyone trying to solve the climate problem has recommended that we go to totally unreliable sources.

Mr. Pfluger. Mr. Hausker, the policy of going to 50 percent EVs is exactly doing that, because where is that electricity going to come from, when we have propped up through the IRA, the IIJA, and other policies in the last 2 years, when the Secretary of Energy says that China is leading the way on, you know, on green policies and green

energy, I think we are. I think that has been suggested that we go that direction.

Dr. Hausker. I think EVs can grow, and we can maintain adequate power supplies through a mixture of renewables, nuclear, and some carbon capture on some fossil plants.

The IRA, as I said earlier, provides technology neutral incentives for all zero carbon electricity. So I don't think we are going to carry out the experiment that you have hypothesized.

Mr. Pfluger. My time has expired. Thank you.

I yield back.

Mr. Allen. [Presiding.] Thank you.

Mr. Crenshaw, you have 5 minutes.

Mr. Crenshaw. Thank you.

Thank you to the witnesses for being here.

Thank you, Mr. Chairman, for holding this hearing.

We will state some key facts, I think, that are important to start this discussion.

Key fact number one: Energy demand will go up 50 percent or so in the next few decades, by 2050. Energy demand will go up.

Another key fact: The primary reason that emissions in the U.S. have gone down is because of fracking. It is because of our natural gas revolution which emits maybe half of the CO2 of coal. And it wasn't a bunch of environmental activists that pursued that goal. It was our oil and gas industry that pursued that goal. It was not environmental regulations that made that fact happen, but it is a fact nevertheless.

And so we find ourselves with the ultimate question, as we always do, which is cost and benefits. That is the question we have to answer. What is the cost to this

action, and what are the actual benefits of it, if we all agree on the scientific consensus, which we will say is the IPCC report, that there is warming going on, it is related to carbon emissions, and there is some interest in mitigating that?

But I have got to say the alarmist view of this question has been wholly debunked. It has been wholly and completely debunked. And I am not saying that any of our witnesses are even implying that it is true, but it is worth stating that as a fact.

And so when we look at cost benefits, we have to look at, what is the value? Is there an inherent value in renewables? Does it just make us feel good? Is it almost like a religious obsession, or is there an actual value? And that value might be measured by costs and benefits. How much does it cost to implement this technology, and what are the benefits we derive from it? And this is where I think we run into problems and disagreements certainly with our colleagues here.

You know, so I want to start with Mr. Hausker. I mean, here is a basic question that I think people have a right to ask: What is the -- you know, what is the point of the U.S. diminishing our emissions by some of the goals set out by this administration, which are enormously costly? What is the point of it if the facts are, if we stopped emitting tomorrow, by the year 2100, it would have potentially a change in global temperature by .3 degrees Fahrenheit?

So, you know, a very insignificant benefit to an enormous cost. Now, that is a crazy cost. That is if we stopped emitting tomorrow. But what is the point of doing that when countries like China are building more coal capacity every single day and have no intention of stopping?

Dr. Hausker. As I said earlier, no one country has created the climate change problem, and no one country can solve it. If I could wave a magic wand and eliminate

China's emissions entirely, we would still have a problem. Eliminate U.S. emissions, as you hypothesized, we would still have a problem, or any country.

So this is a challenging problem of collective action across nations with only a few precedents like how we phased out ozone-depleting chemicals.

Mr. Crenshaw. And so it begs the question: Like, what would that magic wand be, since we don't have magic wands but we do have policy lovers? And so what would that be?

Dr. Hausker. Uh-huh.

Mr. Crenshaw. And I can't help but go back to the obvious, which is, well, you would hopefully replace their coal -- their coal furnaces with natural gas furnaces. That is what you would hopefully do, and you would half the emissions. How would you do that? That is a separate question perhaps for diplomats and U.S. Trade Representatives and deals made at the highest levels.

But if we are thinking just logically about how to actually reduce emissions, since that is supposedly our entire goal, why aren't we all in agreement on that, on exporting more natural gas to dirty coal-burning countries?

Dr. Hausker. Why are we not in agreement?

Mr. Crenshaw. Yeah. Or are we not in agreement? Maybe we are.

Dr. Hausker. I think as Ms. Eversole said, the export of LNG by the United States has had all sorts of positive impacts for Europe adjusting gas supplies in the wake of the Ukrainian invasion. And to the extent that our gas exports can replace coal, that is going to have a positive effect on global emissions.

Mr. Crenshaw. Yeah. Well, it certainly would, and I think we could export a lot more.

Last question here. You know, we have to talk about cost of renewables. And I don't think the costs of renewables have ever been, until recently, I think accurately defined. But, truthfully, what we are talking about is, you know, a needed land -- ten times more land needed for solar and wind power for the same unit of energy than, say, gas and coal and nuclear, but basically unrecyclable materials. Ninety percent of solar panels aren't recycled. It would take a ton of heat to recycle them which, of course, would produce more carbon emissions because I don't think you can get that heat from solar and wind power. And so you have got this real problem.

Is that -- how do you take that into account when assessing the costs and benefits of pushing heavily and subsidizing heavily renewables?

Dr. Hausker. First of all, again, just to be sure, we are moving away from merely subsidizing renewables to providing tax incentives for all zero-carbon electricity. I think that is a move in the right direction.

Second, the cost of wind and solar has come down dramatically, I think as someone observed earlier today, but we know we can't push to 100 percent renewable power. And this is something that is clear in all the credible studies.

So we have a State like Iowa, like Mrs. Miller-Meeks described recently, where she is at 60 percent wind in her State. That is great. But it needs to be complemented also with clean, dispatchable sources, and many of you have noted the need for dispatchable.

So the grids of the future will be a mixture of solar, wind, nuclear, and then -- and clean dispatchable sources and will hopefully keep the costs reasonable, affordable, and provide all the electricity we need.

Mr. Crenshaw. Thank you.

And I yield back.

Mr. Allen. Mr. Crenshaw yields.

And now, Mr. Duncan from South Carolina, you are recognized for 5 minutes.

Mr. Duncan. Thank you, Mr. Chairman.

To follow up on something Dan was saying, you know, we need dispatchable. But when you have Clean Power 2.0 regulations and the costs being passed on the utilities that -- on existing gas-fired power plants or new gas-fired power plants, the cost is almost prohibitive to the utilities putting that dispatchable online to supplement the wind and solar, as you talk about, Mr. Hausker.

And the Democrats continue to thwart the pipeline infrastructure build-out that our country needs in order to deliver the natural gas you talk about for the countries like Vietnam to lower their carbon emissions by burning cleaner U.S.-produced natural gas.

So, you know, we have got to build out a pipeline infrastructure. Produce here at home. Deliver those resources not only to our utilities but also to export facilities so we can export that to countries to help lower their carbon emissions.

So don't thwart our efforts on building out a pipeline infrastructure, building more export terminals, and helping the globe while we do the geopolitical things that Dan was talking about at the highest levels, trying to get China and India and Vietnam and other places to take coal offline and use American-produced natural gas. So don't talk out of both sides of our mouth here.

We like renewables on this side. It ought to be part of the matrix, it will be a part of the matrix, but we also have to have that dispatchable energy that you talk about. If we don't, we are going to have blackouts in this country.

And that brings a point. Earlier today, Congresswoman DeGette said that -- or she asked if the rush-to-green policies are hurting the economy. And you responded

they are not. Well, guess what? Utility rates are increasing. Transportation fuels are higher now than they were in the last administration. Just over the last 3 to 4 years, they have increased for my constituents and all of our constituents. Costs from the trucking companies are being passed on to the consumer through higher consumer goods. That is inflation.

And we have subsidies, government spending, when we are borrowing that money and, ultimately, that is going to have to be paid back. That is higher spending, higher taxes for my constituents. Maybe not today but it's going to happen because every time we hear the President open his mouth, he wants more money. He wants more taxes to spend more money. It is just -- it is crazy.

The misnamed Inflation Reduction Act actually did nothing to reduce inflation. It actually drove inflation higher because of the things I talked about. Consumers are paying more on the shelf. Whether it is for groceries or things they purchase at a retailer, they are paying more because of the transportation costs, because the utility costs have increased under this administration because of this rush-to-green policy.

So I disagree with you. It is hurting the economy, because it is hurting my constituents. They are paying more at the pump for gas. They are paying more for natural gas that comes to their home for their dryers and their hot water heaters and other things. They are now going to have to pay more for the appliances, because they want to do away with gas-fired power appliances and use electricity. That is going to drive electricity costs up. Then you plug in your EV. You are going to pay more for electricity for your EV.

It all trickles down to hurt the economy, and the manufacturers I haven't even talked about that are having to raise prices because it is costing them more just to

manufacture the things that they produce, the widgets they produce.

In both this subcommittee and the Energy Subcommittee, which I chair, we have heard from FERC commissioners, grid operators, industry experts that the rush-to-green policies subsidizing renewables and unlawful EPA regulations, as I mentioned earlier, like Clean Power Plan 2.0, are contributing to premature retirements of reliable generation. We talked about that.

But we have seen nuclear power taken offline in places like California, even places like Germany. We see higher natural gas prices. This is creating overwhelming risk of blackouts in this country, and that will hurt the economy. It will hurt families. It will put people at risk in cold environments and hot environments, depending on when the blackouts happen.

So I want to circle back. Mr. Menezes, and I am going to ask Mr. Mills this. Do these rush-to-green policies threaten grid reliability, and does this increase the risk of blackouts?

Mr. Menezes. I think the committee should be aware of NERC, the North American Energy Reliability Corporation, that has done studies on looking at, as we bring more and more renewables onto the grid that are inverter-based, that we have to look carefully at getting too far out over power that can come on to ramp up and down.

So on that question, in particular, I think that you should look at the NERC studies.

Mr. Duncan. We have had NERC here, and they have mentioned that. We have had FERC here. We have had NRC here, at least in my subcommittee.

Mr. Mills, I will ask you a little different way. Is this hurting the standard of living and quality of life of Americans?

Mr. Mills. The short answer is yes. In every European country and U.S. State,

the increased penetration of wind and solar on grids is associated with higher electric rates, not lower electric rates. The integration challenge and the real costs are higher than this build that it is the sense it is cheaper. It is not, in fact, operationally cheaper.

Mr. Duncan. Well, I will tell you this. As we retire generation and we don't replace that generation with dispatchable generation at equal or higher capacity, we are going to run into problems.

My State is growing. I don't know about the rest of the country, but South Carolina is growing. And we have got to meet that growth by having dispatchable energy as part of our matrix. Eight percent, 9 percent of our power comes from solar. Starts at zero every day and ends at zero and we don't have the storage capacity. We need dispatchable energy or we are going to have problems in this country.

And so hopefully this committee and government in general will work on making sure Americans have always on, 24/7, 365 available power for our manufacturing, our municipalities, and our residential growth.

Mr. Chairman, I yield back.

Mr. Allen. Mr. Duncan yields.

Mrs. Dingell from Michigan, you are recognized for 5 minutes.

Mrs. Dingell. Thank you, Mr. Chairman.

I have the COP G8 Summit. We are here today to discuss how we as a country can stay a leader in reducing global climate emissions. It is vital that we and the rest of the world secure a sustainable energy future. Not only is this important for our energy security but for our public health and global climate.

Climate change is one of the most defining challenges of our time, and the scientific evidence of human-induced climate change is overwhelming. We are seeing it

everywhere, every day. Left unchecked, climate change will lead and is leading to dramatic and irreparable damage to our environment, our national security, and natural resources. And that is why it is critical for the United States to lead the world by example during this transition to renewables and clean energy.

Though the transition to renewable and clean energy is necessary for our future, the reality is -- and this is what you have heard my colleagues talk about -- are most Americans are scared that clean energy is not reliable, and no one wants to worry about whether or not their energy sources will be able to properly heat their homes, a question that was being asked when he said what city.

But, Dr. Hausker, can you talk about how the Inflation Reduction Act increases our energy security by increasing our production of domestic energy and decreasing our reliance on fossil energy resources sources?

Dr. Hausker. That addressed to --

Mrs. Dingell. You.

Dr. Hausker. -- me?

Mrs. Dingell. Yes.

Dr. Hausker. Yes. The Inflation Reduction Act with its set of incentives induces more energy, clean energy forms of all types. So we are not reliant on solely increas- -- just increasing solar or just increasing wind. As I said, new plants, if there is zero carbon electricity, they all get an incentive.

One thing we haven't mentioned yet is that, for the first time, the IRA created an incentive for existing nuclear plants to continue operation. Particularly in the bid-based deregulated markets that mentioned earlier, those plants are under a lot of economic pressure. So for the first time there is a national policy to support the continued

operation of nuclear power plants. That is a plus also.

We also are launching, really, a hydrogen industry with the IRA. Up till now, industry has produced a little bit of hydrogen for some niche uses, but now we have a set of tax incentives to really launch it as a major energy source for the future. And, again, improves our security.

Mrs. Dingell. Thank you for that.

Here at home we are taking proactive steps to transition to renewable energy, from clean energy manufacturing to investing in the domestic production of electric vehicles. We have got to do it in a way that we make sure that that is a success with batteries and solar panels.

But, Dr. Hausker, how do we ensure that the United States remains competitive and accelerates its transition to clean energy? And if we sit back and do nothing, what is the danger of letting countries like China lead, which I am never going to let them do?

Dr. Hausker. Yeah. We need to be smart and strategic in all of our policies, in our trade policies, in our tariffs, in negotiation of trade packs, on top of our climate and clean energy policies. They are all woven together, and I am very impress with the leadership that the Biden administration has shown in enhancing domestic capabilities and in managing the relationship with China.

Mrs. Dingell. Historically, innovation and development of new technologies has been critical to reducing pollution and cleaning up our environment. Remember what our air was like and our water was like in the sixties.

And just for the record, John Dingell got widely denounced when he wanted to clean up the water. He was an enemy. I went in and found him. And now can you imagine today people saying, let them drink dirty water?

But, Dr. Hausker, how has innovation helped us to make progress in addressing the climate crisis? And how important will future investments in clean technology be to achieving our ambitious goals?

Dr. Hausker. We had some good discussions on that today, and I think -- I think everyone agrees that innovation is the key to solving so many problems, including our environmental problems.

Business innovates on its own when it serves private customer needs. That is why we have the iPhone. That is why we have all sorts of innovation. But if we need innovation to solve a public problem, like an environmental problem, we need the policy framework first to drive the innovation. And if that policy framework is flexible and performance-based, business responds with great innovation and great new technology.

Mrs. Dingell. Thank you.

Thank you, Mr. Chairman. I yield back.

Mr. Allen. Mrs. Dingell yields.

Now I recognize my good friend from Utah, Mr. Curtis, for 5 minutes.

Mr. Curtis. Thank you very much.

So call me Pollyannaish, but I like to find the areas where we actually agree. And I, despite what you hear in the press and throughout the world, I think there is actually a lot that we agree on on this issue.

And I would like to just point out something that I heard as a theme this morning, and I am going to articulate it in a slightly different way. And that is affordability matters, right. When you make these decisions, it matters. Reliability matters. And if you don't watch that, it matters.

But clean matters, right. And I think it has been a mistake historically to only talk

about affordability and reliability and ignore clean. And I think it has been a mistake to talk about clean and ignore affordability and reliability.

And in an oversimplistic way, I think Europe went down a path of clean only, and clean mattered far more than affordability and reliability. And I would just say, I think I have heard on both sides of the aisle today a lot about these three factors. And if I had -- could be king for a day, I would say, look, our goal for 2050 is affordable, reliable, clean. Go, right. Let this innovation go. We can get there, and I actually think we can.

I am also -- Mr. Hausker, I will compliment you because I heard at least in innuendoes that it is not about fossil fuels. It is about emissions. And I think that this is a mistake that we make sometimes.

I represent oil, gas, and coal in my district. And if I talk to them about the evils of fossil fuels, I lose them, right. And they are gone, and they want to push back and fight. If I talk to them about affordable, reliable, clean, they say we are on it, right. We get it. We understand and we will innovate and we will find our path there.

And as we talked about Mr. Mills' energy transition, I -- oh, I regret that sometimes we talk about fossil fuels as if we have to transition them out. And I just want to be clear. No, we have to transition emissions out. And every source of energy has what I would call a fatal flaw. In renewables, it is storage, right. I think we will get there, but today that is a fatal flaw for renewables. For nuclear, I love nuclear, but it is cost. And I think we will get there, but today it is cost and timing.

And for fossil fuels, you have got this issues of emissions, and I think with carbon sequestration, direct air capture. And if you talk to everybody that I know in the fossil fuel industry, they will commit to a net neutral by 2050. So I think it is important that

we include them as part of the solution and not part of the problem.

Now, given that, I also want to highlight something I think that we have heard today and I think is the theme of the hearing in that the U.S. has led in this innovation. And I think some of the problems sometimes with this debate is that we don't celebrate our successes. We feel like we have so far to go that we can't stop and celebrate our successes. And I think it is important to stop and say, hey, we have done a lot of really good things here in the United States, and we shouldn't be bashful about that on the world leadership platform. We should herald our successes and not hide them.

And I actually think that in all the major sectors, we lead in cleanliness around the world, not perfectly but in a lot of sectors.

And I want to refer to a study that has been done by the Climate Leadership Council. And as a matter of fact, I ask unanimous consent to put it into the record.

Some of you will be familiar with this.

Mr. Allen. Without objection.

[The information follows:]

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

Mr. Curtis. Thank you.

And so I am grateful to the Climate Leadership Council for doing this, but the problem with that is it is an outside third party. It is not a government document. And I actually think that there is some things coming at us, the C bomb from Europe and things like that, where it is going to be important for us to say, from the Department of Energy, this is what we're doing.

So I am pleased with Representative Peters to be working on what we call the PROVE IT Act which would be a government study that would actually demonstrate in all of these sectors where we are leading, maybe where we are weak in a couple areas but where we are leading, so that we have actual facts when we are sitting with China and talking about the discrepancy that we are putting on U.S. businesses. And when the C bomb is put into effect, we are not using Europe's numbers. We are using our numbers.

So, Ms. Eversole, you are nodding. Let me have you comment on that.

And then Mr. -- and I am not going to pronounce it right. Would you follow up with just, like, is DOE up for this task?

And -- but go ahead.

Ms. Eversole. Right. I will start by saying we appreciate your leadership. We supported the PROVE IT Act in the Senate. And we think it makes a lot of good sense to study, have the Department of Energy study the energy intensity levels.

I do think that there is a right way and a wrong way of how we should consider very complex carbon border adjustment mechanisms. It is worth making sure that we, to the points earlier made, understand the unintended consequences --

Mr. Curtis. Correct.

Ms. Eversole. -- perhaps, but thank you for your leadership, sir.

Mr. Curtis. Yes.

Mr. Menezes. I mean, DOE has its policies in place to where it is looking at truly all of the above. I mean, they have offices looking at all the things that you --

Mr. Curtis. Yeah, but I want you to specifically comment on, are you up to a stu- -- if we can get this passed, would this be a good thing for DOE? Are you up to the task of doing this study?

Mr. Menezes. Well, I am not representing DOE here. I am representing USEA. However, we do have relationships with DOE, and I am happy to talk to DOE about a government study.

Mr. Curtis. Thank you. Yeah. Yeah, I also want to just, in the 17 seconds I have left, I want to point out, not only is America business dealing with this discrepancy in our standards for emissions that put a lot of additional costs on, but we are also dealing with human rights differences. There is a lot of variables that are not equal as things are coming to the United States.

And, Mr. Chairman, I yield.

Mr. Johnson. [Presiding.] The gentleman yields back.

The chair now recognizes the gentleman from Indiana, Mr. Pence, for 5 minutes.

Mr. Pence. Thank you, Chairman Johnson, Ranking Member Tonko, for letting me be here today, and the witnesses for being here.

As my friend, Congressman Curtis, just said, affordability matters. So I would like to kind of go off balance sheet here a little bit and focus my remarks on the so-called eRINs program being pushed by this administration.

While the program is being portrayed as a way to drive electric vehicle integration,

this is nothing more than a subsidy to EV manufacturers in an attempt to destroy the existing liquid fuels market.

Instead of generating RINs at the point of blending, this proposal creates a convoluted process to award credits to the car manufacturers and other third-party participants, like chargers and charging stations.

Having spent my career buying and selling RINs, I am keenly aware of how a complicate process like the one proposed by EPA could become rife with fraud and abuse like the very beginning of the RIN program. Even more, I fear buying obligations for eRINs would fall into existing liquid fuel refineries who could be forced to buy even more credits on top of the RINs that they may have to buy.

The EPA's proposed rule to create eRINs for electric vehicles is a troubling proposal that extends far beyond the intent of the renewable fuel standard. The administration is looking to subsidize manufacturers in the EV chain to recoup their investments and make up for underwhelming sales.

Instead of finding commonsense solutions to lower emissions, such as being discussed by my colleagues today, the administration is a taking one-size-fits-all approach to the transportation sector.

Across the country and in my home State of Indiana, innovators are leading the way to develop next-generation engines that can utilize a variety of fuels, like Cummins Engine Company in my hometown, or ClearFlame in my hometown as well, trying to convert to ethanol in diesel engines.

Ms. Eversole, as you know, the EPA has not committed to an additional proposed rule for eRINs and could go straight to a final rule without additional input from the public. If the EPA implements a system outlined by the set rule from 2022, how would

this disrupt the existing fuels market and the industry you represent?

Ms. Eversole. Congressman, thank you very much for the question. And we appreciate your leadership on H.R. 4469. It was extremely important. Passed as part of the fuels package.

And, look, there is an all-out assault on liquid fuels in this country right now. We see it in the form of EV mandates. We see it all across the countries. We see it in States like California. But at the core, you know, we share the objectives of reducing emissions in the transportation sector. That is clear and straightforward. But the RFS is really not designed for this sort of -- this sort of objective. And, ultimately, we don't believe that the concept of eRINs is technology neutral. It is putting a thumb on the scales, so to speak, for the outcomes.

We would rather see innovation driving, and you can look across our membership and see how we are in the downstream, in particular, making cleaner fuels. It was part of our objective in the API's Climate Action Framework, and there is a lot of work to do. We just happen to believe there is a right way and a wrong way of doing so, and we don't think this administration's approach makes a lot of sense.

Mr. Pence. Do you think this is going to move forward as at all or do you think it is suspended at the moment?

Ms. Eversole. We were supportive of EPA pulling out and separating the eRIN program from the rest of the RFS set, and so hopefully they don't come back together.

Mr. Pence. So, initially, I was very concerned that not only were it depending on who you are representing, whether the smaller refiners or the bigger refiners. But would this be incremental requirements for smaller refiners?

Ms. Eversole. I am going have to get back to you on that, Congressman. Thank

you.

Mr. Pence. Okay. Thank you.

And with that, I yield back.

Mr. Johnson. The gentleman yields back.

And seeing no further members seeking to ask questions, I do have one final question. And with the indulgence of our ranking member, I'm going to ask that really quickly here.

Mr. Menezes, I didn't get to this earlier. You know, this committee recently heard testimony on the administration's Clean Power Plan 2.0, and witnesses expressed concerns that such heavy-handed, topdown dictates disincentivize innovation and put our electric grid at risk.

Can you discuss the importance of patience and a stable regulatory environment for the private sector in order to innovate while maintaining reliability and affordability?

Mr. Menezes. Right. Well, thank you for that question. You know, the industry is put in a place where they want to build facilities to help address emissions. The permitting process delays them. And then when they are unable to implement their own innovation, then regulation comes in. And as was just discussed, sometimes regulation comes out in the form of not getting sufficient public interest but rather a final rule. And so it is implemented.

So it is important that we need to have, you know, put in place, as others have said, really reasoned policies in place so that innovation can both thrive, and do it in a sense of urgency and yet not impose regulations which might have unintended consequences.

Mr. Johnson. Okay. Thank you.

Mr. Mills, do you have any thoughts on that?

Mr. Mills. I think the timeline challenge is what is being ignored here and the cost challenges. The technologies that exist today, and I will quote Bill Gates on this, are not up to the challenge of the aspirations of any of the COP conferences or the IEA. And the technologies that are required, and I will quote Gates again, because he is obviously an advocate of an energy transition, the technologies not only don't exist but have, in his words, no predictor function --

Mr. Johnson. Yeah.

Mr. Mills. -- which is to say we will be suffering huge costs without knowing the outcomes.

Finally, I would just like to point out if -- and, again, this is Bill Gates recently after the Davos -- the last Davos meeting, that the -- none of the actions being taken will mitigate what is going to happen in the models that predict climate outcomes in the next 20 years. Therefore, money should be directed at resilience and mitigation in the environments where we have everything to agree on. That is, there is no downside to allocating capital to mitigation resilience except that the capital is limited.

Mr. Johnson. Okay. Thank you.

With that, again, I will yield to you, Ranking Member, if you have anything.

Okay. All right. Well, great.

Well, I ask unanimous consent to insert in the record the documents included on the staff hearing documents list.

Without objection, that will be the order.

Let me say to our panelists, thank you all so very much for taking time out of your very busy schedules to be here with us today. We appreciate that.

I will remind members that they have 10 business days to submit questions for the record and I ask the witnesses to respond to the questions promptly.

Without objection, the subcommittee is adjourned.

[Whereupon, at 12:53 p.m., the subcommittee was adjourned.]