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LEGISLATIVE HEARING TO STRENGTHEN ENERGY INFRASTRUCTURE, EFFICIENCY, AND FINANCING

HYBRID HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

SECOND SESSION

JUNE 22, 2022

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[1] The legislation has been retained in committee files and is available at https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=114932.

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LEGISLATIVE HEARING TO STRENGTHEN ENERGY INFRASTRUCTURE, EFFICIENCY, AND FINANCING

WEDNESDAY, JUNE 22, 2022

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:33 a.m. in the John D. Dingell Room, 2123 Rayburn House Office Building, and remotely via Cisco Webex online video conferencing, Hon. Jerry McNerney (member of the subcommittee), presiding.

Present: Representatives McNerney, Peters, Doyle, Tonko, Schrier, Matsui, Castor, Welch, Schrader, Kuster, Barragán, McEachin, Blunt Rochester, O'Halleran, Pallone (ex officio); Upton, Burgess (subcommittee ranking member), Latta, McKinley, Griffith, Johnson, Bucshon, Walberg, Duncan, Palmer, Lesko, Pence, and Rodgers (ex officio).

Staff present: Waverly Gordon, Deputy Staff Director and General Counsel; Jessica Grandberry, Staff Assistant; Tiffany Guarascio, Staff Director; Perry Hamilton, Clerk; Zach Kahan, Deputy Director Outreach and Member Service; Rick Kessler, Senior Advisor and Staff Director, Energy and Environment; Mackenzie Kuhl, Digital Assistant; Tyler O'Connor, Energy Counsel; Lino Pena-Martinez, Policy Analyst; Kaitlyn Peel, Digital Director; Kris Pittard, Policy Coordinator; Medha Surampudy, Professional Staff Member; Caroline Wood, Research Assistant; Tuley Wright, Senior Energy and Environment Policy Advisor; Sarah Burke, Minority Deputy Staff Director; Nate Hodson, Minority Staff Director; Noah Jackson, Minority Staff Assistant; Peter Kielty, Minority General Counsel; Emily King, Minority Member Services Director; Bijan Koohmaraie, Minority Chief Counsel, Oversight and Investigations Chief Counsel; Tim Kurth, Minority Chief Counsel, CPC; Mary Martin, Minority Chief Counsel, Energy and Environment; Brandon Mooney, Minority Deputy Chief Counsel for Energy; Clare Paoletta, Minority Policy Analyst, Health; Peter Spencer, Minority Senior Professional Staff Member, Energy; and Michael Taggart, Minority Policy Director.

Mr. MCNERNEY [presiding]. will now come to order.

Today's subcommittee is holding hearing entitled, "Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing."

Due to the COVID–19 public health emergency, members can participate in today's hearing either in person or remotely, via online video conferencing.

In accordance with the updated guidance issued by the attending physician, members, staff, and members of the press present in the hearing room are not required to wear a mask.

For members participating remotely, your microphones will be set on mute for the purpose of eliminated—eliminating inadvertent background noise. Members participating remotely will need to unmute your microphone each time you wish to speak. Please note that, once you unmute your microphone, anything that is in Webex will be heard over the loudspeakers in the committee room, and subject to being heard by livestream and C-SPAN.

Given that members are participating from different locations at today's hearing, all recognition of members, such as for questions, will be in the order of subcommittee seniority.

Documents for the record can be sent to Lino Pena-Martinez at the email address we provided to staff. All documents will be entered into the record at conclusion of the hearing.

The Chair now recognizes himself for an opening statement.

STATEMENT OF HON. JERRY MCNERNEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

I would like to welcome our witnesses for today's hearing: Andrew DeLaski, executive director of Appliance Standards Awareness Project; Richard Rico Frias, pronounced—executive director, Native American Finance Officers Association—thank you for coming; Dustin Mulvaney, Ph.D., professor, environmental studies, San Jose State University; Joshua C. Greene, corporate vice president, government and industry affairs, A.O. Smith Corporation; Lucian Pugliaresi, president, Energy Policy Research Foundation; Ben Lieberman, senior fellow, Competitive Enterprise Institute.

Thank you for joining us today. We look forward to your testimony.

OK, now for my opening statement.

Good morning. Today we will be holding a legislative hearing on six bills authored by members from both sides of the aisle focused on updates and upgrades to our Nation's energy infrastructure.

As the U.S. and the rest of the world undergoes the energy transition necessary to avoid the worst impacts of climate change, it is crucial that our existing system be able to adapt to meeting our evolving needs. The six bills present modest changes to Federal programs to make operations smoother and better able to meet the needs of energy consumers and developers.

Two of today's bills focus on increasing energy efficiency of homes and appliances, which will be essential for decreasing our energy demand and lowering energy—monthly energy costs for Americans.

Another two of the bills make reforms to the way Federal Government finances energy infrastructure, which would improve accessibility and accountability of Federal loan programs.

And two of the bills address the reliability of our energy systems, which continues to be imperiled by climate disasters, supply chain issues, cyber and physical vulnerabilities, and aging assets.

These bills represent a common-sense approach to reforming our energy laws, and I look forward to hearing what our witnesses have to say about them.

First up is H.R. 1599, Securing America's Critical Minerals Supply Act, authored by our ranking member, Mr. Upton. Critical minerals are essential to the growth of renewable energy resources, and onshoring the supply chain will both increase the availability of components and support domestic jobs. This bill draws attention to that need as energy transition evolves.

We will also discuss H.R. 8053, a bipartisan bill from Congressmen Crow, Peters, and Bacon. This bill allows the Department of Energy to enter into contracts or agreements to improve our resilience of portions of our electrical infrastructure that are critical to our national defense, and to reduce the vulnerability of this infrastructure. In my opinion, this should be a non-controversial bill which will allow us to enhance our national security by making long-term commitments to energy reliability, serving our military installations without over-burdening nearby tax ratepayers.

Next up we have two bills focused on energy efficiency. H.R. 7947 from the Environment and Climate Change Subcommittee's Chairman Paul Tonko; this subcommittee's chairman, Bobby Rush; and the chairwoman of the Energy and Water Appropriations Subcommittee, Marcy Kaptur; and H.R. 7962, offered by Congresswoman Debbie Dingell.

Mr. Tonko's Weatherization Enhancement and Readiness Act would strengthen the Weatherization assistance program by raising the cap that limits how much assistance households can receive to account for increasing in the prices of building materials, and by ensuring that the households that could most benefit from Weatherization programs are able to participate. This program has provided important services for our low-income households for decades, and the proposed changes can assure that the program continues to be accessible for years to come.

Mrs. Dingell's bipartisan bill touches on the water energy nexus by harmonizing energy efficiency standards for commercial and residential water heaters by improving the resilience of our grid, by creating a demand response program for residential water heaters. It would also require the Department of Energy to issue a rule by the end of 2024 requiring that electric water heaters have demand response capabilities as long as that requirement is technologically feasible and economically justified. In considering this bill, I hope that we take note of one of the many ways in which energy and water are intertwined, and how energy use is embedded in the water-related appliances in our homes.

These bills are two great ideas that will help reduce the strain on our grid, while delivering electricity to our homes and appliances.

Finally, we have two bills that would make common-sense tweaks to our loan program office within the Department of Energy.

The first is the bill from our late colleague, Don Young of Alaska, H.R. 5292, the Energy Accountability Act. If enacted, it would mandate that any borrower that has previously defaulted on a Title 17

loan be barred from receiving any other loan guarantees under the program.

Second, H.R. 8068, a bipartisan bill from Ms. Leger Fernandez and this subcommittee's own Mr. O'Halleran, improves the Tribal Energy Loan Guarantee Program by allowing the Department of Energy to issue loans directly revitalizing a program that has not been able to issue a single loan in 17 years.

I want to thank the authors of the bills we are discussing today and their staffs for their hard work and the hard work yet to come. This is the start of a journey on these bills, not the end, and I look forward to the feedback that our witnesses are able to provide today.

[The prepared statement of Mr. McNerney follows:]

PREPARED STATEMENT OF HON. JERRY MCNERNEY

Committee on Energy and Commerce

Opening Statement as Prepared for Delivery
of
Representative Jerry McNerney

Hearing on "Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"

June 22, 2022

Good morning. Today, we are holding a legislative hearing on six bills, authored by Members from both sides of the aisle, focused on updates and upgrades to our nation's energy infrastructure. As the US and the rest of the world undergoes the energy transition necessary to avoid the worst impacts of climate change, it's crucial that our existing systems be able to adapt to meet our evolving needs. These six bills present modest changes to Federal programs to make operation smoother and better able meet the needs of energy customers and developers. Two of today's bills focus on increasing the energy efficiency of homes and appliances, which will be essential for decreasing our energy demand and lowering monthly energy costs for Americans. Another two of the bills make reforms to the way the Federal government finances energy infrastructure, which would improve accessibility and accountability of Federal loan programs. And two of these bills address the reliability of our energy system, which continues to be imperiled by climate disasters, supply chain issues, cyber and physical vulnerabilities, and aging assets. These bills represent a common-sense approach to reforming our energy laws, and I look forward to hearing what our witnesses have to say about them.

First up is H.R.1599, the Securing America's Critical Minerals Supply Act, authored by our Ranking Member, Mr. Upton. Critical minerals are essential to the growth of renewable energy resources, and onshoring the supply chain will both increase the availability of components and support domestic jobs. This bill draws attention to that need as the energy transition evolves.

We will also discuss H.R.8053, a bipartisan bill from Congressmen Crow, Peters, and Bacon. This bill allows the Department of Energy to enter into contracts or agreements to improve the resilience of portions of our electric infrastructure that are critical to our national defense, and to reduce the vulnerability of this infrastructure. In my opinion, this should be a non-controversial bill, which will allow us to enhance our national security by making long term commitments to energy reliability serving our military installations, without overburdening nearby ratepayers.

Next up, we have two bills focused on energy efficiency: H.R.7947 from the Environment and Climate Change Subcommittee's Chairman Paul Tonko, this Subcommittee's Chairman Bobby Rush, and the Chairwoman of the Energy and Water Appropriations Subcommittee Marcy Kaptur, and H.R.7962, offered by Congresswoman Debbie Dingell.

Mr. Tonko's Weatherization Enhancement and Readiness Act would strengthen the Weatherization Assistance Program, by raising the cap that limits how much assistance households can receive to account for increases in the prices of building materials, and by

ensuring that the households that could most benefit from the weatherization program are able to participate. This program has provided important services for our low-income households for decades, and the proposed changes could ensure that the program continues to be accessible for years to come.

Ms. Dingell's bipartisan bill touches on the energy-water nexus by harmonizing efficiency standards for commercial and residential water heaters, and improving the resilience of our grid by creating a demand response program for residential water heaters. It would also require DOE to issue a rule by the end of 2024 requiring that electric water heaters have demand response capabilities, as long as that requirement is technologically feasible and economically justified. In considering this bill, I hope we will take note of one of the many ways in which energy and water are intertwined, and how energy use is embedded in the water-related appliances in our home.

These bills are two great ideas that will help reduce the strain on our grid while still delivering electricity to our homes and appliances.

Finally, we have two bills that would make common sense tweaks to the Loan Programs Office within the DOE.

The first is a bill from our late colleague, Congressman Don Young of Alaska, H.R.5292, the Energy Accountability Act. If enacted, it would mandate that any borrower that has previously defaulted on a Title 17 loan be barred from receiving any other loan guarantee under that program.

Secondly, H.R.8068, a bipartisan bill from Ms. Leger-Fernandez and this Subcommittee's own Mr. O'Halleran, improves the Tribal Energy Loan Guarantee Program by allowing the DOE to issue loans directly, revitalizing a program that has not been able to issue a single loan in 17 years.

I want to thank all the authors of the bills we are discussing today – and their staffs – for their hard work, and the hard work yet to come. This is the start of the journey on these bills, not the end, and I look forward to the feedback that our witnesses are able to provide today.

And with that, I yield to the Ranking Member, Mr. Upton, for a five-minute opening statement.

Mr. MCNERNEY. I have a letter here from Dr. Ali Nouri, assistant secretary of congressional intergovernmental affairs of the Department of Energy. I request unanimous consent to enter the following letter from the Department of Energy into the record.

Without objection, so ordered.

[The information appears at the conclusion of the hearing.]

Mr. MCNERNEY. And with that I yield to the ranking member, Mr. Upton, for a 5-minute opening statement.

STATEMENT OF THE HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Well, thank you, my friend, Mr. Chairman, and thanks to our witnesses for appearing before us to provide their testimony.

Mr. Pallone, the U.S. is plunging deeper and deeper into an energy crisis driven by roaring inflation, anti-fossil fuel policies, demand shocks across the country.

Our constituents are rightly concerned about the lack of leadership. The annual inflation rate in May, as we know, was 8.6 percent, the highest level since 1981. Gasoline is averaging five bucks, with drivers in California and other states paying over six, getting close to seven. More than half of the Nation is going to be at elevated risk for power outages this summer, even perhaps this weekend, as reliable baseload power generation is retired in favor of weather-dependent green alternatives like wind and solar. God help us when the wind doesn't blow and the sun doesn't shine.

The bills before us today are not going to alleviate the pain that Americans are feeling at the pump or reduce the risk of blackouts. And while this is supposed to be a legislative hearing, the DoE is not here to provide their testimony.

Republicans on this side of the aisle have been sounding the alarm since day one. Energy prices surged following the President's cancellation of Keystone XL pipeline on day one and the moratorium on Federal leasing. Gas prices went up even further, as the EPA and FERC began to tighten the screws on infrastructure permitting.

But instead of addressing the energy crisis head on, the President is traveling to Saudi Arabia to ask OPEC and Russia for more oil. Members of this committee should hear from energy producers on what it will take to produce more oil here at home.

I am concerned by what appears to be a naive understanding of the scope and scale of the energy crisis and what is required to address it; contrary to the rhetoric from the White House and DoE, high gas prices will not encourage Americans to buy more expensive electric vehicles.

Residential electricity prices are also increasing at record pace, and China is consolidating its control over more than 90 percent of critical minerals used in batteries and solar panels. If we don't reinvigorate our domestic mining industry, we are going to see more spikes in raw materials like lithium that is going to drive up costs even more for consumers.

I was pleased to see my bill, H.R. 1599, Securing America's Critical Minerals Supply Act, included in today's legislative hearing. This bill is going to build on DoE's energy security mission by pro-

viding tools for DoE to secure a reliable domestic supply of critical energy resources, including critical materials. We can't trade away the energy security America has achieved through the domestic production of coal, oil, or natural gas for Chinese batteries and solar panels. It is a national security imperative that we produce the energy that we need right here at home. It is really simple.

Turning to the other bills on the docket, I am supportive, certainly, of H.R. 5292, the Energy Accountable—Accountability Act, introduced by our best buddy, Don Young of Alaska. The legislation is a good government bill that will disqualify companies like Solyndra, who defaulted on a loan, from participating in DoE's loan guarantee program. And I would ask unanimous consent that his fine letter be entered into the record in support of that bill.

Some of these bills will need more work, an additional hearing with DoE before they are ready to be marked up. I have questions about H.R. 8053, the GRID Act, which appears to build on DoE's program to protect critical defense infrastructure.

Members of the committee should have the ability to question DoE on H.R. 7947 and H.R. 8053, which are bills that will modify DoE's Weatherization program and appliance standards. It appears that both bills include new language that could have broad and far-reaching implications for taxpayers and consumers. And at the end of the day, they may not be terribly happy.

For example, H.R. 8053 includes a new concept that would allow DoE to mandate demand response, which is capability that allows a grid operator to remotely monitor and control residential appliances to reduce electricity demand. I believe that that raises serious privacy concerns that, again, I don't think are going to go over very well with consumers.

Each of the bills before us today deserves careful consideration from this subcommittee. I look forward to working with the majority to ensure regular order.

[The prepared statement of Mr. Upton follows:]

PREPARED STATEMENT OF HON. FRED UPTON

Opening Statement of Republican Leader Fred Upton
Subcommittee on Energy "Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"
June 22, 2022
As Prepared for Delivery

Thank you, Mr. Chairman. And thank you, to our witnesses, for appearing before us today to provide your testimony.

Mr. Chairman, the United States is plunging deeper and deeper into an energy crisis, driven by roaring inflation, anti-fossil fuel policies, and demand shocks across our economy. Our constituents are rightly concerned about the lack of leadership from President Biden and some Members of Congress. The annual inflation rate in May was 8.6% - the highest level since 1981. Gasoline is averaging $5 nationwide, with drivers in California and other states paying over $6. More than half of the nation will be at elevated risk for power outages this summer as reliable base-load power generation is retired in favor of weather dependent "green" alternatives like wind and solar.

The bills before us today will not alleviate the pain that Americans are feeling at the pump or reduce the risk of blackouts. And while this is supposed to be a legislative hearing, the Department of Energy is not even here to provide testimony.

Republicans on the Energy and Commerce Committee have been sounding the alarm since Day 1 of President Biden's term in office. Energy prices surged following the President Biden's cancelation of the Keystone XL pipeline and the moratorium on Federal leasing. Gas prices went up even further as the EPA and FERC began to tighten the screws on infrastructure permitting.

Instead of addressing the energy crisis head on, President Biden is traveling to Saudi Arabia to ask OPEC and Russia for more oil. Members of this Committee should hear from American energy producers on what it will take to produce more oil here at home.

I am concerned by what appears to be a naïve understanding of the scope and scale of the energy crisis, and what is required to address it. Contrary to the rhetoric from the White House and DOE, high gasoline prices will not encourage Americans to buy more expensive electric vehicles.

Residential electricity prices are also increasing at record pace, and China is consolidating its control over more than 90% of critical minerals used in batteries and solar panels. If we do not reinvigorate our domestic mining industry, we are going to see more spikes in raw materials – like lithium – that will drive up costs for consumers.

I am pleased to see my bill, H.R. 1599, "Securing America's Critical Minerals Supply Act," is included in today's legislative hearing. H.R. 1599 will build on DOE's energy security mission, by providing tools for DOE to secure a reliable domestic supply of critical energy resources, including critical minerals.

We cannot trade away the energy security America has achieved through the domestic production of coal, oil and natural gas for Chinese batteries and solar panels. It is a national security imperative that we produce the energy we need right here at home. It's that simple.

Turning to the other bills on the docket today, I am supportive of H.R. 5292, the "Energy Accountability Act" introduced by the late Don Young of Alaska. This legislation is a good government bill that will disqualify companies like Solyndra who have defaulted on a loan from participating in DOE's loan guarantee program.

Some of these bills will need more work and an additional hearing with DOE before they are ready to be marked up by the Subcommittee. I have questions about H.R. 8053, the "GRID Act," which appears to build on DOE's program to protect critical defense infrastructure. Members of the Committee should have the ability to question DOE on H.R. 7947 and H.R. 8053, which are bills that will modify DOE's weatherization program and appliance standards. It

appears that both bills include new language that could have broad and far-reaching implications for taxpayers and consumers.

For example, H.R. 8053 includes a new concept that would allow DOE to mandate demand response, which is a capability that allows a grid operator to remotely monitor and control residential appliances to reduce electricity demand. I believe this raises serious privacy concerns.

Each of the bills before us today deserves careful consideration from the Subcommittee, and I look forward to working with the Majority to ensure regular order. With that, I want to thank the witnesses for appearing before us today and I look forward to the testimony.

Thank you, I yield back.

Mr. UPTON. With that, thanks again. I yield back the balance of my time.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes Mr. Pallone, chair of the full committee, for 5 minutes for his opening statement.

OPENING STATEMENT OF HON. FRANK PALLONE, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. PALLONE. Thank you, Chairman McNerney. Today we are going to discuss legislation on a range of topics that affect our energy sectors, including energy supply chains, energy efficiency, weatherization, the Department of Energy's loan programs office, and critical infrastructure.

So first the subcommittee will review two bills that improve energy efficiency and reduce energy costs for consumers.

H.R. 7962, introduced by Representative Dingell, makes important changes to water heater efficiency standards and creates a new demand response program for residential water heaters. This legislation could have a significant impact on energy consumption, help consumers save on the energy bills, and help utilities reduce demand during peak times. It also contains common-sense fixes that harmonize standards for residential and commercial water heaters.

Then there is H.R. 7947, the Weatherization Enhancement and Readiness Act, introduced by Representatives Tonko, Rush, and Kaptur. It establishes an important new weatherization readiness program, makes other practical changes to the Department of Energy's weatherization assistance program.

President Biden's Bipartisan Infrastructure Law built on the bipartisan work we did in the Energy Act of 2020, investing a historic $3.5 billion in the weatherization assistance program, and reducing energy costs for over 700,000 low-income households. Still, many households are not able to receive weatherization improvements due to underlying structural and electrical issues. So this new weatherization readiness program will ensure low-income families can make the upgrades necessary to enable them to qualify for weatherization measures, reduce their energy consumption, and save money on their bills.

Then we have H.R. 1599, Securing America's Critical Minerals Supply Act, introduced by Ranking Member Upton. That requires DoE to conduct assessments and secure energy resources that have vulnerable supply chains. As we work to secure a resilient and clean energy sector, we have to make sure we are responsibly procuring critical minerals here in the U.S. And the BIF took important steps to support clean energy supply chains, and I am eager to learn how this bill can advance our work toward a resilient, clean energy economy.

We are also considering two bills to reform DoE's loan programs.

H.R. 8068, the Tribal Energy Investment Act, which was introduced by Representatives Leger Fernandez, O'Halleran, and Cole, and this bill seeks to improve the Tribal Energy Loan Guarantee Program, which permits DoE to provide loan guarantees to support energy development projects on tribal lands. But despite our best

intentions in establishing that program in 2005, it has not financed a single project in the program's 17-year history, and that needs to change, obviously.

So I look forward to hearing from the Native American Finance Officers Association about how the Tribal Energy Investment Act builds on the recent bipartisan effort included in the Fiscal Year 2022 appropriations package to unlock the promise of this essential program.

Also, I look forward to discussing H.R. 5292, the Energy Accountability Act, sponsored by our late colleague, Representative Don Young. It would prohibit DoE from guaranteeing a loan for any entity that previously defaulted on an obligation guaranteed under Title 17 of the Energy Policy Act of 2005.

And finally, we have H.R. 8053, a bipartisan bill from Representatives Crow, Peters, and Bacon that amends the Federal Power Act to provide the Secretary of Energy authority to address vulnerabilities to the resilience of defense-critical electrical infrastructure. And this bill seeks to ensure that homes and businesses surrounding military installations do not bear the cost of electrical upgrades necessary for the security of those military bases.

So I think these are all important bills that will help strengthen our domestic energy sector.

[The prepared statement of Mr. Pallone follows:]

PREPARED STATEMENT OF HON. FRANK PALLONE, JR.

Committee on Energy and Commerce

Opening Statement as Prepared for Delivery
of
Chairman Frank Pallone, Jr.

Hearing on, "Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"

June 22, 2022

Today we will discuss legislation on a range of topics that affect our energy sector, including energy supply chains, energy efficiency, weatherization, the Department of Energy's Loan Programs Office, and critical infrastructure.

First, the Subcommittee will review two bills that improve energy efficiency and reduce energy costs for consumers. H.R. 7962, introduced by Representative Dingell, makes important changes to water heater efficiency standards and creates a new demand response program for residential water heaters. This legislation could have a significant impact on energy consumption, help consumers save on their energy bills, and help utilities reduce demand during peak times. It also contains commonsense fixes that harmonize standards for residential and commercial water heaters.

H.R. 7947, the Weatherization Enhancement and Readiness Act, introduced by Representative Tonko, Subcommittee Chairman Rush, and Representative Kaptur, establishes an important new weatherization readiness program. It also makes other practical changes to the Department of Energy's Weatherization Assistance Program.

President Biden's Bipartisan Infrastructure Law built on the bipartisan work we did in the Energy Act of 2020, investing a historic $3.5 billion in the Weatherization Assistance Program and reducing energy costs for over 700,000 low-income households. Still, many households are not able to receive weatherization improvements due to underlying structural and electrical issues. This new weatherization readiness program will ensure low-income families can make the upgrades necessary to enable them to qualify for weatherization measures, reduce their energy consumption, and save money on their energy bills.

H.R. 1599, the Securing America's Critical Minerals Supply Act, introduced by Ranking Member Upton, requires DOE to conduct assessments and secure energy resources that have vulnerable supply chains. As we work to secure a resilient and clean energy sector, we must make sure we are responsibly procuring critical minerals here in the United States. The Bipartisan Infrastructure Law took important steps to support clean energy supply chains, and I am eager to learn how this bill can advance our work towards a resilient clean energy economy.

Today we are also considering two bills to reform DOE loan programs. H.R. 8068, the Tribal Energy Investment Act, which was introduced by Representatives Leger-Fernandez, O'Halleran, and Cole. This legislation seeks to improve the Tribal Energy Loan Guarantee

Program, which permits DOE to provide loan guarantees to support energy development projects on Tribal lands. Despite our best intentions in establishing the program in 2005, it has not financed a single project in the program's 17-year history. That needs to change. I look forward to hearing from the Native American Finance Officers Association about how the Tribal Energy Investment Act builds on the recent bipartisan effort, included in the Fiscal Year 2022 appropriations package, to unlock the promise of this essential program.

I also look forward to discussing H.R. 5292, the Energy Accountability Act, sponsored by our late colleague, Representative Don Young. It would prohibit DOE from guaranteeing a loan for any entity that previously defaulted on an obligation guaranteed under Title 17 of the Energy Policy Act of 2005.

Finally, we will discuss H.R. 8053, a bipartisan bill from Representatives Crow, Peters, and Bacon, that amends the Federal Power Act to provide the Secretary of Energy authority to address vulnerabilities to the resilience of defense critical electric infrastructure. This bill seeks to ensure that homes and businesses surrounding military installations do not bear the costs of electrical upgrades necessary for the security of those bases.

I look forward to hearing how these bills will help strengthen our domestic energy sector.

Mr. PALLONE. And I yield back, Mr. Chairman.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes Mrs. Rodgers, ranking member of the full committee, for 5 minutes for her opening statement.

OPENING STATEMENT OF HON. CATHY MCMORRIS RODGERS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WASHINGTON

Mrs. RODGERS. Thank you, Mr. Chairman.

The need for President Biden to abandon his war on American energy is becoming more urgent by the day. People can't afford to fill up their gas tanks. Natural gas prices are surging because energy is foundational to every part of our lives. Everything is more expensive, especially food.

We must flip the switch on American energy, produce more, and make life affordable again. This is clear to every American family as they confront record inflation and energy prices, declining electric reliability, blackout threats, and looming energy security threats from Russia's war on Ukraine. It is clear to domestic energy producers, manufacturers, and innovators as they struggle to attract capital to build and overcome permitting challenges, regulatory uncertainty, and China-controlled supply chains.

To lower costs, President Biden must focus on removing the barriers to an American energy and economic resurgence. Tapping the SPR hasn't worked. A gas tax holiday will be ineffective, and would undermine funding to infrastructure projects for road safety. More government spending has fueled the inflation crisis. And asking foreign dictators for more oil, like in Saudi Arabia, further weakens our security and prosperity.

To secure our energy dominance and lower prices, the President must abandon this agenda that has led to his worsening energy crisis since day one. He must embrace policies that encourage investments in durable American energy, and fuel a supply of goods and services into our economy. It means growing our tremendous energy systems, not dismantling them with rush-to-green policies that stifle innovation, undermine security, and raise energy costs. This should guide how we evaluate proposals concerning energy efficiency, energy infrastructure, and energy security.

Today's hearing considers six bills on different policy topics. The common connection among them is the Department of Energy. Unfortunately, DoE is not here, and we will not be able to question DoE officials on these bills and the programs they address. I hope we have the chance soon. In the meantime, I welcome the opportunity for members to ask questions to stakeholders and other experts here.

I am pleased to see included Fred Upton's H.R. 1599, Securing America's Energy—or Critical Minerals Supply Act, which is part of our Securing a Cleaner American Energy Agenda. This bill establishes a cabinet-level focus on identifying the critical energy resources necessary to develop and supply energy in America. This includes an assessment of supply chains across all energy systems in the United States: a critical way to identify and reform policies that would otherwise drive dependency on China. While much needs to be done to strengthen energy security, establishing this

function at DoE makes sense. It updates the Department's historic role to assure reliable supplies of energy to enable energy security.

Regarding the other bills before us today, H.R. 8053 expands coverage of DoE's work to secure critical defense electric infrastructure to all 50 states. This sounds like a positive path, but the bill goes farther with additional contracting authorities for DoE. And more needs to be understood on that front.

With this and some of the other bills we have questions about implementation that we are pursuing today. There are expansions of Federal programs that seem unrelated to the needed reset on energy policies. For example, H.R. 7947 would create a new $450 million DoE program to prepare homes for weatherization on top of existing programs. Yet a weatherization program was just reauthorized on a bipartisan basis just two years ago.

What is more, through the infrastructure law Congress just appropriated 3.5 billion in additional spending on this program, far above what was authorized in 2020. So now it appears DoE can't spend the money appropriated, and needs a new, duplicative program and more funding. This deserves scrutiny. With record high inflation, should the Federal Government be paying to essentially flip houses on the taxpayers' dime?

We are also concerned with mandates in H.R. 7962. This bill addresses water heater energy efficiency standards, but also requires DoE to examine demand-side management mandates. This is far reaching, and may place control of your water heater in the hands of utilities or other third parties. There are huge implications of this, and we must answer those questions.

Overall, I look forward to our witnesses' testimony today. Welcome to Ben Lieberman, former committee staffer, and Lou Pugliaresi back to the committee. I look forward to your insights, and what is needed to reset our economic and energy policy, and ensure energy and economic resurgence in the great United States of America.

[The prepared statement of Mrs. Rodgers follows:]

PREPARED STATEMENT OF HON. CATHY MCMORRIS RODGERS

Republican Leader Cathy McMorris Rodgers
"Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"
June 22, 2022
As Prepared for Delivery

The Urgent Need to Reset Policies

The need for President Biden to abandon his war on American energy is becoming more urgent by the day.

People can't afford to fill up their gas tanks.

Natural gas prices are surging...

… and because energy is foundational to every part of our lives, everything is more expensive, especially food.

We must flip the switch on American oil and gas production to make life affordable again.

This is clear to every American family as they confront record inflation and energy prices, declining electric reliability, blackout threats, and looming energy security threats from Russia's war on Ukraine.

It's clear to domestic energy producers, manufacturers, and innovators as they struggle to attract capital to build and overcome permitting challenges, regulatory uncertainty, and China-controlled supply chains.

To lower costs, President Biden must focus on removing the barriers to an American energy and economic resurgence.

Tapping the SPR hasn't worked.

A gas tax holiday will be ineffective... and would undermine funding to infrastructure projects for road safety

More government spending has fueled the inflation crisis.

And asking foreign dictators for more oil like in Saudi Arabia, further weakens our security and prosperity.

To secure our energy dominance and lower prices, the President must abandon this agenda that has led to his worsening energy crisis since day 1.

He must embrace policies that encourage investments in durable American energy and fuel the supply of goods and services into our economy.

Grow, Not Dismantle, Our Energy Systems

It means growing our tremendous energy systems, not dismantling them with radical, rush-to-green policies that stifle innovation, undermine security, and raise energy costs.

This should guide how we evaluate proposals concerning energy efficiency, energy infrastructure, and energy security.

Today's hearing considers six bills, on different policy topics; the common connection among them is the Department of Energy.

Unfortunately, DOE is not here, and we will not be able to question DOE officials on these bills and the programs they address.

I'm hopeful we'll have a chance soon.

In the meantime, I welcome the opportunity for members to ask questions to stakeholders and other experts here today.

A Step to Secure Energy Supplies

I'm pleased to see included Fred Upton's H.R, 1599, Securing America's Critical Minerals Supply Act, which is part of our Securing Cleaner American Energy Agenda.

This bill establishes a Cabinet-level focus on identifying the critical energy resources necessary to the development and supply of energy in America.

This includes an assessment of supply chains across all energy systems in the United States – a critical way to identify and reform policies that would otherwise drive dependency on China.

While much more must be done to strengthen energy security, establishing this function at DOE makes sense.

It updates the Department's historic role to assure reliable supplies of energy, to enable energy security.

Regarding the other bills before us today,

…H.R. 8053 expands coverage of DOE's work to secure critical defense electric infrastructure to all fifty states. This sounds like a positive path forward; but the bill goes farther with additional contracting authorities for DOE and more needs to be understood on that front.

With this and some of the other bills, we have questions about implementation that we are pursuing today.

Question Expansive New Spending and Mandates

There are expansions of federal programs that seem unrelated to the needed reset of our energy policies.

For example, H.R. 7947 would create a new $450 million DOE program to prepare homes for weatherization, on top of existing programs.

Yet, the weatherization program was just reauthorized, on a bi-partisan basis, two years ago.

What is more, through the infrastructure law, Congress just appropriated $3.5 billion in additional spending on this program—far above what we authorized in 2020.

So now it appears DOE can't spend the money appropriated and needs a new, duplicative program and more funding.

This deserves scrutiny. With record high inflation, should the federal government be paying to essentially flip houses on the taxpayer's dime?

We also are concerned with mandates in H.R. 7962. This bill addresses water heater energy efficiency standards, but also requires DOE to examine demand side management mandates.

This is far reaching and may place control of your water heater in the hands of utilities or other third parties.

There are huge implications to this that we must question.

Overall, I look forward to our witness testimony this morning.

Welcome to both Ben Lieberman -- a former Committee staffer -- and Lou Pugliaresi (Pooh-la-ree-cee) back to the Committee.

I look forward to your insights on what is needed to reset our economic and energy policy, and to ensure an energy and economic resurgence in America.

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Mrs. RODGERS. I yield back. Thank you.

Mr. MCNERNEY. The gentlewoman yields back.

The Chair would like to remind members that, pursuant to committee rules, all Members' written opening statements shall be made a part of the record.

I have already introduced the witnesses, and I thank you again for joining us today. At this time the Chair will recognize each witness for 5 minutes to provide their opening statement.

Before I begin, I would like to explain the lighting system. In the front of the witnesses is a series of lights. The light will initially be green. The light will turn yellow when you have one minute left. Please begin to wrap up your statement at that time. The light will turn red when your time expires.

Mr. DeLaski, thank you for coming. You are recognized for 5 minutes.

Mr. DELASKI. Thank you. Thank you very much.

Mr. PUGLIARESI. Thank you, Mr. Chairman.

Mr. DELASKI. Thank you for the opportunity to testify today——

Mr. PUGLIARESI. I think we have some slides. Chairman——

Mr. MCNERNEY. Mr. DeLaski is recognized first.

Mr. PUGLIARESI. Oh, I am sorry.

Mr. MCNERNEY. Remotely. Sorry.

Mr. DELASKI. OK. Thank you. Thank you again for the opportunity to testify on two very important bills. These are pragmatic bills that address real problems that face people across the United States.

Mr. MCNERNEY. Mr. DeLaski, you are not being—your audio is not sufficient. Could you turn it up?

Mr. DELASKI. How is that working now?

Mr. MCNERNEY. It is better.

Mr. DELASKI. And is it working better now?

Mr. MCNERNEY. Not—it is not sufficient yet. OK, we are going to turn it up here, if you will wait for a moment.

Mr. DELASKI. How is my audio now?

Mr. MCNERNEY. OK. Please try again.

Mr. DELASKI. OK, I will start again. Is it OK now?

Mr. MCNERNEY. Not really.

VOICE. Why don't we start with Mr. Frias?

Mr. MCNERNEY. OK. We will skip this witness initially, and start with Mr. Frias.

Mr. Frias, would you give us your opening statement?

STATEMENT OF RICHARD FRIAS, EXECUTIVE DIRECTOR, NATIVE AMERICAN FINANCE OFFICERS ASSOCIATION; ANDREW DeLaski, EXECUTIVE DIRECTOR, APPLIANCE STANDARDS AWARENESS PROJECT; DUSTIN MULVANEY, PH.D., PROFESSOR, ENVIRONMENTAL STUDIES, SAN JOSE STATE UNIVERSITY; JOSHUA C. GREENE, ESQ., CORPORATE VICE PRESIDENT, GOVERNMENT AND INDUSTRY AFFAIRS, A.O. SMITH CORPORATION; LUCIAN PUGLIARESI, PRESIDENT, ENERGY POLICY RESEARCH FOUNDATION, INC. (EPRINC); AND BEN LIEBERMAN, SENIOR FELLOW, COMPETITIVE ENTERPRISE INSTITUTE

STATEMENT OF RICHARD FRIAS

Mr. FRIAS. Greetings, Chairman McNerney, Ranking Member Upton, Chairman Pallone, and Ranking Member Rodgers. My name is Rico Frias. I am the executive director of the—of NAFOA, and a citizen of the Chihene Nde Nation. Thank you all for your time today, as well as the opportunity to talk about talk—talk in support of H.R. 8068, the Tribal Energy Investment Act of 2022.

As anyone who has filled their gas tank in the past few weeks knows, the energy industry touches every part of our economy and of our daily lives. We have seen how energy development can transform communities, how it can pull entire regions out of poverty, and how it can shape world events. At NAFOA we know that tribal governments are excited to unlock the energy potential of Indian country, and we believe that H.R. 8068, which permanently changes the ability of the loan programs office to offer direct nation-to-nation loans, is an important step to helping us get there.

Indian tribes hold a unique place in our country. They also face challenges that traditional energy development organizations do not face. For example, the status of tribal trust land creates barriers that non-tribal energy developers would not encounter. The change from loan guarantees to direct loans from the Department of Energy removes the impediment of finding a lender willing to fund the project. The lack of access to capital is a longstanding problem, as many institutions have largely shown an unwillingness to work in and with Indian country.

Direct loans are also more consistent with the nation-to-nation relationship that tribes share with the U.S. Federal Government. The treaties are the basis for the trust responsibility the U.S. has with tribes. Permanently authorizing the loan program's office to do direct loans strengthens the nation-to-nation relationship, and takes another step in fulfilling the promises the United States has made to tribes.

By permanently authorizing LPO to offer direct loans to tribal governments, we are addressing two critical topics for Indian country: energy and economic development. By offering direct loans, we are removing an unnecessary component from an already complex process, and addressing the lack of access to capital that tribes and tribal members face.

For the future of tribes it is crucially important that quality, high-paying, and, perhaps most importantly, long-term jobs are on or close to traditional tribal lands. This helps solve several of the issues tribal governments face, such as creating jobs that encour-

age tribal members to stay within their communities, and to ensure that employment remains diversified so that a downturn in one industry, which we have seen due to COVID recently, would not cause outsized economic harm to the tribal economy.

Direct loan authority also addresses the lack of access to capital within Indian country. Banks and other financial institutions have for many years failed to work in Indian country. This is why the change from loan guarantees to direct lending is so important. While we encourage financial institutions to work in Indian country, the recent joint notice of proposed rulemaking on the Community Reinvestment Act shows how difficult it really is to bring capital into tribal communities and other under-served communities.

One of the major benefits we feel of the LPO direct loan program is that the program, like NAFOA, is technology agnostic. We know the benefit of a clean, balanced, and stable climate, as well as the need for energy transition over the coming years. However, while tribes and their members are excited to participate in the new energy industry, they should not be required or asked to bear the economic burden of the energy transition that the broader economy is still economically benefiting from.

Additionally, renewable energy products—projects require a tax equity partner, which adds another layer of complexity for tribes to overcome.

It is also crucial for the unique nation-to-nation relationship and for tribal self-determination that individual tribes be allowed to decide which energy sources meet their community's unique needs and economic circumstances.

When tribes are given a level playing field, they are able to compete with and even surpass the competition. Permanent authorization of the LPO loan program is another step toward unlocking the Indian country's potential for not just energy, but economic development overall. Removing uncertainty around the LPO's authority to offer direct loans will help tribes across the country to compete in the energy industry, and ensure that our economy works for everyone.

Again, I thank you very much for your time today, and for allowing me to testify. I am available for any questions.

[Speaking native language.] Thank you.

[The prepared statement of Mr. Frias follows:]

Greetings Chairman Rush, Ranking Member Upton, Chairman Pallone, and Ranking Member McMorris Rodgers. Thank you all for your time today, as well as the opportunity to talk about and support H.R. 8068 the "Tribal Energy Investment Act of 2022".

As anyone who has filled their gas tank in the past few weeks knows, the energy industry touches every part of our economy and of our daily lives. We have seen how energy development can transform communities, how it can pull entire regions out of poverty, and how it can shape world events. At NAFOA, we know that tribal governments are excited to unlock the energy potential of Indian Country and we believe that H.R. 8068, which permanently changes the Loans Programs Office ("LPO") ability to offer direct, Nation-to-Nation loans is an important step to helping us get there.

By permanently authorizing the LPO to offer direct loans to tribal governments, we're addressing two critical topics for Indian Country at once; energy and economic development. By offering direct loans, we are removing an unnecessary component from an already complex process and addressing the lack of access to capital that tribes and tribal members face. Increasing access to capital in Indian country is key essential for unlocking our tribal workforce and helping tribes and the surrounding communities benefit from the growth energy development can create. For the future of tribes, it will be crucially important that quality, high-paying, and maybe most importantly, long-term jobs are on or close to traditional tribal lands. This helps solve several of the issues that tribal governments and organizations face such as creating jobs that encourage tribal members to stay within their communities and to ensure that employment remains diversified so that a downturn in one industry, which we've seen with COVID, would not cause outsized economic harm to the tribal economy. It helps ensure the long-term economic resiliency of tribes by making them a part of the new economy that will benefit them for decades and decades to come.

Direct loan authority also addresses the lack of access to capital within Indian country. Banks and other financial institutions have for many years failed to work in Indian country. This is why this change from loan guarantees to direct lending is so important. While we can encourage financial institutions to work in Indian country, the recent joint Notice of Proposed Rulemaking on the Community Reinvestment Act shows how difficult it really is to bring capital into tribal communities and other underserved communities.

One of the major benefits of the LPO is that the program, like NAFOA, is technology agnostic. Well before anyone had ever discussed climate change, the environmental impact of energy usage, or even the impact of Greenhouse Gases, tribal communities understood the importance of the environment in our daily life and health. We know the benefits of a clean, balanced, and stable climate, as well as the need for energy transition over the coming years. However, while Tribes and their members are excited to participate in the new energy industry, they should not be required or asked to bare the economic burden of the energy transition that the broader economy is still economically benefiting from. Additionally, most renewable energy projects require tax equity partner which adds another layer of complexity for tribes to overcome. It is also crucial for the unique nation-to-nation relationship and for tribal self-determination that individual tribes be allowed to decide what energy sources meet their community's members unique needs and economic circumstances.

By allowing tribes to decide what best addresses their needs, it helps to ensure that each project is something that is appropriate for the area in which it is being constructed and will have the necessary community support to succeed. Many economically viable energy projects are of such a scope that a

grant would never be able to provide sufficient funds to complete the project, nor do grants allow tribal governments to build the financial relationships necessary for future economic development. The only way that energy development, indeed most new economic development, can take place is if you have access to substantial amounts of capital. The LPO not only creates an opportunity to develop Indian Country's resources, but also helps develop Indian Country's access to capital. We have heard that even tribes with no interest or ability to develop energy resources support the LPO program because of this increase in capital access for Indian Country.

Grants absolutely have their place in tribal economic development. However, despite having treaties with the federal government outlining specific promises made to Indian Country, each year tribes must fight for their appropriations. I don't need to tell anyone in this room that the appropriations are inconsistent at best. This puts an incredible burden on tribal governments and makes long-term, economic planning a nightmare; the exact kind of planning that is necessary if tribes are going to take full advantage of the energy industry. Development of energy projects can take years to plan and complete, which increases the negative impact of inconsistent grant funding and unreliable appropriations cycles. Direct loans with set terms helps to alleviate the appropriations uncertainty and make it possible for Indian Country to seriously enter the energy marketplace.

When making decisions about how to allocate limited tribal resources, it is difficult to justify allocating funds towards an economic development program which may or may not exist in the next fiscal year even though it could bring in critically needed new revenues. Forced to choose between funding essential services for tribal members or allocating funds to plan a project for which they may be no opportunity for success because the funding needed is not available the essential services must win. This bill, H.R. 8068, removes the uncertainty, removes one more obstacle from an already complex process, and makes it easier for tribal leaders to say yes to energy development. Direct loans can also interact with grants, increasing positive economic impacts of both. I am excited to share that NAFOA is working in partnership with several Departments on a series of public, educational webinars focused on how the various government grants, programs, and funding sources can be combined in one project.

I want to ensure the Members of the Subcommittee and Committee that there is interest throughout Indian Country in energy development. Since becoming Executive Director of NAFOA just under a year ago, I have witnessed firsthand the strong tribal interest in energy development within our tribal membership and Indian Country at large. NAFOA has run a series of webinars in partnership with the Department of Energy, the LPO, and the Office of Indian Energy and Programs, all of which had high participation. At our Conference in Seattle last April, we ran an event on Indian Energy development that filled its conference room. We also provided space for personnel from the Department of Energy to speak one-on-one with our conference attendees in order to provide programmatic information or offer technical assistance. I know that NAFOA staff has received questions from NAFOA's membership on energy development, and the LPO in particular, and that at the RES Conference last month there was strong interest in Department of Energy programs.

We are excited to continue to work with the LPO, which has done a great job getting word of its activities out. First authorized in 2005, the LPO didn't receive funding until 2017 and it was not until a year later that guidelines, staffing, and work was able to get started. NAFOA has been working with LPO to amplify programmatic announcements, to direct tribal questions to the right offices, to connect them with the necessary tribal contacts, and to help inform tribal governments about what options are available. For many tribes, energy development is an entirely new industry, and just getting the word out on what the program can and cannot do and how it works was a multi-year effort and then COVID hit. To this day COVID still impacts the energy development supply chain in unexpected and unanticipated ways. None the less, I know the LPO has continued its work in reaching out to tribes.

COVID didn't just impact LPO, but also hit tribal communities in a unique number of ways that we are still feeling today. First, there has been an unprecedented flow of money from the federal government to tribes since 2020. However, with the funds have come regulations, deadlines, reporting guidelines, , etc..

For two years tribal governments faced staffing shortages, limited social/governmental bandwidth (a word I use intentionally, as NAFOA knows internet broadband access is a major issue for tribal governments and members), and crisis after crisis to address. Currently, too many tribes are forced to focus on the sometimes overwhelming "now", much less have the time to focus on an energy project years from now.

Indian Tribes hold a unique legal place in our country. They also face some challenges that traditional energy development organizations do not face. For example, the status of tribal trust land, creates barriers that non-tribal energy developers would not encounter. One of the primary benefits of this change to the LPO is that it removes a major friction point from the energy project development and financing cycle. The change from loan guarantees to direct loans directly from the Department of Energy removes the impediment of finding a lender willing to fund the project. The lack of access to capital is a longstanding problem, as institutions have largely shown an unwillingness to work in and with Indian country.

Direct loans are more consistent with the Nation-to-Nation relationship that tribes share with the U.S. federal government. The treaties are the basis for the trust responsibility the U.S. has with tribes. The federal government has an obligation to step-up where these private sector lending institutions have not. Permanently authorizing the LPO direct loan program strengthens this Nation-to-Nation relationship and takes another necessary small step in fulfilling the promises the United States has made to tribes.

At NAFOA, we know that when tribes are given a level playing field, they are able to compete and surpass the competition. The success of tribes in the gaming industry has demonstrated this clearly. Permanent authorization for the LPO loan program is another step towards unlocking Indian Country's potential for not just energy, but economic development overall. Removing uncertainty around the LPO's authority to directly offer loans helps tribes across the country to compete in the energy industry, and ensure that our country's economy works for everyone. Again, I thank you very much for your time today and allowing me to testify. I am available for any questions. Thank you.

Mr. MCNERNEY. Thank you. The gentleman yields. We would like to try again to recognize Mr. DeLaski, and hope that this time we can follow through.

Mr. DeLaski, you are recognized.

STATEMENT OF ANDREW DELASKI

Mr. DELASKI. Thank you. I appreciate the opportunity to testify today, and thank the committee for this opportunity.

I am here today to testify in favor of two very important bills: H.R. 7947, the Weatherization Enhancement and Readiness Act; and H.R. 7962, a bill to amend the Energy Policy and Conservation Act with respect to water heaters.

I would like to thank Representatives Tonko and Dingell, respectively, for the introduction to these bills, and all the cosponsors for their support.

I am here today on behalf of two organizations, the Appliance Standards Awareness Project, of which I am the Executive Director; and the American Council for an Energy Efficient Economy. ACEEE is a non-profit, 501(c)(3) organization that acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors so that all households experience equitable benefits from energy efficiency improvements. ASAP is a coalition project housed at ACEEE that works to advance and defend new appliance equipment and lighting standards that cut emissions that contribute to climate change, and other environmental and public health harms, save water, and reduce economic and environmental burdens for low and moderate-income households.

I also want to recognize organizations that were involved in the development of the Weatherization Enhancement and Readiness Act and helped us prepare this testimony: the National Association of State Community Services Programs, the National Community Action Foundation, and the National Consumer Law Center. We are grateful for their longstanding leadership on this program, and their work to support this bill's development.

With respect to the water heater bill, I would like to recognize the contributions of the Air Conditioning, Heating, and Refrigeration Institute; the National Rural Electric Cooperative Association; the Solar Energy Industries Association; and the Natural Resources Defense Council. We worked in collaboration with each of these organizations during the bill's development. And we also consulted with State governments, other efficiency organizations, and individual utility companies. Of course, any errors in this testimony of commission or omission are my responsibility alone.

These bills will improve two of the most important Federal programs for easing the burdens of high energy bills on low-income families, and delivering large energy savings that protect our environment, improve power system reliability, and improve energy security.

The first, the Weatherization Enhancement and Readiness Act, would add needed flexibility to the Federal weatherization assistance program, which helps low-income families by making energy efficiency improvements to their homes. The reforms contained in this bill would, first, raise the maximum amount that the program can invest in any one home, a critical need with wages rising, also

particularly important for rural households that can be more expensive to serve.

It would also—the bill would, second, increase the amount available to make essential repairs to homes which are necessary for safe, effective, and durable weatherization improvements.

Third, it would raise the cap on solar energy investments for a home allowed under the program.

And fourth, it would remove bureaucratic barriers to weatherization improvements.

With energy prices on the rise through the war in Ukraine and severe weather events that can threaten health and safety happening more frequently, such as the severe heat waves of last week, people across the country need Congress to act on this bill.

Today, as many as one in five eligible households is not able to benefit from this program, due to structural problems with their home: a hole in a roof, a mold problem. This bill would create more opportunities, more flexibility to address these problems so homes can be weatherized.

Reforms in this bill are urgently needed in 2022 to make sure that the lowest-income households—many of them rural, many people of color, many elderly—that have the greatest need of assistance can fully benefit from the weatherization assistance program.

The second bill would amend the National Appliance Energy Conservation Act, a cornerstone of U.S. energy policy that covers about 60 product categories. The average U.S. household today is spending about $500 less per year on their utility bills because of existing standards enacted under this program. It is one of the most successful programs for reducing utility bills for consumers, saving energy.

Standards have also resulted in an enormous reduction in climate change emissions and other pollutants. This bill would amend the law with respect to water heaters, one of the largest energy-using products in our homes and businesses. It would update definitions to clarify the line between consumer and commercial water heaters, it would add a new definition for solar thermal water heaters. And third, it would authorize the development of demand response requirements for water heaters.

[Audio malfunction.]

Mr. DELASKI [continuing]. This third element. It is a package of amendments, but I will focus on the third.

Demand response is a well-established technique for shifting electricity use away from times of peak demand to times when cheap, clean power is available, thus reducing costs and improving reliability. By heating water when power is cheap and clean, it is possible to save money, reduce demand peaks that can threaten grid reliability, and cut emissions from fossil generation.

Historically, some utilities have retrofitted water heaters with demand response capabilities for customers at or after the time of installation. But the capability could be more cost-effectively added to products at the time of manufacture. Several states have now established or authorized such manufacturing requirements.

This bill would authorize the development of a national demand response requirement that could improve business certainty for manufacturers and for utilities, facilitate broader access to this im-

portant technology, and strengthen grid flexibility and reliability. To ensure—it could ensure a common communications protocol, easing the pathway to large-scale demand response and significant cost savings for consumers. A national requirement would preempt additional states from setting their own requirements, helping to promote a consistent national marketplace for water heaters.

Both these goals are urgently needed to approval.

Mr. MCNERNEY. Yes, would you please wrap up your testimony?

Mr. DELASKI. I am finished. Thank you very much.

[The prepared statement of Mr. DeLaski follows:]

ACEEE Testimony
American Council for an Energy-Efficient Economy

Testimony of Andrew DeLaski

Executive Director, Appliance Standards Awareness Project

On behalf of ASAP and ACEEE

SUBCOMMITTEE ON ENERGY OF THE U.S. HOUSE COMMITTEE ON ENERGY AND COMMERCE
LEGISLATIVE HEARING ON BILLS TO STRENGTHEN ENERGY INFRASTRUCTURE, EFFICIENCY, AND FINANCING

JUNE 22, 2022

Introduction

Thank you for the opportunity to testify on two very important bills, H.R. 7947, the Weatherization Enhancement and Readiness Act of 2022, and H.R. 7962, a bill to amend the Energy Policy and Conservation Act with respect to water heaters. I would also like to thank Representatives Tonko and Dingell respectively for the introduction of these bills, and all their cosponsors for their support.

I am here today on behalf of two organizations, the Appliance Standards Awareness Project (ASAP) and the American Council for an Energy-Efficient Economy (ACEEE). ACEEE, a nonprofit 501(c)(3) organization, acts as a catalyst to advance energy efficiency policies, programs, technologies, investments, and behaviors so that all households experience equitable benefits from energy savings. ACEEE produces more than 30 reports and other resources each year on energy-saving technologies, programs, and policies, including research focus areas on health, energy insecurity, and equitable program access and policy development. ASAP is a coalition project housed at ACEEE and led by a Steering Committee consisting of representatives of efficiency advocacy organizations, state government, advocacy organizations that work on behalf of low-income households and consumers, environmental organizations and utilities. ASAP works to advance and defend new appliance, equipment and lighting standards that cut emissions that contribute to climate change and other environmental and public health harms, save water, and reduce economic and environmental burdens for low- and moderate-income households.

I also want to recognize several organizations that were involved in the development of the Weatherization Enhancement and Readiness Act and helped us prepare this testimony: the National Association for State Community Services Programs, the National Community Action Foundation and the National Consumer Law Center. These organizations are deeply involved in supporting and helping states effectively deliver the weatherization program. We are grateful for their long-standing leadership on this program and their work to develop this bill. We appreciate the opportunity to support their work.

With respect to the water heater bill, I'd like to recognize the contributions of the Air-conditioning, Heating and Refrigeration Institute (the trade group for water heater manufacturers), the National

Rural Electric Cooperatives Association, the Solar Energy Industries Association and the Natural Resources Defense Council. We worked in collaboration with each of these organizations during the development of the proposal. We also consulted with state governments, other efficiency organizations and individual utility companies.

Of course, any errors of commission or omission in this testimony are mine alone.

Summary

Two bills before the committee today will improve two of the most important federal programs for easing the burdens of high energy bills on low-income families and delivering large energy savings that protect our environment, improve power system reliability, and improve energy security. The first, the Weatherization Enhancement and Readiness Act of 2022, would add needed flexibility to the federal Weatherization Assistance Program (WAP) which helps low-income families by making energy efficiency improvements to their homes. The reforms contained in the bill would:

- raise the maximum amount that the program can invest in any one home,
- increase the amount available to make essential repairs to a home, which are necessary for safe, effective and durable weatherization improvements,
- raise the cap on solar energy investments for a home allowed under the program, and
- remove bureaucratic barriers to weatherization improvements.

These enhancements are urgently needed in 2022. With energy prices on the rise due to the war in Ukraine and severe weather events that can threaten health and safety happening more frequently, people across the country need Congress to act on this bill. Households with the lowest incomes desperately need a strengthened weatherization program to reduce the tremendous strain of keeping up with high energy bills and enable them to qualify for investments that make their homes safe when heat waves or severe cold-snaps strike. Today, as many as one in five eligible households are not able to benefit from this program due to structural problems with their home. Generally, these are the households with the greatest needs. They live in substandard housing that requires basic home repairs for safety, to patch roof holes and make other essential repairs.

The reforms in this bill are urgently needed to make sure that the lowest-income households -- many of them rural, many people of color, many elderly -- that have the greatest need of assistance can fully benefit from the weatherization program.

The second bill would amend the national appliance efficiency standards law, a cornerstone of US energy policy that covers about 60 product categories. The average US household spends about $500 less per year on its utility bills because of standards on the books today. Standards have also resulted in enormous reductions in climate change emissions and other pollutants. Water heaters are one of the largest energy users in our homes and businesses, therefore one of the most important products covered by the national standards program. This bill would amend the law with respect to this critically important product category. The bill would:

- Update and clarify the line between consumer and commercial water heaters to ensure that products meet the standards designed for their application.

- Add a new definition of solar-thermal water heaters
- Authorize the development of demand response requirements for water heaters

The definitional changes are needed because the existing statutory definition of consumer water heaters encompasses some products that are used for commercial purposes. The updated definitions will provide regulatory certainty and clarity for manufacturers and purchasers and will ensure that products meet standards designed for their application. In addition, solar thermal water heaters are specialized products that can provide significant cost and energy saving benefits. A separate definition will allow for appropriate regulatory treatment of these products.

Two trends support the need for enhanced authority for demand response: increased frequency of severe weather events that strain the power grid and increased availability during off-peak hours of clean, renewable energy. Demand response is a well-established technique for shifting electricity use away from times of peak demand and to times when cheap, clean power is available, thus reducing costs and improving reliability. By heating water when power is cheap and clean, it is possible to save money, reduce demand peaks that can threaten grid reliability and cut emissions from fossil generation. Two trends support the need for enhanced authority for demand response: increased frequency of severe weather events that strain the power grid and increased availability during off-peak hours of clean, renewable energy.

For water heaters to provide these grid-flexibility services they must be equipped to respond to external signals. Historically, some utilities have retrofitted water heaters with demand response capabilities for customers at or after the time of installation. But the capability can be more cost-effectively added to products at the time of manufacture. Several states have established or authorized such manufacturing requirements. This bill would authorize the development of national demand response requirements that could improve business certainty for manufacturers and for utilities, facilitate broader access to this technology, and strengthen grid flexibility and reliability. It could ensure a common communications protocol, easing the pathway to large scale demand response and significant cost savings for households. A national requirement would preempt additional states from setting their own requirements, helping to promote a consistent national marketplace for water heaters.

Low-Income Weatherization

H.R. 7947, The Weatherization Enhancement and Readiness Act of 2022

The Weatherization Assistance Program (WAP) helps low-income families by making energy efficiency improvements to their homes. Since 1976, WAP has funded and provided training to community assistance programs across the United States to make more than 7 million homes more energy efficient. Using energy assessments, contractors determine a package of efficiency measures that are appropriate and cost-effective for each home, such as sealing air leaks, adding insulation, and replacing old heating and cooling equipment.

For more than four decades, WAP has reduced energy usage in the homes of low-income families. The U.S. Department of Energy (DOE) estimates that these upgrades help each household save $372 on

average in energy bills each year.[1] For every $1.00 invested in weatherization $1.72 is generated in energy savings benefits.[2] And while these energy and cost savings are great, this same investment results in $2.78 in nonenergy benefits that are perhaps even more important to vulnerable communities: lower rates of asthma and respiratory illness, more money to pay for medications, and better home comfort. The program also leads to significant reductions in CO_2 emissions – 3.5 MMT CO_2 per year (roughly the equivalent emissions of 740,000 cars – and natural gas use – 27 trillion Btu per year).[3] WAP also trains and employs thousands of workers, often from the same low-income communities that benefit from home improvements.

While WAP is highly successful, increased program flexibility is necessary. We are concerned that certain limitations in the program's rules hamper its potential to prepare homes for worsening weather conditions. Additionally, some constraints on the program prevent low-income households from accessing innovative technology.

The Weatherization Enhancement and Readiness Act makes some major strides to address these issues, investing more money in eligible homes, fixing homes that need repairs before weatherization, normalizing renewable energy technology, and clarifying "re-Weatherization" restrictions.

First, the average cost limit per unit, or ACPU, is currently set in statute at $6,500 per home (with a small annual escalator). As prices rise for labor and materials, and new resilience measures are added to the menu of efficiency investments, fewer measures fit under the cap. WAP workers are also often underpaid compared to their industry counterparts, and as private sector wages rise, trained workers are increasingly unavailable to many WAP providers. Wage growth without a higher ACPU means program officials must reduce the number of upgrades per house.

The $6,500 ACPU limit also creates perverse incentives. After serving very low-income applicants in disadvantaged areas whose houses need significant upgrades, WAP teams are forced to find homes that need very few improvements in order to keep the ACPU down. This stands at odds with the program's goal of serving those most in need.

Representative Tonko's bill would increase the ACPU to $12,000, permitting the program to keep pace with risings costs and enabling deeper retrofits with greater savings.

Second, many eligible homes are too dilapidated to support the upgrades made by WAP. Either the home structure itself cannot make use of them due to defects like leaking roofs, or work teams are

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[1] US Department of Energy. "Weatherization Assistance Program." https://www.energy.gov/eere/wap/weatherization-assistance-program (last accessed June 21, 2022).

[2] US DOE. "Weatherization Assistance Program" Fact Sheet. January 2021. https://www.energy.gov/sites/default/files/2021/01/f82/WAP-fact-sheet_2021_0.pdf.

[3] ACEEE. "Weatherization Assistance Program" Fact Sheet. 2018. *available at* https://www.aceee.org/sites/default/files/pdf/fact-sheet/weatherization-assistance-program.pdf.

unable to enter due to unsafe conditions like rotting stairs (which low-income people live with every day). Yet only $500 of WAP funds for a home may be used toward incidental repairs. According to the National Association for State Community Services Programs (NASCSP) many states have deferral rates, the amount of income-eligible homes that are structurally unfit to receive upgrades, at or approaching 20%.[4] But one state that had such a 20% rate just 3 years ago saw that dropped to 9% after the state government created a trust to fix a common structural problem in its homes.

These repairs come in all forms. NASCSP has collected many stories from eligible homes that were unable to receive weatherization assistance because of the incidental repair limit:

- A senior citizen in Aberdeen, WA who is partially disabled was deferred from weatherization assistance due to extensive rot. A state program helped him repair these issues and then a WAP contractor was able to come in and do full insulation – reducing his annual heating bill below $700 in his home built in 1912.
- A single mother with small children had a leaky roof, preventing the safe and effective installation of attic insulation which was badly needed.
- A couple with four children living in housing in need of insulation, updated ventilation, and more was found to have lead-based paint and soil surrounding the home, creating a hazard for family and workers if disturbed. The family was deferred for weatherization services.
- A disabled elderly client living in a manufactured home had rotten flooring that was not safe to walk on, preventing a crew from safely entering the home and installing necessary health and safety and weatherization measures.

This bill includes a much needed "weatherization readiness" fund that would allow WAP teams to complete major repairs in order to make homes structurally sound and safe for installers.

Third, renewable technology installations are limited to $3,000 per home in the WAP program. When this was set in statute, these kind of upgrades were relatively uncommon and seen as untested. That is no longer the case. Residential renewable energy systems, especially solar, are much cheaper and well understood, and provide clear benefits for reduction of energy use and energy bills. This legislation would remove that cap and allow low-income households to benefit from proven technology where it makes sense. Renewable measures would still be subject to the cost-effectiveness requirements that apply to all measures and to the overall funding cap per home. They would just be treated on an equal basis with other measures.

Finally, current law prohibits installing more WAP measures in a home until 15 years have passed since a retrofit under the program. It also has language that can be read to imply that a WAP agency must investigate the records of *every* other similar federal program to be sure that no other agency has ever weatherized that unit. Thus, for example, a home that has received assistance under the Low-Income Home Energy Assistance Program for a new heater might be deemed ineligible for air sealing or more insulation.

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[4] E4theFuture. "Weatherization Barriers Toolkit." April 2022. *available at* https://e4thefuture.org/wp-content/uploads/2022/04/E4-EFG_Weatherization-Barriers-Toolkit-4-7-2022.pdf.

This bill loosens those restrictions somewhat to allow for better program administration by only limiting homes that another program has "fully weatherized" in the past 15 years could not receive service from WAP.

Water Heaters

H.R. 7962, **"To amend the Energy Policy and Conservation Act to modify the definition of water heater under energy conservation standards and for other purposes"**

Congress created the national appliance standards program in 1975 when it enacted the Energy Policy and Conservation Act (EPCA) and has amended and expanded it on a broad bipartisan basis many times since, most notably in 1987, 1992, 2005, 2007 and 2012. The laws established initial standards for products or, in some cases, directed the Department of Energy (DOE) to develop initial standards by rulemaking. Recognizing both the potential for technological progress and the ongoing need for saving energy, Congress directed DOE to review each product standard periodically to determine if strengthened standards make sense. By law, any increased standard must be both technologically feasible and economically justified. To provide for regulatory certainty, an anti-backsliding clause prohibits DOE from weakening any standard. These national standards also generally preempt state-level appliance efficiency regulation, helping to create the national-scale regulatory environment that manufacturers and sellers prefer.

Appliance and equipment efficiency standards are an essential cornerstone of US energy policy. They establish an efficiency floor for many of the energy- and water-using products purchased by households and businesses. The energy savings from appliance standards translate into pocketbook savings for consumers and businesses, create jobs, make our energy systems more resilient and reliable, foster technological innovation, and reduce emissions that harm public health and the environment.

- The typical household spends about **$500 less per year on utility bills** than if there had never been any standards. That's equal to 16% of an average household's utility bills, savings that are especially important for households with low incomes.[5]
- For businesses, which also buy and use products covered by standards, annual savings total about **$23 billion**.[6]
- All told, standards on the books today will have saved consumers and businesses **$2 trillion by 2030** on utility bills.[7]

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[5] deLaski, A. and J. Mauer. "Energy Saving States of America." ASAP and ACEEE. February 2017. p 1.

[6] Ibid. p. 6.

[7] US DOE. "Saving Energy and Money with Appliance and Equipment Standards in the United States" Fact Sheet. January 2017.

- Research shows that standards **boosted the number of domestic jobs by about 300,000** in 2016.[8]
- Saving energy with improved efficiency standards helps make our **energy systems more resilient, reliable and affordable**.
- US carbon dioxide emissions will be cut by a **cumulative 7.9 billion metric tons by 2030** because of already existing energy-saving standards.[9]

HR 7962 updates and clarifies the law with respect to water heaters, one of the largest energy uses in our homes and in businesses. We strongly support HR 7962. We deeply appreciate Representative Dingell's leadership on this bill and the bi-partisan group of co-sponsors – Ms. Blunt Rochester, Ms. Moore of Wisconsin, Mr. Cooper, Mr. Rose, Mr. Tonko, Mr. Welch, Mr. Walberg, Ms. Escobar, Mr. Mullin, Mr. Kind, and Mrs. Harshbarger – who have worked to advance it.

We are pleased to have been able to work with manufacturers and their trade association, the Air-conditioner, Heating and Refrigeration Institute (AHRI), and in consultation with representatives of the utility industry, states and the solar energy industry to develop consensus recommendations that provided a foundation for this bill.

HR 7962 contains critical updates that are needed to modernize the law's treatment of water heaters for the energy policy challenges of the 21st century. The bill, which replaces a prior version that failed to advance in the previous Congress, contains a carefully negotiated package of complementary changes that enable broad support. It makes two important sets of updates to the law. First, it updates and clarifies the consumer and commercial water heater definitions. Second, it provides for authority to address water heater demand response capabilities.

Water heater definitions

The bill's updated definitions clarify the line between commercial and consumer water heaters. Because commercial and consumer products have different uses, the standards and underlying test procedures for each are different. The modified definitions will ensure that products manufactured and sold for consumer use meet the consumer water heater standard and those manufactured and sold for commercial use meet the commercial water heater standard.

When Congress enacted the original water heater standards in 1987, it provided a simple statutory definition for consumer water heaters based on maximum energy input (rate of energy use), an approach based on an assumption that products that use more energy are more likely to be used in

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[8] Stickles, B., J. Mauer, J. Barrett, A. deLaski. *Jobs Created by Appliance Standards.* ACEEE and ASAP. July 2018. Available at https://appliance-standards.org/sites/default/files/Jobs_Report.pdf.

[9] US DOE. "Saving Energy and Money with Appliance and Equipment Standards in the United States" Fact Sheet. October 2016.

commercial settings. For example, for electric water heaters, the 1987 law drew the line at 12 kilowatts (kW) of input power.

Subsequently, through regulation, DOE specified additional criteria such as maximum temperature set point (i.e., products able to heat water to 180 degrees F were deemed commercial) that manufacturers came to interpret as allowing them to categorize products meeting the statutory definition of a consumer water heater as commercial.

DOE recognized that manufacturers' practice conflicted with law about a decade ago and in 2016 clarified its regulatory definitions and test procedures to ensure fidelity to the statute. As a result, many products which manufacturers had certified to the commercial water heater standard had to meet the more demanding residential water heater standard. In recognition of the potential for misunderstanding and to avoid market disruption, DOE exercised its enforcement discretion to allow time for manufacturers to adjust their product offerings. DOE extended and amended this enforcement discretion policy several times, and in 2019 announced that it would sunset at the end of 2021.

In response to DOE's clarifications, manufacturers sought statutory definitional changes to align more closely with the marketplace. HR 7962 amends the 1987 definition to exempt some water heaters that are intended for commercial usage but that have energy input in the consumer water heater range from the consumer water definition. These products would instead be categorized as commercial water heaters. Because some of these products could be modified for residential application, the bill includes protections to ensure that these exceptions do not become a path for circumventing standards. Most notably, if sales of the exempted water heaters grow at a rate indicative of significant circumvention, the exemptions would expire.

In addition to updating the line between commercial and residential water heaters, the bill provides a new definition for solar-thermal assisted water heaters. This definition provides legal clarity that will assist DOE in determining regulatory treatment for products that primarily heat water using solar-thermal energy, but which also have electric or gas back up.

Demand response

The second major element of HR 7962 authorizes the development of demand response requirements for consumer water heaters. This authority is found in section 1, subsection d.

Severe weather events, such as the heat wave that affected much of the country last week, are driving higher peak electricity demand levels that can threaten grid reliability and increase electricity prices. Over the past several years, extreme heat waves have occurred with increasing frequency and severity.

Additionally, in many parts of the country, emissions-free renewable power is in surplus and available at low cost during certain times (e.g., nighttime wind resources). Grid-flexibility technology that enables storage water heaters to respond to grid conditions and variable electricity prices can help reduce peak demand and consumer costs by heating water when power is cheap, clean and plentiful. The water heater preheats the water at a favorable time, storing energy for later use.

The best way to reduce energy bills and cut power sector emissions remains using less energy to provide the desired service (e.g... keeping food cold; warming or cooling a home, etc.). By saving

energy, a more efficient water heater reduces utility bills and the environmental consequences of energy production. Increasingly, these same benefits – lower bills and reduced environmental harms – can be achieved by adjusting the timing of energy use. Shifting energy consumption to times when clean power is cheap and plentiful can be nearly as valuable as reducing consumption.

Utility demand response programs have generally focused on large commercial and industrial energy users, paying these customers to adjust their consumption to help meet the needs of the power grid cost-effectively. Some programs have provided these benefits to residential consumers by retrofitting water heaters or other products at the time of installation or after installation. However, the cost savings of providing flexible demand have not been widely available to households. Few utilities offer flexible demand rates or incentives for residential customers because few customers have technology to take advantage of those rates. Consumers have little reason to demand products that offer flexible demand capabilities because utilities do not offer time of use rates or incentives. In essence, the market for demand response appliances has been slow to develop because of a classic "chicken and egg problem": one of these two conditions (widespread availability of time-of-use rates or household demand response capabilities) needs to be achieved so, the consumer market for flexible demand products can grow.

Several states including Washington, Oregon, California, and New York have now enacted or authorized manufacturing requirements to ensure that new water heaters are factory-ready to provide grid-flexibility services. Incorporating demand response capabilities into products as part of their original manufacture is far less costly than retrofitting products at the time of or after installation. It can also increase the number of products installed with the capability, which when combined, can provide demand-side resources at scale. A manufacturing requirement potentially can dramatically lower the cost of demand-response-capable water heaters for consumers and create a large scale, at-the-ready demand-side resource for stabilizing the grid and avoiding the need for costly additional grid upgrades that will be passed to consumers.

By authorizing a national approach, HR 7962 would provide a pathway that could improve business certainty for manufacturers and for utilities, facilitate broader access to this technology, and strengthen grid flexibility and reliability. It could ensure a common communications protocol, easing the pathway to large scale demand resources. A national requirement would preempt additional states from setting requirements, helping to promote a consistent national marketplace for water heaters.

The bill directs DOE to consider setting these requirements subject to similar criteria used for establishing traditional energy efficiency standards. Any requirement must be technologically feasible and economically justified, considering impacts on consumers and manufacturers, any impacts on product performance and competition among manufacturers. The bill would require DOE to consider industry consensus standards developed by AHRI as the basis for national demand response requirements. Work on the relevant AHRI standard is now far advanced as AHRI has already put several years of work into developing a consensus approach. In addition, the bill establishes reasonable rules for federal preemption of state requirements that will provide certainty for state and power grid utility planners, utilities companies and manufacturers.

Conclusion

H.R. 7947, the Weatherization Enhancement and Readiness Act, and H.R. 7962, concerning amendments to water heater definitions and grid flexibility requirements, are two important bills for addressing the burdens of high energy bills, protecting health and safety, strengthening the energy system, and reducing climate emissions and other environmental harms. Both bills are urgently needed: we urge the committee to approve them.

Mr. MCNERNEY. Thank you.
The Chair now recognizes Mr. Mulvaney for 5 minutes.

STATEMENT OF DUSTIN MULVANEY

Dr. MULVANEY. Good morning, and thank you for this opportunity to discuss an important topic to our environment and economy. My name is Dustin Mulvaney. I am a professor at San Jose State in the environmental studies department, and a fellow at the Payne Institute for Public Policy at the Colorado School of Mines.

My area of expertise is lifecycle impacts, environmental justice impacts of clean and renewable energy technologies and infrastructures, with a particular emphasis on photovoltaics and lithium ion batteries. I have a Ph.D. in environmental studies, and a master's in environmental policy, and a bachelor's in chemical engineering. I have been an expert witness at the California Public Utilities Commission for over a decade, and I currently serve on the technical committee for ultra low carbon standard for photovoltaics under development with the Green Electronics Council.

We are in the midst of a low-carbon energy transition, one that is outpacing even the expectations of professional analysts. A growth in photovoltaics, wind turbines, lithium ion batteries, electrolyzers for hydrogen, heat pumps, fuel cells are all poised for dramatic growth in the coming decades.

However, many of these same technologies that support rapid decarbonization depend on metals, minerals, and materials that are fraught with supply chain issues, from accusations of forced labor, child labor, geographic concentration, disruptions with logistics, environmental impacts from mining, and feedstock processing, and material bottlenecks. Demand for some of these materials often outstrip supply, and that causes price increases and price volatility for key inputs such as lithium, nickel, cobalt, polysilicon, and many others, making the case that the United States would benefit from growing domestic manufacturing and supply chains and lessen dependance on imports.

There is a tremendous opportunity to grow domestic industries and reshore supply chains. The United States used to be a major producer of polysilicon, a major producer of rare earth elements. However, while it is critical to develop these resources for clean and renewable energy devices and infrastructures through responsible mining, the only way to do that is to—is first by updating our 150-year-old mining law that has allowed a toxic legacy on public lands to continue to this day.

We also need to ensure that we are utilizing waste streams and considering alternative materials. These could be strategic opportunities to mitigate impacts of mining through improved collection and recycling of equipment and devices that contain and could augment supplies of these critical metals, materials, and minerals.

So it is notable to see language in bill H.R. 1599 that emphasizes improving technology that reuses and recycles to recapture the end-of-life waste flows that would otherwise be landfilled or disposed of as hazardous waste. There is much room for improvement in recycling in recovery rates for lithium ion batteries, for example, which are not just for the electric grid and vehicles, but also in, you

know, personal electronics, consumer electronics, cell phones, power tools, and computers.

And there are significant carbon emission savings from recovering materials from some of these used batteries, as well. Yet most of lithium ion batteries go uncollected. In fact, lithium ion batteries that are unsorted is a leading cause of fires at material recovery facilities, often causing local governments millions of dollars in damages.

It is also fundamentally important to emphasize incentives in policy that develop substitutes and alternatives to critical minerals as sustainable ways to secure domestic supplies. This would help mitigate extensive impacts from extractive industries, which can be thinly regulated and environmentally damaging. We are already seeing companies move away from cobalt, nickel, and manganese in the next generation lithium ion batteries, and someday we may see batteries that all together avoid graphite and lithium.

There are a few specific items in H.R. 59

[sic], as written, that raised concerns in my read.

First, section 3 says the Department of Energy will need to increase domestic production, separation, and processing. This is concerning because it suggests DoE would be in charge of mining permitting and oversight, activities which should continue to be in the domains of the Department of the Interior and Environmental Protection Agency. These latter two Federal agencies have the expertise and mandate to minimize impacts to lands, waters, and communities. The DoE, for example, has no expertise with government-to-government tribal consultation processes with indigenous communities, and it is hard to imagine DoE developing the policies and in-house expertise to do this work.

Second, the language of the bill is very vague, with general references to energy and energy systems throughout. The text is not exclusive to critical minerals, and makes no mention of low carbon or decarbonization as a goal that could be applied to development of any mineral resources such as natural gas, petroleum, and coal. Failure to be specific here would be sending mixed messages to the markets, and undermine efforts to grow domestic low-carbon manufacturing and supply chains.

Third, I hope that public policies that encourage domestic industries can avoid undermining tribal consultation, cultural resource review, and bedrock environmental laws that have benefited all Americans simply to expedite mining.

And finally and importantly, it is key to realize that, without ensuring the entire supply chain is domestic, supply chains can still be vulnerable to disruption. Domestic mining that requires overseas smelting or chemical processing before returning to domestic manufacturing is still supply chain vulnerable to disruption.

In summary, we need to be strategic and thoughtful about how to grow domestic industries to build a low-carbon economy. Failure to do so will undermine the benefits an energy transition will bring, and risk leaving vulnerable and historically marginalized communities behind.

Thank you again for the committee, and I look—for hosting this discussion, and I look forward to any questions from the committee.

[The prepared statement of Dr. Mulvaney follows:]

Testimony before the House Committee on Energy & Commerce, Energy Subcommittee

"Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing."
Wednesday, June 22, 2022

Dustin Mulvaney, Professor,
Environmental Studies, San José State University

Good morning and thank you for the opportunity to discuss an important topic to our environment and economy.

My name is Dustin Mulvaney. I am a Professor of Environmental Studies at San José State University, and a Fellow at the Payne Institute for Public Policy at the Colorado School of Mines.

My area of expertise is on the life cycle and environmental justice impacts of clean and renewable energy technologies and infrastructures—with particular emphasis on solar photovoltaics and lithium-ion batteries. I hold a PhD in Environmental Studies, a masters degree in Environmental Policy, and bachelors degree in Chemical Engineering, and have professional experience in chemical manufacturing having once worked for a fortune 500 company in the chemical industry. I have been an expert witness at the California Public Utilities Commission for over a decade. I also currently serve on the technical committee for an ultra-low carbon standard for photovoltaics under development by the Green Electronics Council.

We are in the midst of a low carbon energy transition—one that is outpacing even the expectations of professional analysts. Growth in photovoltaics, wind turbines, lithium ion batteries, electrolyzers for hydrogen, heat pumps, and fuel cells are all poised for dramatic growth in the coming decades.

However, these same technologies that support rapid decarbonization depend on metals, minerals, and materials that are fraught with supply chain issues—from accusations of forced labor and child labor, geographic concentration, disruptions with logistics, environmental impacts from mining and feedstock processing, and material bottlenecks. Demand for some of these materials often outstrips supply leading to price increases and volatility for key inputs such as lithium, nickel, cobalt, polysilicon and many others—making the case that the United States would benefit from growing domestic manufacturing and supply chains, and lessen dependence on imports.

There is tremendous opportunity to grow domestic industries and reshore supply chains. The United States used to be a major processor of polysilicon - the key ingredient in solar panels, the sole provider of rare earth elements - needed for advanced magnets for motors in electric vehicles and wind turbines.

However, while its critical to develop domestic resources for clean and renewable energy devices and infrastructures through responsible mining - the only way to do that is by first updating our 150-year-old mining law that has allowed a toxic legacy on public lands to continue to this day.

We also need to ensure that we are utilizing waste streams and considering alternative materials. These could be strategic opportunities to mitigate the impacts of mining through improved collection and recycling of equipment and devices that contain and could augment supplies of these critical metal, minerals, and materials.

So it is notable to see language in the bill that emphasizes "improving technology that reuses and recycles" to recapture end-of-life waste flows that would otherwise be landfilled or disposed of as hazardous waste. There is much room for improvement in recycling and recovery rates for lithium ion batteries, which is not just for our electric grid and vehicles, but also widespread in consumer electronics, mobile phones, computers, and power tools. For example, there are significant carbon emissions benefits from recovering materials like lithium for example from waste streams as opposed to hardrock mining and brine extraction. Yet, most of lithium ion batteries go uncollected; in fact unsorted lithium ion batteries are a leading cause of fires at material recovery facilities which are up 30% nationwide in recent years, sometimes costing local governments millions of dollars in damages.

It is also fundamentally important to emphasize incentives and policy that "develops substitutes and alternatives to" critical minerals as sustainable ways to secure domestic supplies. This would help mitigate extensive impacts from extractive industries, which can be thinly regulated and environmentally-damaging. We are already seeing companies move away from cobalt, nickel, and manganese in next generation lithium ion batteries; and someday we might see batteries that altogether avoid graphite and lithium.

There are a few specific items in H.R. 1599 as written that raise concern in my read.

First, Section 3 says the Department of Energy (DOE) will need to "increase domestic production, separation, and processing". This is concerning because it suggests DOE would be in charge of mining permitting and oversight, activities which should continue be in the domains of the Department of the Interior and Environmental Protection Agency; these latter two federal agencies have the expertise and mandate to minimize impacts to lands, waters, and communities. The DOE for example has no experience with government-to-government Tribal consultation processes with Indigenous communities, and its hard to imagine DOE developing the policies and in-house expertise to do this work.

Second, the language of the bill is very vague with very general references to energy and energy systems throughout. The text is not exclusive to "critical minerals" and makes no mention of "low carbon" energy or "decarbonization" as a goal and could be applied to development any mineral resources including natural gas, petroleum, and coal. Failure to be specific here would be sending mixed messages to the market and undermine efforts to grow domestic low carbon manufacturing and supply chains.

Third, I hope that public policies to encourage domestic industries can avoid undermining Tribal consultation, cultural resource review, and bedrock environmental laws that have benefited all Americans, simply to expedite mining permitting. There is much public attention to reviews done under the auspices of the National Environmental Policy Act, particularly around permitting of mining. Lessons from the American Recovery and Reinvestment Act (ARRA) show that permitting can be done on time and without litigation through cooperation between local communities, environmental groups, and federal, state, and local agencies and decision-makers. The average time to complete an Environmental Impact Statement and Record of Decision for utility scale solar projects built with ARRA support, was 18 months and importantly without litigation. Solar projects today get permits even more expeditiously. A recent project I read about in California - covering many square miles of public lands - was permitted in less 9 months. Manufacturing facilities are built with a simple environmental assessment. Increasing domestic supply chains and manufacturing can be done without undermining key laws and regulations that benefit communities and the environment such as the Clean Water Act, Endangered Species Act, and National Historic Preservation Act.

Finally, and importantly, it is key to realize that without ensuring the entire supply chain is domestic, supply chains can still be vulnerable to disruption. Domestic mining that requires overseas smelting or chemical processing before returning to domestic manufacturing is still a supply chain vulnerable to disruption and geopolitical tensions. Increased mining alone will not solve this.

I also want to briefly offer a comment in support of H.R. 8053, which could allow the federal government to make investments in local electricity infrastructures that are key to national defense. As someone familiar with rate cases in California and also Utah, I am sensitive to the cost burdens on ratepayers from expensive infrastructure upgrades. These are high cost-burdens often to rural ratepayers, and aiding these improvements will enhance national security without adding to the rising costs of electricity to ratepayers.

In summary, we need to be strategic and thoughtful about how to grow domestic industries and build a low carbon economy. Failure to do so will undermine the benefits that the energy transition will bring and risk leaving vulnerable and historically marginalized communities behind.

Thank you again to this committee for hosting this discussion and I look forward to any questions from the committee.

Mr. MCNERNEY. Thank you.

Mr. Greene, you are now recognized for 5 minutes for your opening statement.

STATEMENT OF JOSHUA C. GREENE

Mr. GREENE. Thank you, Mr. Chairman. Chairman McNerney and Ranking Member Upton, members of the subcommittee, my name is Josh Greene. I serve as corporate vice president of government and industry affairs of A.O. Smith Corporation. And I would like to thank you for the opportunity to testify today on behalf of the water heating industry, as well as our umbrella organization, the Air Conditioning Heating Refrigeration Institute.

By way of very brief background, A.O. Smith is one of the world's largest manufacturers of residential and commercial water heaters, boilers, and pool heaters, and a leading global manufacturer of water treatment and filtration products. We are publicly traded on the New York Stock Exchange, and a member of the S&P 500. And we are globally headquartered in Milwaukee, Wisconsin since 1874. We employ approximately 14,000 people around the world at 36 facilities, and do business in over 60 countries.

Now, as it relates to H.R. 7962, as the committee knows, this is bipartisan legislation that will provide important updates and clarifications to the definitions of water heating products under the Energy Policy and Conservation Act, or EPCA, and the legislation also responds to technology evolutions in the water heating industry, and—which will also provide business certainty for manufacturers, their consumers, and customers. And this is obviously important to us, as an industry that—and our customers that use our equipment on a daily basis.

As the committee knows, Congress established the first national standards for commercial water heaters as part of the Energy Policy Act of 1992. And those statutory definitions are now 30 years old. And though DoE—the Department of Energy, excuse me—periodically updates the regulatory definitions, either by direction from Congress or relying on its delegated authority, subject to notice and comment.

Unfortunately, sometimes the regulatory process has its limits. Without periodic updates to the statute to ensure EPCA remains up to date with technology, there is a necessary component to updating the statute. And one of the criteria as it relates to the statute is the binary criteria that is currently in law that distinguishes residential and commercial water heating equipment. And those are really just based on the sole energy input of the water heating equipment, notwithstanding that there are various characteristics that distinguish residential and commercial water heating equipment, such as amperage and voltage, and the end use applications, the outlet water temperature, amongst other things. And we highlighted that in our written testimony.

One of the things that DoE did in 2016, in response to some other issues, is amend—or really, slightly altered their regulatory definitions of water heating equipment, and specifically commercial water heating equipment. And what ended up happening is that manufacturers were then faced with a decision to transition commercial water heating equipment that heretofore, for decades be-

fore, had been treated as commercial and having to meet commercial standards, to potentially dramatically shift them to meet residential standards. And that would have otherwise created a vacuum in the marketplace, and for some manufacturers to stop producing certain commercial water heaters all together. And these are products that commercial customers had been relying on for decades.

Thus, manufacturers had to transition very quickly, and that caused some uncertainty in the marketplace. And what ended up happening from there in 2017 is that the Department of Energy, along with manufacturers, came together and decided that the best course forward would be to amend the statutes so we don't have the ebb and flow and kind of the regulatory uncertainty relating to these issues.

So that put us in a tight position. But over the last several years we have been working in earnest with a broad set of stakeholders, including with counsel from the Department. And H.R. 7962 is the end result of those efforts.

Now, my written testimony addresses some of the more specific updates afforded in the bill, and I am happy to answer questions on those. But the core components of that legislation are important, and it is really to clarify this definitional line between residential and commercial water heating equipment, taking into consideration the key characteristics the commercial water heating equipment has that is more than just the sole energy input.

The other issue in 7962 includes one refinement that was not addressed in previous iterations of the bill, but one in which manufacturers support, and that is language—excuse me—that would otherwise authorize the Department to issue a final rule by December 31st, 2024 that will require certain residential electric storage water heaters to have the capability to participate in utility demand response programs, but only if that requirement is technologically feasible and economically justified.

This provision represents an opportunity to establish a national standard for a narrow product class of innovative water heating technology that heretofore is subject to—and increasingly by—state-by-State regulation. And that, unfortunately, presents some compliance obligations and a quagmire for manufacturers. And having a national standard and the benefits of the preemption that is embedded in EPCA as a threshold matter is better for manufacturers, not only for business certainty, but it allows us to have one standard, as opposed to multiple standards moving forward.

So I will close with the following. Technology and innovation in our industry have outpaced statutory definitions for the most part, and these definitions are no longer up to date when it applies to commercial water heating equipment. And more broadly, H.R. 7962 offers a bipartisan and broad stakeholder solution to update the EPCA.

Once again, on behalf of A.O. Smith and the water heating industry, I appreciate the opportunity to testify on this important bipartisan bill, and I appreciate Congresswoman Dingell and Mr. Walberg for their leadership in this regard. Thank you.

[The prepared statement of Mr. Greene follows:]

Testimony of Joshua C. Greene
Vice President for Government and Industry Affairs, A. O. Smith Corporation
Energy and Commerce Committee, Subcommittee on Energy
Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing
Wednesday, June 22, 2022

Good morning, Chairman Rush, Ranking Member Upton, and members of the Subcommittee. My name is Josh Greene, and I serve as Corporate Vice President for Government and Industry Affairs for the A. O. Smith Corporation, and through that capacity, I am also representing the water heating manufacturing community under the umbrella of its main trade association, the Air-Conditioning, Heating and Refrigeration Institute (AHRI), of which A. O. Smith Corporation is a member. I'd like to thank you for the opportunity to testify today.

By way of brief background, A. O. Smith is one of the world's largest manufacturers of residential and commercial water heaters, boilers, and pool heaters, as well as a leading global manufacturer of water treatment and air filtration products. Publicly traded on the New York Stock Exchange and a member of the S&P 500, we have been globally headquartered in Milwaukee, Wisconsin since 1874, and currently employ 14,000 employees around the world at thirty-six facilities and do business in over 60 countries. At A. O. Smith our Guiding Principles and Values, handed down by the Smith family over five generations, are the North Star by which we conduct our business affairs and hold ourselves and our vendors to those high standards. One of those values is being a good corporate citizen, which includes being a resource to policy makers and regulators regarding our products and industry.

AHRI has 320 member companies that manufacture quality, safe, efficient, and innovative residential, commercial, and industrial air conditioning, space heating, water heating, and commercial refrigeration equipment and components for sale in North America and in export markets around the world. It is an internationally recognized advocate for the heating, ventilation, air conditioning, and refrigeration (HVACR) industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR industry is approximately $256 billion. In the United States alone, AHRI's members, along with distributors, contractors, and technicians, employ more than 1.3 million people.

My remarks specifically address H.R. 7962, bipartisan legislation that provides important updates and clarifications to the definitions of water heating products in the Energy Policy Conservation Act (or EPCA). The legislation, which I will address shortly, responds to technology evolutions in the water heating industry, and will provide business certainty for manufacturers, their customers, as well as consumers, and stakeholders across the ecosystem that use our industry's equipment on a daily basis.

To further ground the Subcommittee to the importance of H.R. 7962, the water heating manufacturing industry employs thousands of people across the United States that produce, on average, approximately 8 million units of water heating equipment annually. Hence, it is of paramount importance to manufacturers to have products available to meet their customers'

needs, while at the same time ensuring that those products are being regulated based on their intended application and thus meet the appropriate energy efficiency standards.

To that end, let me provide the Subcommittee with important background regarding the specific needs that H.R. 7962 addresses, and why the legislation enjoys broad stakeholder support.

As the Subcommittee knows, EPCA authorizes the Department of Energy (DOE) to regulate the energy efficiency of certain consumer (aka residential) and commercial and industrial equipment. This authority extends to residential and commercial water heaters, which include a wide range of equipment that heats potable water for purposes other than space heating. Businesses with commercial water heating applications range from office buildings, hotels, schools, car washes, spas and salons, highway rest stops, and light commercial facilities. Congress established the first national standards for commercial water heaters as part of the Energy Policy Act of 1992.

The statutory definitions under EPCA for water heating products remained largely the same from that point forward, though the DOE updated its regulatory definitions periodically either by direction from Congress or by relying on its delegated authority. This structure generally provides regulatory and market certainty for the benefit of consumers, manufacturers and other stakeholders.

This regulatory framework remained in place until October 2016, when the DOE revised its criteria used to distinguish commercial from residential water heaters in a final rule meant to address consensus changes to the test procedures used for commercial water heating equipment. This change resulted in reversion to the original statutory definitions that are decades old and well known by manufacturers. The change repealed the DOE's previous criteria that if a water heater, regardless of its energy input, is designed to deliver hot water above 180 degrees Fahrenheit (180°F), that product could be certified and regulated as a commercial product and thus meet the applicable commercial energy efficiency standard. As a result of DOE's action, commercial water heating equipment certifications became singularly dependent on EPCA's binary commercial definitions, which are based solely on rated energy inputs greater than 12 kW for electric, 75,000 BTU/h for gas-fired storage, 105,000 BTU/h for oil-fired storage, and 200,000 BTU/h for gas-instantaneous (or tankless) and circulating water heaters.

We realize this sounds like an arcane regulatory decision. However, the impact of reverting solely to statutory definitions that are 30 years old was significant and led to dramatic implications for our industry and consumers, as reliance on the outdated EPCA definitions to distinguish residential and commercial water heaters continues to create disruptions and inject regulatory uncertainty throughout our industry. Water heater manufacturers were then faced with the decision to either transition commercial water heaters to residential standards or leave the market and stop producing certain commercial waters that customers relied on for decades. As a result, the availability of certain commercial water heaters decreased, customers had to potentially purchase products that did not meet their needs, planned capital investments with job expansion across the industry stalled, and manufacturers were left scrambling; attempting to figure out what to do with potentially stranded or underutilized assets in costly plant equipment.

In 2017, however, the DOE, in recognition of the market turmoil that its decision caused, issued a non-enforcement policy that afforded the industry a brief reprieve from having to convert, recertify, or take certain commercial water heaters off the market. The non-enforcement policy was welcomed by the industry. However, it was a discretionary action that could be rescinded at any time, and unfortunately the DOE allowed the policy to expire at the end of last year. Hence, with direction from the DOE that true business certainty would only come if EPCA was amended to reflect the current marketplace of commercial water heating equipment, our industry, along with a broad set of stakeholders, endeavored to come to a consensus on legislation that would update EPCA, and finally provide manufacturers business certainty they were seeking, while also promoting energy-efficiency.

H.R. 7962 addresses these issues by updating EPCA's definition framework for water heating equipment, while at the same time providing the DOE authority to address a nascent, but rapidly evolving marketplace of grid-interactive water heating equipment. These updates reflect important technology needs for manufacturers and consumers. In relevant part, the legislation:

- Amends EPCA to clarify the definitions of residential and commercial water heaters, thereby modernizing EPCA to address innovative product development throughout the water heater industry.

- Clarifies that gas instantaneous and circulating water heaters are to be regulated as commercial products if they have an input rating of 4,000 BTU/h per gallon of stored water and provide outlet water above 180°F.

- And, importantly, establishes criteria for a subset of electric storage water heaters that are used in commercial buildings that have energy inputs that fall below EPCA's current 12 kW energy input line.

These statutory improvements are not new to this Committee. Core components of the bill were first introduced in H.R. 8267, bipartisan legislation introduced on September 16, 2020 to address the concerns enumerated above, and ultimately passed in the House as a part of H.R. 4447.

H.R. 7962 does, however, include one refinement not addressed in previous versions. The bill authorizes the Department to issue a final rule by December 31, 2024 requiring certain residential electric storage water heaters to have the capability to participate in utility demand response programs, but only if the Secretary finds the requirement is technologically feasible and economically justified.

This provision represents an opportunity to establish a national standard for a narrow product class of innovative water heating technology that is, unfortunately, becoming the subject of state-by-state regulation, and a growing compliance quagmire for manufacturers.

Simply told, technology and innovation in our industry have outpaced statutory definitions for our products. These definitions are no longer up to date when applied to the commercial water industry, or more broadly. H.R. 7962 offers a bipartisan and broad stakeholder solution to update EPCA and bring much needed business certainty for manufacturers and their customers.

Once again, on behalf of A. O. Smith, AHRI, and the water heating industry, I appreciate the opportunity to testify in support of this important, bipartisan legislation. I especially would like to thank Representatives Dingell and Walberg for the leadership in introducing the bill, as well as their Committee colleagues Messers Tonko, Welch, Mullin, and Mrs. Blunt Rochester for their support, and I look forward to addressing your questions.

Mr. MCNERNEY. Thank you.

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

STATEMENT OF LUCIAN PUGLIARESI

Mr. PUGLIARESI. Chairman Pallone, Chairman McNerney, Ranking Member Upton, Ranking Member Rodgers, members of the subcommittee, I want to thank you for the opportunity to testify on this proposed legislative—these proposed legislative initiatives.

We are now in the midst of an energy crisis that may last for years to come. A mix of forces have led to this crisis, including accelerated demand as the world economies rebound from the pandemic lockdowns, sustained under-investment in fossil fuels, and a fundamental misunderstanding of the impact of government policies on energy markets. Clearly, Ukraine war has exacerbated this crisis, but these disruptions to our energy systems were well underway before the war began.

If I could have the first slide, please.

[Slide]

Mr. PUGLIARESI. Thank you. As you can see here, rising prices are especially harmful to low-income households: 40 percent of these households are seeing very rapid increases between 2021 and—2020 and 2021; 2022 is a nightmare.

Next slide, please.

[Slide]

Mr. PUGLIARESI. Look, we have put an enormous amount of effort at EPRINC in understanding the scale challenges of moving to net zero. But this graphic shows you that, in the absence of large supplies of natural gas, we would only have enough fertilizer to feed about three billion of the planet's eight billion people. Large supplies of low-cost natural gas are critical to food security.

I would like to also point out that four pillars of modern civilization—cement, plastics, ammonia, and steel—have no cost-effective substitute.

Next slide.

[Slide]

Mr. PUGLIARESI. You can see here the rising fertilizer prices are also spiking food costs, and they are also increasing—you know, the increase in natural gas with ammonia prices and corn. So we have a kind of perfect storm of rising prices from higher fossil fuel prices.

Next slide.

[Slide]

Mr. PUGLIARESI. OK. We need a massive amount of critical minerals in order to engage in a rapid transition to the fuels and energy sources of the future. As noted in my written testimony, most of these minerals and materials for the energy system have been sourced outside of the OECD. In this regard, H.R. 1599 appropriately recognizes that the energy transition offers the potential to somewhat insulate us from volatility and supply chain disruptions associated with oil and gas production. But it will introduce a new set of supply risks.

It is appropriate that these critical minerals and materials be fully incorporated into the Department of Energy's ongoing respon-

sibilities to bolster supply—you know, to bolster U.S. energy security.

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[Slide]

Mr. PUGLIARESI. Yes. Any of us who thought that, by moving to the these fuels of the future, these energy sources of the future, that we would eliminate risk for volatility can just look at what is happening now.

In fact, we issued a chart of the week today that looked at nearly a doubling in the cost of the Tesla battery. And you can see that price indices for key electric vehicle battery metals have been just skyrocketing in cost. It is not going to relieve our problems with the volatility and supply risks.

Next slide.

[Slide]

Mr. PUGLIARESI. One way to get down gasoline prices is to build out the infrastructure and the capacity of the North American oil and gas production platform.

As you can see here, between 2010 and 2020, the United States—the United States alone—provided over 80 percent of world incremental demand for petroleum. And it was in that period that we had extremely low gasoline prices. The North American Petroleum Platform is an instrument—sort of, if you like, a strategic asset for the United States. It is essentially the arsenal of energy security.

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[Slide]

Mr. PUGLIARESI. The U.S. is also a major supplier of natural gas, not just to our industry, but to the world market. Right now—if you see the sort of negative sign, there is actually a plus for exports. We are exporting ten billion cubic feet a day. This is roughly equivalent to 40 percent of European requirements for their import needs for natural gas.

And I will find—one last slide, next slide.

[Slide]

Mr. PUGLIARESI. I know that we are looking for ways to reduce gasoline prices, and probably you are tired of hearing from us on this. But one way that we could take 30 percent—$0.30 off the price of gasoline, much more than a gasoline tax, would be to make a small adjustment in the renewable fuel standard, to take it down to close to the market-based level, which would be about ten percent. This will take back some of the high compliance costs and other factors in the market that are driving up gasoline prices.

And with that, Mr. Chairman, I conclude my remarks.

[The prepared statement of Mr. Pugliaresi follows:]

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Testimony

Subcommittee on Energy

of the

U.S. House of Representatives Committee on Energy and Commerce

Hearing on legislation to

Strengthen Energy Infrastructure, Efficiency, and Financing

Rayburn House Office Building
John D. Dingell Room (2123)

June 22, 2022
10:30 a.m.

Submitted by:

Lucian Pugliaresi
President, Energy Policy Research Foundation, Inc. (EPRINC)
Washington, D.C.
www.eprinc.org

Chairman Rush, Ranking Member Upton and members of the Subcommittee on Energy, I want to thank you for the opportunity to testify on the proposed legislative initiatives to *"Strengthen Energy Infrastructure, Efficiency, and Financing."* This is a timely hearing as we are now facing an unprecedented crisis across our entire energy complex which requires immediate attention.

I am President of the Energy Policy Research Foundation, Inc. (EPRINC), a non-profit public policy research organization. EPRINC was founded in 1944 and studies energy economics and policy issues with special emphasis on oil, natural gas, and petroleum product markets. I have worked on a broad range of energy security issues for my entire career, both in and out of government, beginning with the 1973-74 Arab oil embargo. For the last two years, EPRINC has undertaken a systematic assessment of the technical risks and cost challenges of the energy transition with special attention to implications for our energy security.

Summary

We are in the middle of an energy crisis that may last for years to come. A mix of forces have led to the current crisis among of which the more important are rapidly rising energy demand as the world economies rebound from the pandemic lockdowns, sustained under-investment in fossil fuels from climate concerns, and a fundamental misunderstanding of the impact of government policies on energy markets. Clearly, the Ukraine war has exacerbated the crisis, but these disruptions to our energy systems were well underway before the war began.

High energy prices are especially harmful to low-income communities (Figures 1 & 2). The energy crisis is also feeding inflation, contributing to rising worldwide food shortages (Figure 3 & 4) and constraining economic growth worldwide. Of special concern are both private sector initiatives and government policies that have deterred if not prohibited new investment in domestic oil and gas infrastructure and production. This approach has been viewed by some as an appropriate strategy to accelerate the energy transition. However, it has now become apparent that we cannot properly address the current crisis without significant new supplies of fossil fuels, especially oil and natural gas, and new infrastructure.

Many proponents of proceeding with a rapid energy transition have argued that by accelerating production of electric vehicles, accompanied by a rapid buildout of wind and solar

resources, we can free ourselves from price volatility and the supply chain disruptions now prevalent in world oil and natural gas markets. This strategy, however, at least in the near-term, has proven to be unrealistic. Any of these envisioned transitions will require mining, processing and procuring of large volumes of critical minerals and materials that may present new environmental and energy security liabilities. In this regard, H.R. 1599 (*"Securing America's Critical Minerals Supply Act")* recognizes that while the energy transition offers the potential to insulate the U.S. from price volatility and supply chain disruptions associated with oil and gas production, it may instead introduce a new set of supply and cost risks. The proposed legislation appropriately requires that these critical minerals and materials be fully incorporated into U.S. Department of Energy's ongoing responsibilities to evaluate supply risks and address energy security requirements.

As shown in Figure 5, the U.S. will require what can only be described as a massive increase in critical minerals and materials to meet the requirements of the energy transition. Note that as shown in Figure 6, the primary sources of these minerals and materials are outside the OECD; and as shown in Figure 7, there is no guarantee that reliance on such minerals will insulate the U.S. from price volatility.

The energy transition is going to take time, likely many decades, and may, in the end, prove more elusive than current expectations. More importantly, policy measures to accelerate the transition must not undermine the ability of energy markets to supply consumers with reliable and reasonably priced energy, even in times of supply disruptions.

I ask the Subcommittee to consider the following as they proceed to address the current energy crisis and develop legislative initiatives to support the energy transition.

Strengthen the North American oil and gas production platform

We have under-estimated the cost and the timeline for the energy transition. In doing so, we have underinvested in traditional forms of energy and undermined the capacity of energy markets to increase supply and reduce prices. Telling oil and gas producers to increase production at the same time the government has promoted policies to end investment in fossil energy infrastructure is nonsensical and has accelerated the energy crisis. Instead, we should view the North American oil and gas production platform as an essential strategic asset for the United States and an arsenal of energy security for ourselves and our allies. Note that in a recent

visit to Japan, President Biden refused to join Prime Minister Kishida in a joint statement emphasizing the importance of investment in U.S. oil and gas resources.[1] This sends the wrong message to our allies and adversaries.

Protecting and expanding the North American oil and gas production platform will require sound policies that send positive signals to investor communities and the marketplace. The Congress should undertake legislation to support more rapid approval of critical infrastructure, including new natural gas pipelines with sufficient capacity and flexibility to address pipeline and facility outages. We will require continued upgrades and renewal of our pipeline network to move crude oil and petroleum products throughout North America. Cancellation of the Keystone Pipeline from Canada, ongoing political and regulatory attacks on the operation of Line 5 in Michigan, and the halt in leasing of oil and gas resources on public lands are sending the wrong signal to petroleum markets and will inevitably further raise prices to consumers.

The U.S. and the rest of the world will continue to need oil and gas throughout the transition. Any policy decision based on the simple premise that the U.S. can transition simply by cutting production of legacy fuels will backfire horribly and erode public support for the energy transition.

Recent speculation that some members of Congress and the Biden Administration are considering reinstituting a ban on U.S. crude oil exports is especially worrisome as it would likely raise gasoline prices and further disrupt supply chains. It is important to recognize that the U.S. is a large continental land mass. Minimizing transportation costs for moving crude oil to market is important. Oil prices are set in the world market. This allows a refiner in Hawaii to purchase crude from Indonesia rather than Houston and save on transportation costs. A Gulf coast refiner whose processing technology is tuned to heavy crude might find it cheaper to use Mexican or Canadian oil than the specifications of the crude oil produced in North Dakota. In

[1] President Biden refused to join Prime Minister Kishida in welcoming more investment in U.S. oil and gas even though the Japanese side requested it be made jointly, .."*The two leaders welcomed recent efforts by the international community to secure stable energy and food supplies, which are threatened by the impact of Russia's aggression against Ukraine. Prime Minister Kishida emphasized the significant role U.S. Liquid Natural Gas plays in alleviating global supply constraints and welcomed investment by U.S. industry to increase oil and natural gas production.*" See https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/23/japan-u-s-joint-leaders-statement-strengthening-the-free-and-open-international-order/

short, crude oil and petroleum product exports allow the entire North American production platform to minimize transportation and processing costs.

Open access to markets and crude and product transportation efficiencies permit U.S. refineries to operate at high levels of capacity utilization and provides opportunities for upstream producers to maximize crude oil output. The free movement of capital, crude oil and petroleum products remain critical to sustaining the productive capacity of the U.S. petroleum industry and the entire North American oil and natural gas production platform. These efficiencies have led to rapid expansion of U.S. oil production and remain one of the central reasons that large volumes of U.S. crude imports also result in large volumes of higher value-added exports of petroleum products. One of the reasons the U.S. has achieved energy independence is that the production platform is efficient. Reinstituting the export ban would result in further reductions in U.S. production, higher stress on supply chains, and rising price risk to gasoline supplies.

We only need to look at recent history to see the benefits on a robust domestic oil and gas sector. As shown in Figure 8, between 2010 and 2020 the U.S. supplied over 80% of incremental world demand. It was these U.S. production increases that played the central role in moderating gasoline prices.

What can we do now?

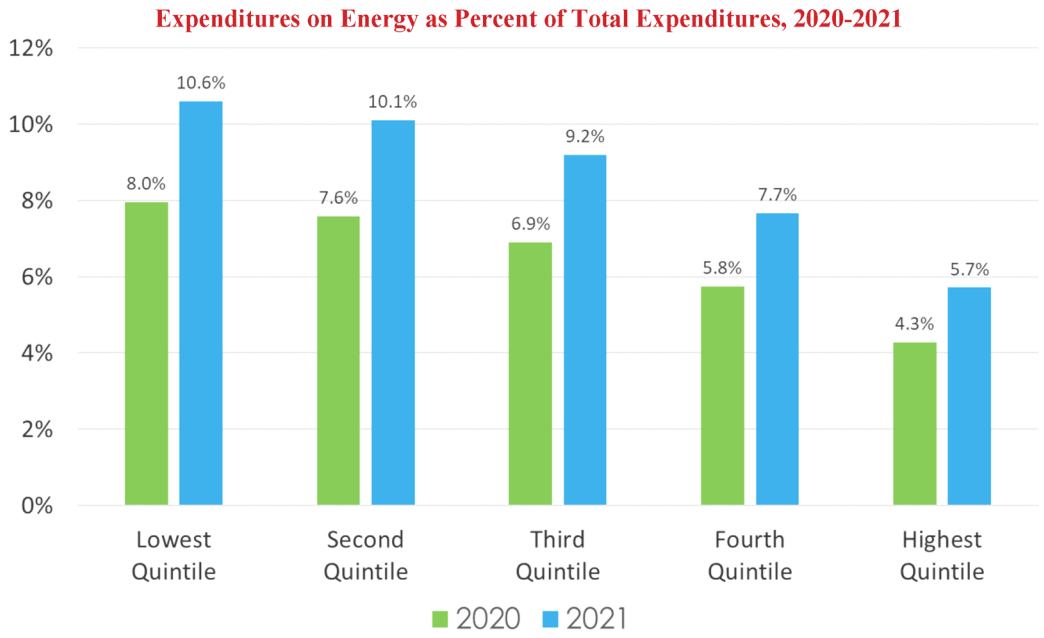
Although most policy and legislative measures aimed at reducing gasoline prices will take time, there are some measures we can undertake now. Regulatory programs managing the production and consumption of transportation fuels are adding to the cost of gasoline. Right now, approximately 30 cents per gallon in the price of gasoline is from compliance costs in meeting biofuel blending requirements under the Renewable Fuel Standard (Figures 9 and 10).[2] The problem is not the use of biofuels (in this case, ethanol), it is a government mandate that now requires blending biofuels above 10% by volume. The volumetric mandate above 10% leads to escalating compliance costs. An additional consequence of this program is that some refineries

[2] For a full discussion of fuel specifications, cost considerations, and regulatory requirements for manufacturing gasoline, see Pugliaresi, L., & Pyziur, M. (June 2015), ***Gasoline Blending: An EPRINC Primer***; http://eprinc.org/wp-content/uploads/2015/06/Updated-Gasoline-Primer-2015.pdf. Also, see Pugliaresi, L., & Pyziur, M. (November 2016), **The Biofuel Mandate: Technical Constraints and Cost Risks;** https://www.dropbox.com/s/6zldnd64svpl44h/Biofuel%20Mandate%20Nov%202015.pdf?dl=0**,** and Pugliaresi, L., & Pyziur, M. (February 2019), **OCTANE: Pathway to a Compromise**; https://eprinc.org/wp-content/uploads/2019/02/Octane-Pathway-to-a-Compromise-Feb-2019-FINAL.pdf.

have been repurposed to produce biodiesel as a direct result of the RFS mandate and this has reduced U.S. refinery capacity to produce transportation fuels. Holding the RFS mandate at 10% would reduce the volumetric mandate modestly, increase refinery capacity and reduce gasoline prices, and likely have little effect on corn and soybean prices which have risen substantially as food supplies have been curtailed from the war in Ukraine.

There are other measures worth considering that offer potential to bring efficiencies in the production and distribution of transportation fuels. The Administration should consider an emergency measure and the Congress should consider a legislative initiative to move towards national standards for fuel specifications, especially Reid Vapor Pressure (RVP) standards. Providing more ocean transportation resources to move Gulf Coast oil production and petroleum products to U.S. East Coast destinations would also take pressure off of gasoline prices. Under the Jones Act, only U.S. registered, and crewed tankers can move products from one U.S. port to another U.S. port, but these transportation options are limited and expensive. I am well aware these measures face enormous political headwinds, but addressing rising gasoline prices remains an urgent issue for most Americans.

Figure 1



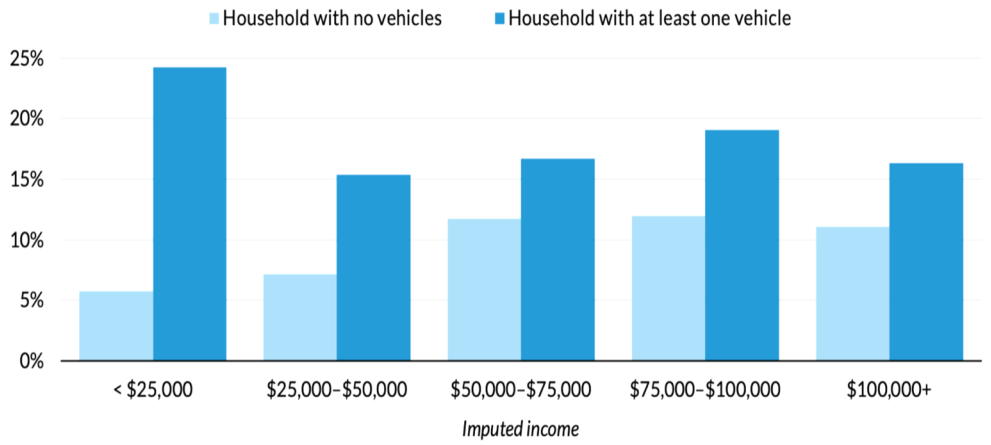
Source: Joint Economic Committee, U.S. Congress

Expenditures on Energy as Percent of Total Expenditures, 2020-2021

Figure 2

Rising Cost of Transportation Fuels Harm Low-Income Households

(Share of Household Income Spent on Transportation)

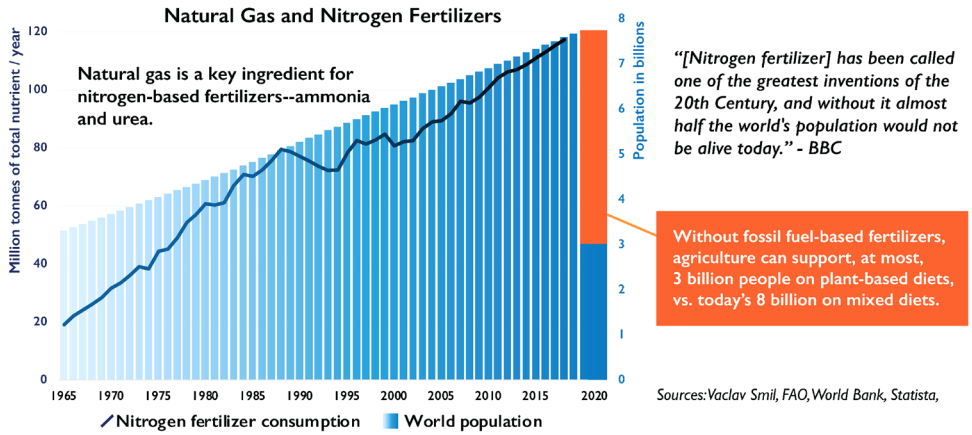


Source: Urban Institute, Data from Second Quarter 2020 from BLS data sets. See https://www.urban.org/urban-wire/what-rising-gas-and-rent-prices-mean-families-low-incomes

Source: Urban Institute

Figure 3

World Food Production Depends on Fossil-based Fertilizers



"[Nitrogen fertilizer] has been called one of the greatest inventions of the 20th Century, and without it almost half the world's population would not be alive today." - BBC

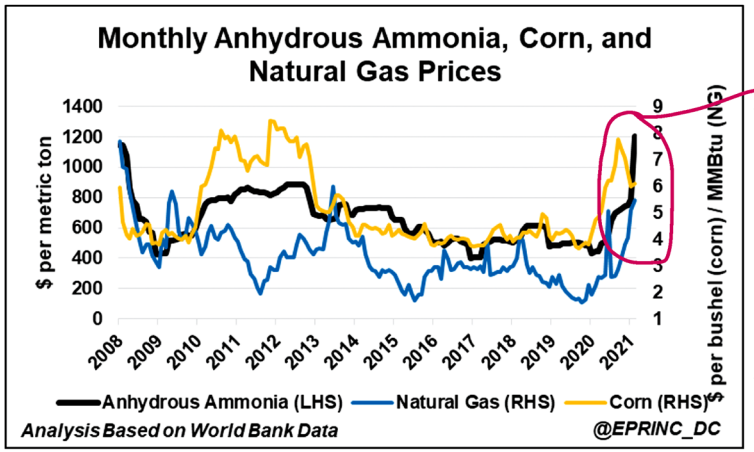
Without fossil fuel-based fertilizers, agriculture can support, at most, 3 billion people on plant-based diets, vs. today's 8 billion on mixed diets.

Sources: Vaclav Smil, FAO, World Bank, Statista,

9

Figure 4

Rising Natural Gas Prices are Leading to Rising Costs for Fertilizer (and Food)

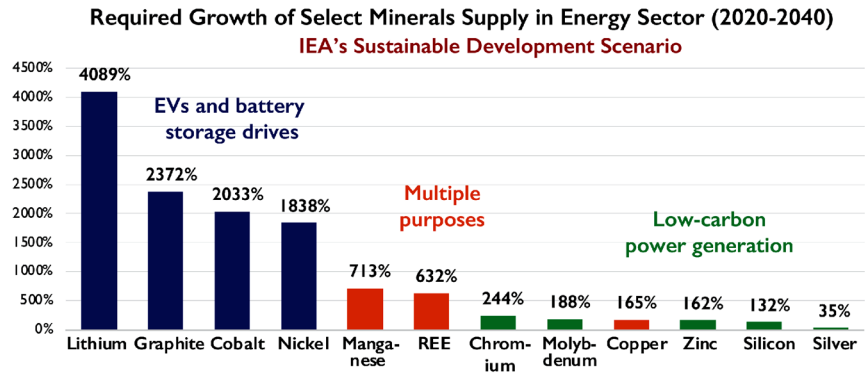


Since 2013, natural gas, anhydrous ammonia, and corn prices have been tightly correlated.

Since the beginning of 2021 and the tightening of natural gas supplies, prices of all three commodities have risen considerably.

Figure 5

A Massive, Unrealistic Increase in Critical Minerals Required

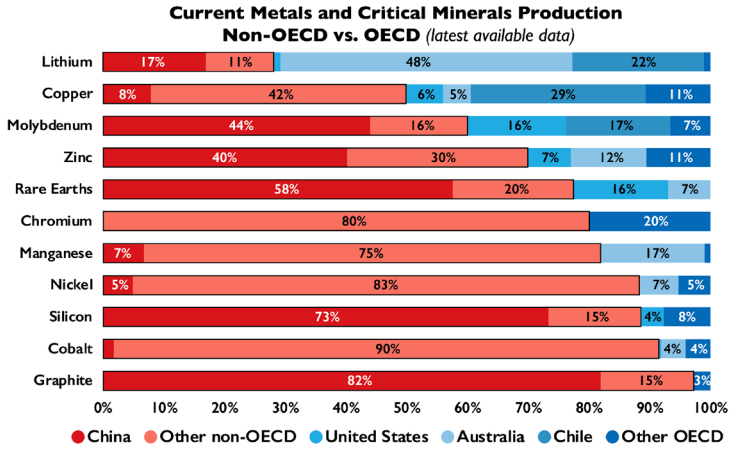


REE=Rare earth elements | Multiple purposes include EVs, battery storage, power gen, hydrogen, electric networks.
Data from IEA's Critical Minerals Report

7

Figure 6

OECD: Dependence on Critical Mineral Supply from Non-OECD

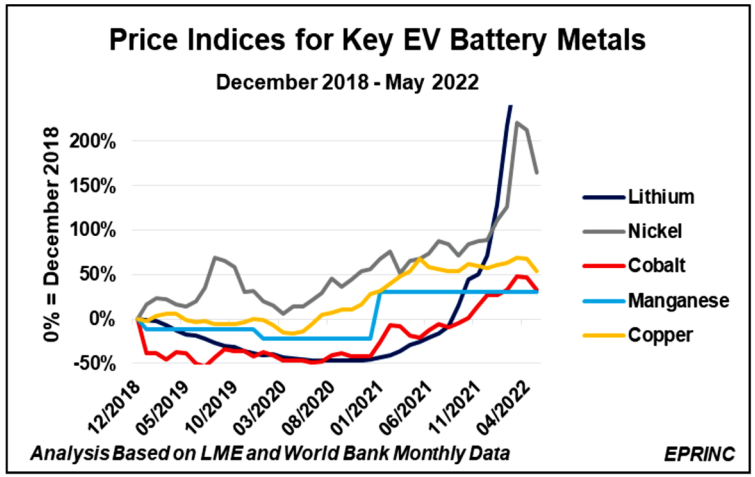


Note: Copper data is from 2018, Cobalt from 2019, Lithium from 2020, all other data from 2021
EPRINC figure based on data from the Global Economy, US Geological Survey, Statistica, and other sources

36

Figure 7

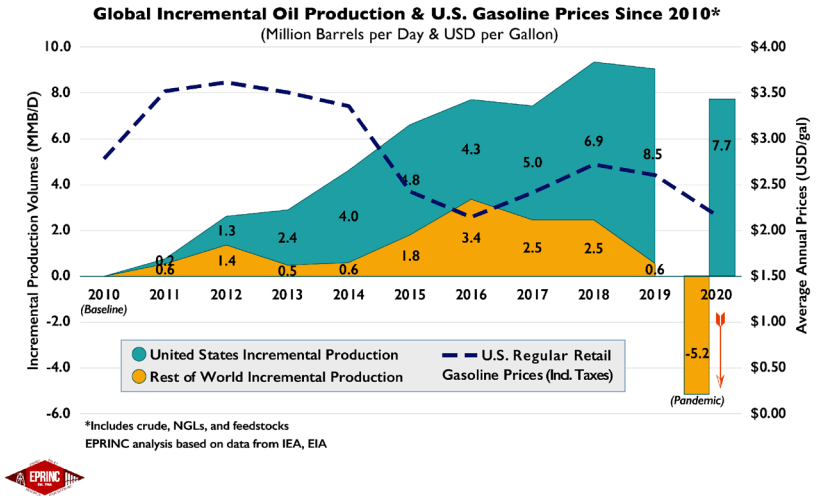
Critical Minerals Essential for the Energy Transition are Not Immune from Price Volatility



	Percentage Change
Lithium	393%
Nickel	165%
Cobalt	33%
Manganese	30%
Copper	54%

Figure 8

Incremental U.S. Oil Production Expansion Helped Moderate Gasoline Prices

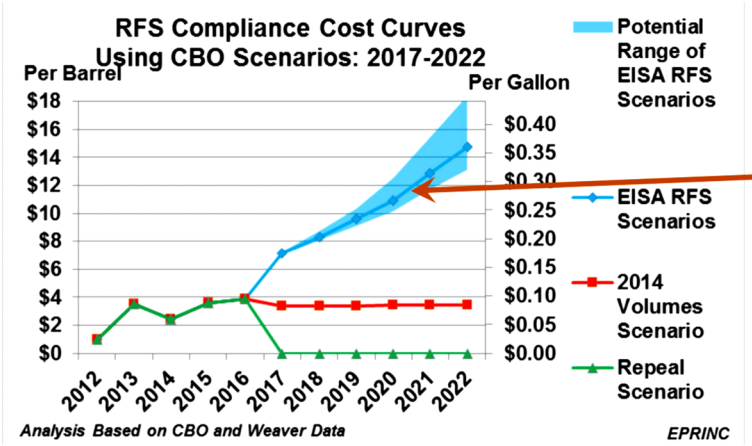


U.S. supplied **84%** of incremental global liquids demand between 2010 and 2020.

Figure 9

The Renewal Fuel Mandates are Still Adding 30 Cents per Gallon to the Costs of Gasoline

EPRINC 2016 ANALYSIS OUTLINED COST RISKS FROM VOLUMETRIC TARGETS ABOVE THE BLEND WALL

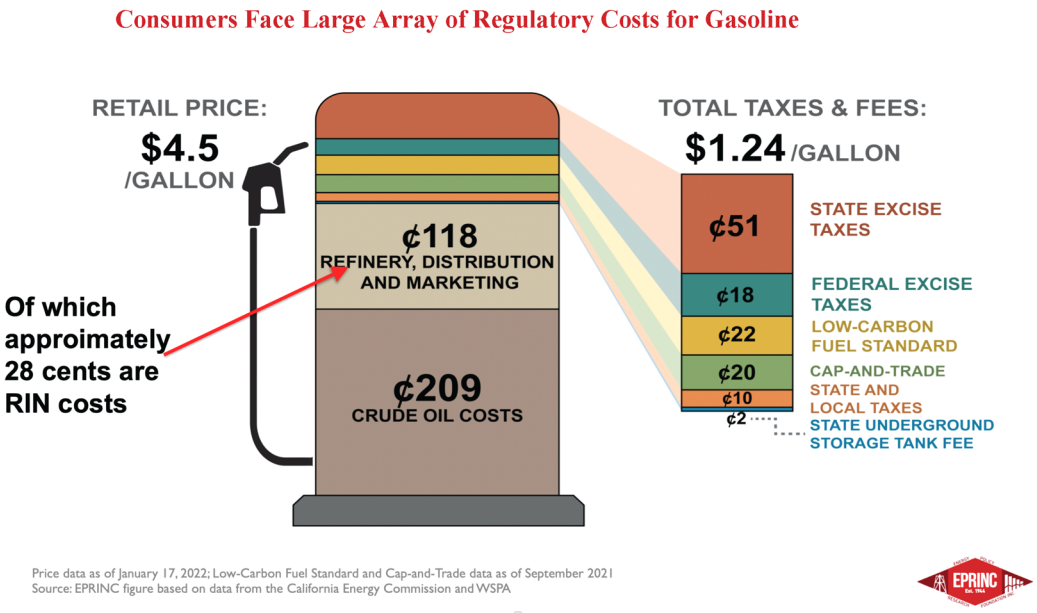


Program costs escalate as mandates drive volumes above the blend wall.

RFS program (*Dec 2021*) adding about 28 cents a gallon to price of gasoline

This tracks current cost increases in production of transportation fuels (as shown in "crack spreads")

Figure 10


Consumers Face Large Array of Regulatory Costs for Gasoline
RETAIL PRICE:
$4.5
/GALLON
¢118
REFINERY, DISTRIBUTION AND MARKETING
¢209
CRUDE OIL COSTS
Of which approimately 28 cents are RIN costs
TOTAL TAXES & FEES:
$1.24 /GALLON
¢51
STATE EXCISE TAXES
¢18
FEDERAL EXCISE TAXES
¢22
LOW-CARBON FUEL STANDARD
¢20
CAP-AND-TRADE
¢10
STATE AND LOCAL TAXES
¢2
STATE UNDERGROUND STORAGE TANK FEE
Price data as of January 17, 2022; Low-Carbon Fuel Standard and Cap-and-Trade data as of September 2021
Source: EPRINC figure based on data from the California Energy Commission and WSPA
EPRINC

Mr. MCNERNEY. I think the witness.
Mr. Lieberman, you are now recognized for 5 minutes.

STATEMENT OF BEN LIEBERMAN

Mr. LIEBERMAN. Chairman Rush, Mr. McNerney, Ranking Member Upton, and members of the subcommittee, thank you for the opportunity to testify today. My name is Ben Lieberman, and I am a senior fellow at the Competitive Enterprise Institute, a non-profit, non-partisan public policy institute committed to advancing the principles of free markets and limited government.

Before that, I had the privilege of serving on this committee from 2011 to 2018, where I worked on several DoE issues under Chairman Upton, and for a shorter time under Chairman Walden. And to all of you who are retiring, best wishes in your well-earned retirements.

I would like to use my time to just three of the DoE programs that are the subject of some of the bills being discussed today: appliance efficiency standards, weatherization assistance, and loans and loan guarantees.

If there is a common theme, it is that these programs were created to address market failures that have proven to be considerably overstated, and thus the benefits from government involvement are minor and not worth the burdens to consumers and taxpayers. I would like to start by making a few general points about DoE's appliance efficiency programs, which have been around since the 1970's.

It is important to recognize that, for virtually every regulated appliance, there already are numerous models on the market that go above and beyond the current Federal standards and there are the Federal Trade Commission energy use labels and the Energy Star program that make it easy for consumers who want ultra-efficient appliances to identify and choose them. But new standards only serve to force that choice on everyone, whether the extra cost makes sense for them or not.

One size does not fit all, and we all know our own individual circumstances and preferences better than any DoE regulator could. Not every homeowner comes out ahead with efficiency standards. We have seen that standards have raised the purchase price of appliances, in some cases more than consumers can expect to earn back in the form of energy and water savings. In addition, some standards have compromised product performance, such as those that led to dishwashers taking multiple hours to finish a load. And at this point, most major home appliances have been subjected to two, three, four, five rounds of successively tighter standards.

So the risk of diminishing marginal returns, even negative margin returns, is greater than ever. I am particularly concerned that these DoE efficiency programs are now being hijacked in pursuit of climate agenda, with potentially adverse consequences for consumers. As we see with the recently proposed residential furnace rule, which might be the subject of a future hearing, social cost of carbon is now being used as a thumb on the scale in favor of new rounds of more stringent standards that threaten higher costs and shift the focus toward environmental goals, rather than what is best for consumers.

Especially troubling—and again, something we see in the proposed furnace rule—is the effort to use these standards to eliminate the option of natural gas appliances, even though they are the best choice for many consumers since natural gas is generally cheaper than electricity.

Simply put, it is not the role of government to dictate choices and tell homeowners what they can and cannot have in their homes.

By the same token, I would oppose provisions in H.R. 7962 mandating demand response capability in water heaters when many homeowners do not want this feature and, in fact, some would strongly object to it. We need to respect consumer choice, and this measure does not.

Demand response is also something that moves us away from the original purpose of the Appliance Standards Program, and is yet another example of mission creep toward climate policy.

With regard to other DoE programs that are the subject of today's legislative hearing, weatherization and loan programs, I just don't believe we are getting very much bang for the buck. In particular, the weatherization program is one in which economists and others have questioned whether the expenditures exceed the benefits. As it turns out, most homeowners, even many low-income ones, take reasonable steps on their own to prevent wasting energy, and thus the marginal benefit of government programs is limited.

In addition, with so much money already being allocated to weatherization programs, I think we are already overspending on weatherization. And therefore, H.R. 7947 is difficult to justify.

I would like to conclude by emphasizing what I think is an obvious point, and that is that the best thing Congress can do right now to save consumers money on their energy bills is not demand response to water heater mandates, or free weather stripping, or more DoE loans, it is to get these damn prices down.

Now, I was working on this committee during a really tremendous transition, where we went from very real concerns about America running out of oil and natural gas to this incredible shale revolution. But now we are seeing that revolution neutralized by Federal policies blocking domestic energy production and infrastructure. It is time to put energy affordability first, and that can be done by once again unleashing American energy.

To the extent that we do want to make changes to DoE programs, the focus should be on reining in the regulatory reach and strengthening the consumer and taxpayer protections in the law. Thank you.

[The prepared statement of Mr. Lieberman follows:]

House Subcommittee on Energy
2123 Rayburn House Office Building
June 22, 2022

Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing

Remarks of Ben Lieberman
Senior Fellow, Center for Energy and Environment
Competitive Enterprise Institute

Chairman Rush, Ranking Member Upton, and members of this Subcommittee, thank you for the opportunity to testify today. My name is Ben Lieberman and I am a Senior Fellow at the Competitive Enterprise Institute, a non-profit, non-partisan, public policy institute committed to advancing the principles of free markets and limited government. Over the years we have participated in numerous rulemakings conducted by the Department of Energy (DOE), mostly regarding energy and water efficiency standards for home appliances, and usually on the side of cautioning against regulatory overreach.[1] Before that I had the privilege of serving on this committee from 2011 to 2018, where I worked on several DOE issues.

I would like to use my time to address three of the DOE programs that are the subject of some of the bills being discussed today – appliance efficiency standards, weatherization assistance, and loans and loan guarantees. If there is a common theme it is that these programs

[1] See, Competitive Enterprise Institute, Comments Regarding the Department of Energy's Fiscal 2004 Priorities for the Appliance Standards Rulemaking Process, August 14, 2003, http://cei.org/sites/default/files/Ben%20Lieberman%20-%20Comments%20Regarding%20DOE%E2%80%99s%20FY%202004%20Priorities%20for%20the%20Appliance%20Standards%20Rulemaking%20Process.pdf; Competitive Enterprise Institute, Petition for Rulemaking on a New Product Class of Fast Dishwashers, March 18, 2018, https://cei.org/sites/default/files/DOE%20Dishwasher%20Petition.pdf; Comments of the Competitive Enterprise Institute to the Department of Energy, Test Procedure for Showerheads, Notice of Proposed Rulemaking, September 20, 2021, https://cei.org/regulatory_comments/comments-to-doe-regarding-water-use-limits-for-showers/.

were created to address market failures that have proven to be considerably overstated, and thus the benefits from government involvement are minor and not worth the burden to consumers and taxpayers.

I would like to start by making a few general points about DOE's appliance efficiency programs, which have been around since the 1970s. First, I believe there is good reason to question the ongoing need for the program, since appliance efficiency improves with or without government intervention. It is important to recognize that for virtually every regulated appliance, there are numerous models on the market that go above and beyond the current federal standards, and there are Federal Trade Commission energy-use labels and the Energy Star program that make it easy for consumers who want ultra-efficient appliances to identify them. But new standards only serve to force that choice on everyone, whether the extra costs make sense for them or not. One size does not fit all, and we all know our own individual circumstances and preferences better than any DOE regulator.

Not every homeowner comes out ahead with efficiency standards. We have seen standards that raised the purchase price of appliances more than many consumers will ever earn back in the form of energy or water savings.[2] In addition, some standards have compromised product performance, such as those that led to dishwashers taking multiple hours to finish a load.

It turns out that homeowners are smarter shoppers than the government gives them credit for and that regulations add very little if anything.[3] And at this point, most major home

[2] See, Department of Energy, Energy Conservation Program for Consumer Products: Central Air Conditioners and Heat Pumps Energy Conservation Standards, 66 FR 7,170 (January 22, 2001), https://www.federalregister.gov/documents/2001/01/22/01-1790/energy-conservation-program-for-consumer-products-central-air-conditioners-and-heat-pumps-energy (Table V.13).
[3] See, Hunt Allcott et al., "Measuring The Welfare Effects Of Residential Energy Efficiency Programs, National Bureau of Economic Research, May 2017, https://www.nber.org/papers/w23386.

appliances have been subjected to three, four, five, or even six rounds of successively tighter standards, and the risk of diminishing or even negative marginal returns is greater than ever.

I am particularly concerned that these DOE efficiency programs are now being hijacked in pursuit of the climate change agenda, with potentially adverse consequences for consumers. As we see with the recently proposed residential furnace rule, social cost of carbon is now being used as a thumb on the scale in favor of new rounds of more stringent standards that threaten higher costs and shift the focus towards environmental goals rather than what is best for consumers.[4] Especially troubling, and again something we see in the proposed furnace rule, is the effort to use these standards to eliminate the option of natural gas appliances, even though they are the best choice for many consumers since natural gas is cheaper than electricity.[5] Simply put, it is not the role of government to dictate choices and tell homeowners what they can and cannot have in their homes. By the same token, I would oppose provisions in HR 7962 mandating demand response capability in residential water heaters, when many homeowners do not want this feature and in fact some would strongly object to it. We need to respect consumer choice, and this measure does not. Now I do support other provisions in the same bill that would expand the range of available water heaters, but demand response, and particularly mandated demand response, is a very problematic new direction for this program with potentially serious consequences. Demand response is also something that moves us away from the original purpose of the appliance standards program and is yet another example of mission creep towards climate policy.

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[4] Department of Energy, Energy Conservation Standards for Residential Furnaces, (June 13, 2022), https://www.energy.gov/sites/default/files/2022-06/res-furnaces-ecs-nopr.pdf.

[5] Department of Energy, Energy Conservation Program for Consumer Products: Representative Average Unit Costs of Energy, 87 FR 12,681 (March 7, 2022), https://www.govinfo.gov/content/pkg/FR-2022-03-07/pdf/2022-04765.pdf.

With regard to two other DOE programs that are the subject today's legislative hearing, weatherization and loan programs, I just don't believe we are getting very much bang for the buck. In particular, the weatherization program is one in which economists and others have questioned whether the expenditures exceed the benefits.[6] As it turns out, most homeowners take reasonable steps on their own to prevent wasting energy, and thus the marginal benefit of government programs is limited. In addition, with so much federal funds already allocated to weatherization programs, starting with the big spending bill during the December 2020 lame duck and expanded further in the infrastructure package, I think we are already overspending on weatherization and therefore HR 7947 is difficult to justify.

Similarly, the DOE loan and loan guarantee programs are based on the premise that there are market failures in the form of promising energy ideas and projects that can't attract private capital and thus need federal help to fill the void, but the track record shows that many of these loan and loan guarantee recipients were projects that never panned out. For example, I was on the committee not too long ago when cellulosic ethanol was the next big thing and the recipient of loan guarantees, but as is too often the case it turned out to be a boondoggle. That is what taxpayers typically get with these DOE loan and loan guarantee programs.

I would like to conclude by emphasizing what I think is an obvious point, and that is that the best thing Congress can do right now to save consumers money on their energy bills is not demand response water heater mandates or free weather stripping or more DOE loans – it is to get these energy prices down. Gasoline has gotten most of the attention, but natural gas and electricity and propane are up as well, and unnecessarily so. I was working for this committee

[6] See, Meredith Fowlie, et al., "Do Energy Efficiency Investments Deliver? Evidence From The Weatherization Assistance Program," National Bureau of Economic Research, July 2015, https://www.nber.org/papers/w21331.

when fears of America running out of oil and natural gas gave way to the incredible shale revolution, but now we are seeing that revolution neutralized by federal policies blocking domestic energy production and infrastructure. It is time to put energy affordability first and that can be done by once again unleashing American energy. To the extent we do want to make changes to DOE programs, the focus should be on reining in the regulatory reach and strengthening the consumer and taxpayer protections in the law. Thank you.

Mr. MCNERNEY. I thank the witness. The Chair—we have concluded our opening statements. We will now move to member questions.

Each member will have 5 minutes to ask questions of our witnesses. I will start by recognizing myself for 5 minutes.

As we move toward achieving a national zero emissions energy system, securing a domestic supply of critical materials needed for solar cells, wind turbines, batteries, and other renewable components will be a significant challenge.

Dr. Mulvaney, what safeguards are needed to ensure that the domestic production of critical materials is done responsibly?

And what role, if any, do you think the Department of Energy should have in that mission?

Dr. MULVANEY. I think, as I stated in my testimony, you know, it is a very difficult challenge, I think, to balance these, you know, our climate objectives and land use impacts of domestic mining. And I think we just really need to make sure that we tighten up a very old law.

I mean, the 1872 mining law, you know, is very unclear on, for example, reclamation or legacy mine tailings. And the EPA, you know, is cleaning up many, you know, legacy tailings piles across the American West from, you know, historic mining of public lands. So I think that is really important.

And I am also hearing in the public discourse a lot of conversation about how the National Environmental Policy Act is holding up much of mining efforts. And I just don't see that as a valid—not supported by the empirical record. It is, you know, protecting the National Environmental Policy Act, and it is the policies that are—that emerge out of that, the Clean Water Act, and some of the Endangered Species Act and the National Historic Preservation Act. I think these are really important policies, and they have done very well for the American public to date.

So now, as far as the Department of Energy's role, you know, the Department of Energy could help perhaps finance some of these mining efforts if we find that some of these sites, which, you know, could be justified, sustainable mining practices and things like that, perhaps there are vehicles that the Department of Energy could use, like the loan program, for example, to help develop some of these resources.

But, you know, I think we are also missing a big piece of this, which is the recycling and materials recovery part. There seems to be in this conversation about securing critical minerals, metals, and materials, just more production and more extraction, when we are really letting a lot of these resources slip through the cracks, and they are getting landfilled and sent to——

Mr. MCNERNEY. OK, thank you for answering that question.

I have long advocated for policies to address the energy water nexus, which, among many other things, relates to the energy required to heat water in a home. Mr. DeLaski, and your testimony is focused on the electricity savings that could be achieved by increasing the energy efficiency of water heaters. But can you speak to how increasing the water efficiency of appliances and fixtures in a home or building could also lead to energy savings?

Mr. DELASKI. Absolutely. Setting water efficiency standards for a range of products can also drive enormous energy savings, because we use a lot of energy in this country to heat water for our homes and for our businesses.

Your State, California, of course, has led work there. The dry West is facing historic drought, and the opportunity to save water is important not just for energy savings, but also for ensuring that we have water resources to meet the needs of the dry West. And standards set by both the Department of Energy and by individual states like—such as California, Colorado, Arizona, and others are driving considerable water savings today for a range of water-using devices.

Mr. MCNERNEY. Well, could you address the alternatives to reducing water waste while people are waiting for the water at the tap to heat up?

Mr. DELASKI. The alternative—I am sorry, could you reState the question, please?

Mr. MCNERNEY. Well, when you turn on your hot water, you got to wait for a minute or two for the water to heat up, unless you have a demand—on-demand water heating. What are the alternatives to eliminate that waste?

Mr. DELASKI. Right. Well, one of the alternatives is to—as you said, on-demand water heaters are an option for that. Another alternative is using recirculation techniques to reduce—you know, to reduce water waste. But those are two options that I am familiar with.

Mr. MCNERNEY. Well, my time is expired. The Chair will now recognize Mr. Upton, subcommittee ranking member, for 5 minutes to ask his questions.

Mr. UPTON. Thanks, Mr. Chairman. It is always good to be with you.

Mr. Lieberman, welcome back. It is good to see you, that is for sure.

As you know, NERC is reporting that we are at increased risk of blackouts this summer—perhaps, as I said, even this weekend, as our electric grid becomes more unstable. Baseload power plants like coal, nuclear, and natural gas are being forced into early retirement, with weather-dependent wind, solar batteries taking their place, we hope.

Some believe that we ought to stabilize the electric grid with demand response, as we know, which gives the grid operators the ability to remotely monitor and control our home appliances to balance supply and demand. What do you expect the consumer protection and privacy concerns associated with demand response are going to be?

Mr. LIEBERMAN. [Inaudible.]

Mr. UPTON. I mean, you got to use your—you should know best of all.

Mr. LIEBERMAN. I should know this by now.

Mr. UPTON. Push the button.

Mr. LIEBERMAN. A man's home is his castle. A woman's home is her castle. These should always be decisions made by the homeowner, and never the government. It is really as simple as that.

And sure, we can save energy if utilities can shut the appliances on and off. But that is not what consumers want.

And I should add I am not opposed to demand response capability. I am only opposed to mandating it. Let consumers who want this feature, who think that they can save money with it, let them go ahead with it. But I can tell you, as a homeowner myself, this is—I wouldn't want to be a guinea pig in this experiment.

Mr. UPTON. It reminds me of the saying, "If Mama ain't happy, nobody's happy."

Do you think it ought to be mandated by the Federal Government, or should it be a choice, then?

Mr. LIEBERMAN. I think that is the problem. It shouldn't be mandated by the Federal Government. There is very real privacy issues here.

Also, when I hear about this scheme, it strikes me as very convoluted. I really question whether it can work as well as some are hoping. It absolutely has to be voluntary.

And to me, I think there is almost a philosophical divide here. There are people here that argue this is such a great idea we need to mandate it. But I am the one who is saying, if it needs to be mandated, it is probably not a great idea.

Mr. UPTON. Mr. Pugliaresi, I want to give you the opportunity to address the energy crisis that we are facing today. We use fossil fuels for everything in our economy, from plastics and fertilizer—your graphs were terrific. What are some of the near-term solutions to record-setting energy prices that we ought to be looking at and focused on?

We know about Keystone, and we know about permitting infrastructure needs with NEPA reforms sending the right signal, but what are some of—what are some basic things that we ought to be focused on, and what might you suggest that we do?

Mr. PUGLIARESI. Yes. So first we need to send the right signals to the marketplace. We need to restore the leasing program. We need to give confidence that the North American Production Platform can have an expansive, cost-efficient expansion over time. And the government is heavily involved in affecting that outcome.

We need to permit a lot more natural gas pipelines. The Marcellus, West Virginia, Pennsylvania, Ohio, these are enormous gas reserves. They have production levels that look like Saudi Arabia if they were oil. We can double or triple U.S. natural gas production in the United States. We can keep our prices low, and we can supply the world.

We are, as I said, an arsenal of energy security. But we have to change the policies. We need to give assurance in these constantly interventions—I mean, I know you are quite familiar with the Line 5. These constant regulatory and political attacks on Line 5, they create risk in the marketplace. People start to wonder what is next?

Mr. UPTON. Well, can you imagine—for the folks that don't know about Line 5, this is a line that connects the upper peninsula with the lower peninsula of Michigan. And if—and that line needs to be replaced, there is no question about that. It was built in the late 1950's, I think it was, 60-some years ago. But I can't imagine the impact on gas prices in the Midwest if that line was simply cutoff,

and not replaced, in terms of the impact at that marathon refinery in southeast Michigan.

Mr. PUGLIARESI. Independent estimates show shutting down that line would increase consumer costs by $58 billion.

Mr. UPTON. Yes, it is something else.

Mr. PUGLIARESI. We can do more for the fuel supply. We should try to get a more national standard for fuel specs.

Mr. UPTON. Let me ask you one more question in my remaining 15 seconds or so.

Microchips. You know, we have got legislation that passed the Senate big time more than a year ago. Does this have an impact on energy? Are you able to get something like this back through so we can actually build it ourselves versus relying on China?

Mr. PUGLIARESI. Absolutely. A reliable supply of microchips adds a lot to the efficiency of the—of our entire production process: all the inputs into petroleum production, all the inputs into industrial production. So it is a very important supply chain issue.

Mr. UPTON. I yield back. Thank you, Mr. Chairman.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes Mr. Pallone, full committee chair, for 5 minutes to ask questions.

Mr. PALLONE. Thank you, Chairman McNerney. I wanted to start with Mr. DeLaski, and I have got three separate questions here, so maybe a minute or so for each of you to respond, if possible.

So, Mr. DeLaski, Representative Dingell's bill, H.R. 7962, contains provisions for water heater demand response requirements. Demand response, as I understand, is an important tool to lower consumer bills, fight climate change, and address grid resilience and reliability. So could you talk to us about a minute about the importance of demand response, and especially as we face more frequent weather events, extreme weather events that place a lot of stress on the grid? How can demand response help with emergency events and ensure grid stability?

[Pause.]

Mr. PALLONE. I don't know if he heard me.

Mr. DELASKI. Demand response is an incredibly important resource for ensuring grid stability.

As we—as the peak—as peak demand goes up and that happening as—on a hot weather event, that strains the power grid. It can lead to outages as we faced risk of this summer

[inaudible] during this hearing. It also drives up costs enormously. That is the most expensive power, is the marginal power, however it is generated.

Demand response allows market to move that demand to another time. And water heaters are a natural battery. Why not use that battery to charge up that water heater with hot water when power is cheap, and when it is produced by clean resources? That is what demand response programs can do.

This bill would make those programs more possible. It doesn't require them. It doesn't mandate them. It simply makes them more possible by allowing for the Department to consider setting demand response requirements for water heaters, as are manufactured by companies such as A.O. Smith.

Mr. PALLONE. Well, thank you. Let me go to Mr. Frias.

The Tribal Energy Loan Guarantee Program, while well-intentioned, has not guaranteed a single loan in its 17-year history. We know that. So can you describe for us again in about a minute or so the potential importance of this program, why it hasn't delivered on the promise, and whether you think the changes proposed in the Tribal Energy Investment Act will ensure that tribes finally have access to energy project financing?

[Pause.]

VOICE. Microphone.

Mr. FRIAS. Apologies. Thank you for the question, Chairman Pallone. And it is a fair question.

Looking back at the history of the tribal program, though, it was authorized in 2005, but it was not appropriated for until 2017. And the first solicitation did not go out until 2018. It was making good progress in Indian country, and then the pandemic hits.

You know, and by comparison, I would say that the NIGC took three or four years, National Indian Gaming Commission, to have regulations and be set up and to be going and working to regulate Indian gaming. So a year for them to get going, once they had staff and funds, is a pretty good turnaround.

With many tribes working remotely or shifting funds to address the impacts of the pandemic, it is understandable that the program has faced delays in the past several years.

I can tell you that, since I came on as executive director of NAFOA in July of last year, that we have seen strong interest from tribes about this program, interest in meeting with DoE, LPO, the Office of Indian Energy, specifically at our conferences, where they are speaking on panels, specifically our spring conference in Seattle, to talk about energy programs. There is interest in energy programs in Indian country.

And one of the great things about this program is that it is technology agnostic, right? Whether it is extraction, whether it is renewable, the program will work to find it. And it addresses a critical problem in Indian country, not just for energy development, but for economic development across the board, and that is access to capital.

And so this program is important to Indian Country. You know, without the pandemic, I think we wouldn't see the history you are addressing there.

Mr. PALLONE. Just quickly, Dr. Mulvaney—I am talking now about H.R. 1599, the Securing America's Critical Minerals Supply Act—does that meet the standards that we want to see for supporting domestic critical minerals supply chains?

Are there any changes to the bill that—so it does not inadvertently contribute to harmful mining practices?

And what changes do you think must be made to guarantee the bill truly supports clean energy production, if you will?

Dr. MULVANEY. I think there could be more specificity about—around what energy, minerals, or critical minerals are being supported. I think there are, you know, ones that need more attention than others.

There also could be more language around decarbonization and low carbon energy systems that help define that, as well.

Mr. PALLONE. Thank you, Mr. Chairman.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes Mrs. Rodgers for—full committee ranking member, for 5 minutes to ask questions.

Mrs. RODGERS. Thank you, Mr. Chairman.

First and foremost, I am a mom. We recently remodeled my kitchen, our kitchen. And I didn't like my choices of dishwashers. And today, because of what was available, we wash most of our dishes by hand. But I want to get back to some of my questions that I think are really important for energy reliability and affordability.

Mr. Pugliaresi, I wanted to thank you for being—returning to the committee. I appreciate your testimony. Last year you testified in front of our committee, and you warned—you said that it was important for us to look to the example of Germany and their approach in imposing various top-down policy dictates, shutting down certain energy sources, and the result of being more dependent upon Russia. You noted that spiking energy costs there and elsewhere were a warning for us, as U.S. policymakers, and that was months before Russia invaded Ukraine.

Americans now see the risk and the—and we see the impact on reliability and affordability. In the United States there has been an unrelenting drive to shut down fossil energy with weather-dependent wind and solar. Do you think the policy debate over this rush-to-green movement would benefit from authoritative information on what is necessary to secure energy resources, including critical minerals?

Mr. PUGLIARESI. Absolutely. We need a much better understanding of the risks.

By the way, Germany has now fired up its major coal plants. And from the folks we talk to there, their climate program is delayed by at least a decade.

Mrs. RODGERS. So in the late 1970's, the Department of Energy was organized as a cabinet agency to oversee national energy policy, and specifically address energy supply emergencies. H.R. 1599 provides a new function in the Department's core statute to evaluate energy resource vulnerabilities, both for critical materials of renewables and for traditional energy.

How do you think that this might be useful in putting energy security back at the center of our debate?

Mr. PUGLIARESI. Right. If we move to a set of systems where we are reliant on these critical materials and minerals, we are particularly reliant on foreign sources that are not necessarily friendly, actually might be quite hostile to the United States. We need a careful assessment of what that means to our energy security and the reliability of our energy complex.

Mrs. RODGERS. Thank you. So—and we hear from our colleagues on the other side of the aisle and the Administration that a move to renewable energy will reduce energy price volatility, which we are all experiencing at the gas pump these days. Is the answer to record high gas prices to increase dependance on critical minerals and materials for renewable energy?

Mr. PUGLIARESI. It is very difficult to hide from the volatility of any commodity. The way we—on our traditional energy complex is—we had a large strategic petroleum reserve. We had an expan-

sive program to expand U.S. oil and gas production, diversified production, not just around the North America, but around the world. These are the features that add to your energy security.

Mrs. RODGERS. Thank you, thank you.

Mr. Lieberman, I appreciate your testimony. One of the questions I have about the legislation amending the weatherization program concerns taxpayer stewardship. When Congress reauthorized the program in 2020, it allowed for a limited program to help ready homes for weatherization with a sunset and safeguards, such as a minimum investment to savings ratios. We have not had enough time to evaluate the program yet in the bill before us today.

But the sunset is eliminated. Minimum investment to savings ratios is eliminated, and the whole—a new program is added. Do you think this reflects careful spending of taxpayer dollars?

Mr. LIEBERMAN. When I look at this new bill, to me it looks like they are clutching at straws, looking for rationales, for more money that don't really make a lot of sense to me, that we have to spend money now on houses to get them ready for spending more money later on. This seems kind of a reach. And the weatherization program is already very heavily funded.

I think it makes a lot of sense to see what we are getting for the money that has already been allocated before we throw more that way.

Mrs. RODGERS. Thank you. Mr. Pugliaresi noted that behind these drives to fund electrification programs, it actually increases high—increases electricity rates, and it increases the burden on the poor than—it disproportionately impacts the poor. Do you think Congress should evaluate risk of expanding Federal programs that will raise electricity on low-income families and workers?

And I have expired my time.

Mr. PUGLIARESI. I think energy poverty should always be a front burner issue whenever energy policy, climate policy is being discussed.

Mrs. RODGERS. Yes. Thank——

Mr. PUGLIARESI. We are already seeing energy price increases more than expected.

Mrs. RODGERS. OK, thank you. Thank you. Let's stay focused on reliability and affordability.

I yield back.

Mr. MCNERNEY. The gentlelady yields back. The Chair now recognizes the gentleman from California, Mr. Peters, for 5 minutes to ask questions.

Mr. PETERS. Thank you, Mr. Chairman, and thank you, Ranking Member Upton.

First I would like to discuss one of the bills before us today, H.R. 8053, the Guaranteeing Resilient Installations for Defense Act, or GRID Act. I am happy to be discussing that today. I worked on—pretty hard on that over the last two years, and I want to thank the committee leadership and staff for working with my office to find a path forward on this important piece of legislation.

As many of you know, my district in San Diego is host—is proud to host one of the largest military footprints in the country. One facility in my district, Marine Corps Air Station Miramar, is pio-

neering the Department of Defense's investments in the adoption of renewable energy and resilient energy infrastructure.

Miramar's collaboration with relevant stakeholders and staff has culminated in the design of one of the most innovative microgrids in the Department of Defense. The project constructed a power plant with both diesel and natural gas generation to supplement existing landfill gas and solar power.

Also, the station built an energy and water operations center to manage the microgrid and other utility control systems at Miramar.

These capabilities have already demonstrated their value to the local community, as well. In the summer of 2020 the microgrid was used to assist local communities by preventing rolling blackouts during a heat wave, proving its utility on a larger scale. I am confident this experience informed the written testimony provided by the Department of Energy today when it stated that this bill would, "address the significant security disadvantages for facilities located throughout the United States."

The microgrid at MCAS Miramar enables the installation to use onsite renewable resources and power generation to supply its critical base loads when utility power is not available. And when the microgrid system is grid-connected and utility services are available, the system reduces costs for the base.

The air station's success incorporating renewable energy solutions into its electric grid provides proof of concept for the problem the GRID Act solves. It provides the Secretary of Energy, in coordination with the Department of Defense, to enter into contracts and agreements to improve the resilience of defense critical electric infrastructure, and reduce the vulnerability of critical defense facilities to the disruption of the supply of electric energy to those facilities.

I wanted to ask Dr. Mulvaney. In your testimony you note how the GRID Act enhances national security. Can you elaborate on how you believe investments in the resilience of defense critical infrastructure and possible investments in local electricity infrastructure improves national security?

Dr. MULVANEY. Yes. You know, I spent time looking at issues related to ratepayer, and I am very sensitive to cost issues. So, you know, it was nice to see in that bill that the—as proposed, that the Department of—or at least the Federal Government could potentially be investing in local communities to enhance grid resilience.

We have quite—you know, thinking particularly from the California perspective, we have quite big challenges on our plate in the State, with wildfires and moving power to where it needs to be on certain days because of those wildfires.

So I think making those investments and making sure that the lights stay on as consistently as possible are really key to national security. And they help the rural communities that also live in and around these bases also keep the lights on, which is, I think, critically important for national security and human well-being.

Mr. PETERS. Maybe the benefits to an average household from that kind of strategy.

Dr. MULVANEY. I am sorry. Could you repeat one more time?

Mr. PETERS. Elaborate a little bit more on the benefits to an average household of that kind of strategy.

Dr. MULVANEY. Well, electricity costs are—you know, in California—are some of the highest in the country. And having investments not be rate-based by the utility, but instead coming from outside will, I think, help lower those bills, or keep them where they are at, keep them from increasing, which—you know, electricity infrastructure is expensive. And we have a very old electricity system that we have connected all of us together with, and have, you know, given us so much benefit. But it is time for us to start upgrading it, and modernizing it, and giving us the ability to, you know, isolate parts of the electric grid, for example, where these power outages are.

So that would be another benefit to these communities, is that they actually are able to go through these hot days we just had. For example, in the Santa Cruz mountains, where—near where I live, we had—the whole Stanford campus was down on power. It was 100 degrees yesterday, and it was because of a relatively small wildfire going right in and around the transmission lines. So, you know, we got to reinvest here.

Mr. PETERS. Thank you, Dr. Mulvaney. I appreciate it.

And I yield back. Thank you.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentleman from Texas, Dr. Burgess, for 5 minutes for his questions.

Mr. BURGESS. Thank you, Chairman.

And Mr. Pugliaresi, let me just ask you a couple of questions. We are doing a hearing today. We are kind of in the middle of an energy crisis. A lot of people don't understand why we are in the middle of an energy crisis. Two years ago this was not a problem. Today it is a serious problem. It is hard to tell from the bills that we have in front of us that we are taking this seriously, and we don't have—as has been pointed out by Ranking Member Upton—we don't have the Department of Energy here, which is really a shame, because we should be able to ask them questions.

But what is your opinion of the bills that we are considering today? Are they going to be able to address this emergent crisis that we have in energy in this country?

Mr. PUGLIARESI. Many of these bills, particularly—well, I guess, 1599 can be very helpful in addressing problems that will emerge over time. But this is not the critical problem facing the country. We are not going to move through a transition as many people expect.

Fossil fuels are embedded in the U.S. and the world economy. They come with a lot of favorable characteristics, particularly the density and the cost effectiveness of their use. And so there will be—it will be very difficult to do a rapid transition. These fuels are going to be with us for years. Just how they end up costing us as a country is going to depend a lot on government policy. And if we have a policy that seems to think that we can stop the production of oil and gas before the alternatives are cost effectively ready, we are going to be in a lot of hurt.

Mr. BURGESS. Well, I think we are seeing that, as being evidence, as you pointed out, I think, on your slide, that some of us are in-

convenienced, but some people are devastated by the economic effects of this ill-considered rapid transition. It is almost as if, rather than scientific thinking, it was magical thinking. We can now get our energy from different sources without doing the hard work and making the investments along the way.

Mr. PUGLIARESI. I couldn't agree more. I mean, we just did some work the other day on biogas, just biogas for electric generation. In order to meet the goals of 2050 under net zero, we are going to have to take what we now dedicate, which is about, in terms of land mass for bioenergy, for power, the land mass of France, and add to it the land mass of Mexico.

These kinds of requirements are just enormous, and they are going to take decades and decades to figure out the best way to proceed. The notion that we can do this quickly, in my view, is not just aspirational. It is somewhat delusional.

Mr. BURGESS. Well, and I wasn't going to go here, but since you brought up the word "delusional," it is delusional to think that you can turn everything off in an industry as complex as the traditional energy markets and then say, oh, gosh, I made a mistake, just kidding, turn it all back on. It doesn't work like that. These investments take time. They are capital intensive. And right now you don't have the economic climate that is willing to make these long-term investments when the Federal Government has acted in the way it has.

Mr. PUGLIARESI. It is a serious problem, and we are going to have to rethink it.

Mr. BURGESS. Mr. Lieberman, I was so grateful you mentioned the point at which, on this committee, the consideration was we are running out of natural gas. The Energy Policy Act of 2005 was predicated on the fact that we have to import natural gas from the North Sea, because we didn't have enough, we were running out of feedstock for fertilizer, and how policies that really were developed in this committee—so we are capable of that type of deep thinking—policies developed in this committee actually led to an abundance of natural gas after the fracking and the shale revolution.

So it is disconcerting to see people willing to absolutely discount what had worked when we knew we were getting into trouble, as you pointed out earlier, in the last decade, and then to completely undo it with no thought from where we backfill this supply.

Mr. LIEBERMAN. Absolutely. The transition when I was on this committee was incredible. There was bipartisan concern that America was running out of oil and natural gas. Along comes the shale revolution, and some of the changes in the 2005 energy bill facilitated that to an unexpected abundance. Now we are seeing that abundance under threat.

One thing that Mr. Pugliaresi mentioned was the tremendous amount of natural gas bottled up in Appalachia, just a couple of states away from states like New York and into New England that desperately need it. But the infrastructure isn't there. Most of the bills today deal with giving the Department of Energy more regulatory authority and more spending authority. That is not what we need. We need BTUs being made in America and being shipped to consumers.

Mr. BURGESS. I couldn't agree more. So they don't have to buy them from Russia, absolutely.

Thank you, Mr. Chairman. I will yield back.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentleman from Pennsylvania, Mr. Doyle, for 5 minutes to ask questions.

Mr. DOYLE. Well, thank you, Chair, and also to Ranking Member Upton for holding this important hearing.

Reliable and affordable energy is critical to both families and businesses, and the key to ensuring that we have reliable, stable, and affordable energy is to invest in domestic, clean energy production, domestic supply chains, advancing new technologies, and making our grid, businesses, and homes more efficient.

I am also pleased that we are talking today about critical minerals and their supply chains today. It is vitally important that we proactively work to establish a domestic supply chain for critical minerals. If we are to build a cleaner energy future, and wish to be truly energy independent, we must ensure that the entire lifecycle of critical infrastructure is made here in the United States.

With that said, Dr. Mulvaney, can you expand on how we could design a system at the Federal level, or incentivize better recycling of critical materials?

Dr. MULVANEY. Well, I think, in general, with a lot of these electronic products, they are not prohibited from going—entering into landfills, for example. We don't have national electronics recycling policy. We have hazardous waste policy.

But I think if we were to have a comprehensive program like some states do in recovering all electronic products, or trying to do what they can with that, I think that that could go a long way to augmenting the supplies that we are going to need.

Mr. DOYLE. You know, a second important piece of this puzzle will be developing new materials to replace rare, critical materials. Can you talk about how we can help companies who have innovative technologies get into the market?

Dr. MULVANEY. That is a great question, and I am not sure I have the full set of solutions there. But I think that we need to reward companies that are being more material use efficient.

So for example, solar panel over the last ten years uses ten times less silver in it than it did a decade ago. And that is because silver is expensive. So companies have that internal motivation. But imagine what the savings would be if we started having a system where we recognized that, you know, companies that could avoid silver all together, for example, would be rewarded in the marketplace. And I am not sure what the specifics of that would be, but that, I think, is the general concept there, is to reward the most materials innovative companies that are making new products.

Mr. DOYLE. Thank you. You know, weatherization can have a large impact for individual families, both in the short and long term, and in the city of Pittsburgh that I represent we have a lot of older homes, and the utility bills for families can end up taking a large percentage of their income through no fault of their own, but because they have a leaky house.

So, Mr. DeLaski, can you expand on the importance of the Weatherization Readiness Fund?

Mr. DELASKI. Absolutely. Based on data from programs around the country, local programs like the program in Pittsburgh and others, and cities and rural areas around the country, about one in five households, the weatherization professionals go into the home, and they can't do their work because the home is in such disrepair that if they were to do insulation or ceiling, it could be damaged right away. Say you have a hole in the roof, say there is rotting floorboards. So one in five homes has—are in that State of disrepair, where you can't provide this service. And, of course, these are the homes occupied by the lowest income residents of these areas.

Just to tell, you know, one story that we came up with—this is from Aberdeen, Washington—this is a home where a partially disabled man, an elderly—a senior citizen, was deferred from weatherization because of extensive rot in the floor. And the State program helped him repair these issues in his floor, and then the contractor, the weatherization contractor, could then come in and do the weatherization job. And as a result, his annual heating bill was reduced to $700 a year. This is a home built in 1912.

This happens time and time again for the program, so it is really critical that programs be able to do the basic repairs so they—you can go ahead and insulate. You can go ahead and do the weatherization that still has to be cost-effective. It still has to be cost effective to deliver those services. So it is really important to be able to do the repairs.

Mr. DOYLE. Thank you.

Mr. Chairman, I yield back.

Mr. MCNERNEY. The gentleman yields. The Chair now recognizes the gentleman from Ohio, Mr. Latta, for 5 minutes for questions.

Mr. LATTA. Well, I thank my friend and the chairman for yielding, and I also thank our witnesses for being with us today.

Mr. Pugliaresi, if I could start questions with you—and I have got so many questions and so little time. You know, the first chart—or one of the charts you showed us—figure two, which was world production depends on fossil-based fertilizers. And this is kind of an interesting chart, because my mom was raised on a farm, my wife was raised on a family farm. And back in 1965 on this chart is showing about—just a little over one billion people being able to be fed, and where we are today. I look at that as interesting, because in 1965 my grandfather was 65, and he was—and so it is interesting to see where we have gone in that short period of time.

And, you know, my concern is, when you look at these numbers that you showed us, that three billion people, you know, are dependent on—we are—you know, where we are, that if we don't have that fertilizer, depending on the eight billion with the mixed diets, you know, what is going to happen if we don't have these fertilizers out there in the future?

Because, again, this is absolutely critical for survival of the population.

Mr. PUGLIARESI. Yes, we are just going to—we are going to have starvation and spiked prices. So I just don't think it is going to happen. I don't think the—you know, the—particularly the devel-

oping world, they are not going to move to a system in which they don't use ammonia or, you know, fossil fuels to make fertilizer.

Now, the question is maybe you could do some of this with carbon capture and things like this, but the rising cost of this is likely going to see resistance. These countries will—you know, I don't think the political leadership is going to permit them to not grow food.

Mr. LATTA. Well, and again, because—you know, what we are seeing with Ukraine this year with—they are not bringing out the maybe 60, 65 percent of their crop, and then they got to get it out to market.

But then, in another—your figure three shows the rising prices because, again, that is going to affect everybody, not only in this country, but around the world what the price is going to be, because a lot of people are saying, well, prices are up for farmers this year, but the problem is going to be the cost of production is so much higher than it was last year.

Mr. PUGLIARESI. Right, right, right.

Mr. LATTA. So, you know, it is—I think it is critical.

You know, again, another figure that you have was on—you know, and it was brought up just a little bit by Mr. Doyle. But when you are looking at, you know, rare earth minerals—this is your figure four.

Mr. PUGLIARESI. Yes.

Mr. LATTA. And, you know, when we need these minerals, and when you are thinking about especially where communist China is in supplying rare earth minerals across the globe today, you know, we are—but, you know, we talk about being able to recycle batteries and things like that, but we have got to have these things today.

So where do you see, in the near term—because, again, it is—you know, we had testimony here. It might take ten years to get a mine open in this country.

Mr. PUGLIARESI. At least.

Mr. LATTA. To be able to get these, if we could get the mine open.

Mr. PUGLIARESI. Yes, right.

Mr. LATTA. So what is your projection, when you look at these numbers across your figures here, what is going to happen in the near term?

Mr. PUGLIARESI. So I think the risk—one of the risks that we have to understand that we face is that, if we try to transition too quickly to these alternative technologies, we are going to substitute an energy security situation in which we are actually relatively secure if we take the right measures, to a set of circumstances in which we will be relatively insecure. Because some of these folks making these critical materials, unless we have supplies here at home, are not friendly to the United States.

Mr. LATTA. Well, thank you.

Mr. Lieberman, you know, I introduced legislation a while back that—you know, the discrepancies between energy standards based on when a furnace, central air conditioner and heat pump is installed versus when these appliances are manufactured. Can you talk about the problem of stranded inventory, and how regulations can better be tailored to avoid this problem?

Mr. LIEBERMAN. Yes. Some of the standards have the regulatory deadline as the point at which the product must be installed, rather than a drop dead deadline, after which you can't manufacture a certain product. And when the installation date is the deadline, that means some legally manufactured air conditioners or other equipment can no longer be installed. And that means that, if it is at a warehouse, if it is at a retailer, it is no longer legal, and so you have stranded inventory.

So I do like the idea of moving away from using the installation date as the deadline. Again, many of these wholesalers, retailers are small businesses. They are struggling with supply chain issues, as well. We want to make sure they are not stuck with inventory that they cannot sell.

I would point out that we need to be more broad about this because DoE regulations are just part of the story. There is EPA regulations, as well, that can create the risk of stranded inventory. So I am familiar with your bill, we just—we need to make sure that it is comprehensive.

I would make one point that one of the reasons for using the installation date is to prevent a run on the older models before the new models take over, which is sort of an indication that consumers wanted the older models. And that is worth keeping in mind. We want DoE standards that don't deprive consumers of what they want.

Mr. LATTA. Well, thank you very much.

And Mr. Chairman, my time has expired, and I yield back.

Mr. MCNERNEY. The gentleman yields. The Chair now recognizes the gentleman from New York, Mr. Tonko, for 5 minutes to ask questions.

Mr. TONKO. Thank you, Mr. Chair. I thank you for holding this hearing and including H.R. 7947, the Weatherization Enhancement and Readiness Act. I also thank you for your commitment to protect and strengthen DoE's Weatherization Assistance Program.

This program is essential to supporting low-income households, especially during a time of increased energy prices. But we know even before these recent energy increases, many Americans were struggling to pay their bills, and low-income families have a disproportionate energy burden, a higher percentage of their income being used to pay their energy bills. As many as one in five Americans reported reducing or foregoing necessities such as food or medicine to pay an energy bill. That is unacceptable.

So the Weatherization Assistance Program plays a critical role in helping these families, and it works. Homes receiving assistance save an average of $372 every year. But despite this great work, we know the program can be improved.

I want to focus on two important provisions of H.R. 7947.

First, the bill would raise the average cost per dwelling unit from $8,000 for Fiscal Year 2022 to $12,000. This is the limit on how much assistance a home can receive. The ACPU has not been adjusted at a rate to keep up with recent increases in the cost of building materials, restricting the services households receive, and putting pressure on WAP crews' wages, which are included in the ACPU calculation.

So Mr. DeLaski, can you help us understand why at this moment an increase in the average cost per unit is indeed appropriate for this program?

Mr. DELASKI. It is urgently needed for this program. With the increase in wages that we are seeing across the economy, this is affecting the programs and their ability to be able to retain—to hire and to retain workers to deliver weatherization services. These are skilled people who can move on to other jobs if there is not—they are being paid adequately to do weatherization services. So the rise in wages is one factor.

Another is the cost of materials. I think this committee is familiar with—that the cost of materials are going up, and the construction industry—of lumber. These costs and other inputs, these costs are going up. And the program hasn't kept pace with those—with the changes in costs to deliver these services.

In addition, I would add that the homes that are in the worst—have the greatest needs, programs aren't able to provide necessary services with the caps that exist today. So this doesn't—increasing the cap is absolutely essential to being able to provide services to homes.

I would also add that rural homes can be expensive to serve, as well, because the technicians, the service providers, have to travel further to provide those services. So for, you know, substandard housing in the rural parts of the country, rural districts, it is super important to increase this cap.

Mr. TONKO. I thank you, sir. And second, many Americans who—would benefit from the program, but most are unable to receive assistance due to their homes, as you indicated, being in such poor conditions. These homes are passed over by the program. In some areas, this might be as many as 20 percent of eligible homes. So, Mr. DeLaski, do you believe it undermines the goals of the Weatherization Assistance Program that families are living in the worst conditions have the greatest difficulties accessing the assistance?

Mr. DELASKI. Yes, it is ironic, and it is—it undercuts the very purpose of the program, that people who most need the services can access it.

The program provides tremendous benefits to the homes that are able to be—to those families. But for the one in five, who they—they come into the home, they want to provide the service, they assess that there is the need, but then, because of problems like a hole in the roof, or because of rot, or because of mold, they can't do the insulation, they can't do the ceiling. And these are the people who most need those services, because they live in the most substandard housing. And those are homes in urban

[inaudible], that are homes in rural areas. There are homes throughout the country, and these are the families who we most need to be able to serve with the Weatherization Program. And the way the program is structured today, these houses are deferred. In other words, they are not served. And that is a huge problem.

Mr. TONKO. While the dedicated readiness funding, which may support structural improvements like bad roofs, and addressing environmental hazards like mold, and help lead to better outcomes, certainly for the traditional weatherization program—and provide

hope for those households that have been passed by. So I appreciate your comments.

And with that, Mr. Chair, I yield back.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentleman from West Virginia, Mr. McKinley, for 5 minutes to ask questions.

Mr. MCKINLEY. Thank you, Mr. Chairman. Well, here we go again. After spending a year and a half on partisan messaging bills like the Clean Future Act and Build Back Better, Pelosi seems to be trying to avoid losses in this fall's general election by trying to appear bipartisan.

Look, as Chairman Upton said a minute ago, inflation is at a 40-year high. Gas prices are over $6 a gallon. The opioid crisis continues to grow exponentially, and frustrated Americans are increasingly turning to violence. So instead of actually working on those matters, this majority is nibbling around the edges.

And last night the President announced his support for a three-month moratorium on the Federal gas tax. Really? There is—this is nothing but a politically motivated gesture. Does anyone really expect the trucking companies to pass on those savings to the consumers? And with this suspension, a typical motorist will probably only save 7 to $10, 7 to $15 a month. That is about the price of a pack of cigarettes, or a couple of gallons of milk.

But let's return to today's hearing, because that is what they want to talk about.

These bills are well intended. I understand that. But, Mr. Chairman, these bills will not increase our domestic infrastructure, energy infrastructure, and its production, and lowering prices. This committee should be talking about issues that matter to Americans now.

So, Mr. Pugliaresi, if I could ask you a couple of questions, if you were his adviser, would you tell the President or would you be advising the President to suspend the gas tax for three months?

Mr. PUGLIARESI. No. I think, as President Obama said, it is a gimmick.

[Laughter.]

Mr. MCKINLEY. Thank you. And according to Reuters, countries around the world are increasingly using—reverting back to use of coal, as you mentioned in your remarks, for power generation because it is cost effective and avoids rising gas prices, natural gas prices. So if other nations are doing this, continuing to use coal—and let's call it clean coal—would energy reliability in the United States benefit by our using clean coal technology?

Mr. PUGLIARESI. Absolutely. We should have a very robust and diversified energy source for generating power and other uses for energy throughout the national economy.

Mr. MCKINLEY. Thank you.

And Mr. Lieberman, if you could just do—if you could just pass the magic wand that did one thing to lower gas prices at the pump, what would that be?

Mr. LIEBERMAN. I would try to travel back in time, and try to get candidate Joe Biden to not say he wants to kill off the domestic oil industry. I mean, talk about a chilling effect. And we have seen that ever since.

One can complain that the oil industry, the refiners aren't investing enough. But can you really blame them, when the commander in chief is using that kind of extinction rhetoric, or at least was until prices got too high?

Plus, as we know, the President has made good on those promises, starting from day one.

One point I would also make is that, sure, Keystone XL pipeline, drilling in ANWR these would take time to come online. But a number of economists believe that expectations of future supplies has a beneficial effect on current prices. And then the alternative expectations of future supplies being cracked down upon because of Federal policy has an adverse effect on current prices.

So I think there is a lot we could have done that would have lowered gas prices much more than the 18.4 cents per gallon Federal tax.

Mr. MCKINLEY. Thank you.

Back to you, Mr. Pugliaresi. What would you do if you could just pass one thing? What would be the top priority to lower gasoline prices?

Mr. PUGLIARESI. Well, in the near term I would take the renewable fuel standard down to ten percent. I could get $0.30 right there. I would ask the Administration to take emergency procedures to give us a national RVP standard for gasoline. I would probably also repeal the Jones Act, at least temporarily, so crude oil and products can move at low cost to—from where they are produced to where they are needed within the United States.

These are all very difficult things to do. I fully understand that.

Mr. MCKINLEY. Thank you.

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

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentlewoman from Washington State, Ms. Schrier, for her questions.

Ms. SCHRIER. Thank you, Mr. Chairman. Mr.—and thank you to our witnesses.

Mr. Frias, under the current statute, the Tribal Energy Loan Guarantee Program permits the Department of Energy to guarantee up to 90 percent of a private sector loan. And I wanted to dive into that a little bit.

The first question is just has the private sector been willing to finance tribal energy projects?

Mr. FRIAS. Thank you. You know, in Indian country we experience difficulty accessing capital across the board. It is—as I mentioned in my comments, you know, the joint NPR about the Community Reinvestment Act addresses some of the difficulties we have in bringing institutions—bringing capital into Indian country. I believe one of the members talked about how capital-intensive energy programs are. And so it is difficult for us to get capital in Indian country. Increasing it is a constant struggle.

And, you know, studies have shown that institutions are reluctant to lend for economic development programs where they don't have a pre-existing relationship. The tribes that will have those pre-existing relationships are tribes that perhaps have built gaming institutions or other forms of economic development. But the reality is the tribes that are most in need of economic development

are those that don't have it now, and perhaps are not well situated to be involved in the gaming industry.

Ms. SCHRIER. And do you have any sense of what sorts of energy projects tribes of—various tribes were looking to finance? Just for some examples.

Mr. FRIAS. You know, again, as I said in my testimony, we are agnostic about the technology at NAFOA, and I think you will find tribes that are on all sides. You will find tribes that are very interested in renewable energy. You will find tribes that are very interested in doing extraction. And that is one of the strengths, I think, of this program, is that it is technology agnostic. It doesn't favor one over the other, but allows tribes to have that authority in their own sovereign hands, tribal leaders to be able to make the decision for what works best for their community.

And so we hear interest in a broad array of different projects. I think, but for the pandemic and the effect that it had, you know, not just in Indian country, but in the country as a whole, we would have seen further progress.

Ms. SCHRIER. And are these energy production, or can this also be energy distribution projects? Because the ones you are talking about sound like they are really highly capital-intensive, if they are energy production.

Mr. FRIAS. You know, I believe it is in favor of energy production.

Ms. SCHRIER. OK.

Mr. FRIAS. But I will have to go back and take another look and make sure. If I can get back to you with a——

Ms. SCHRIER. That is OK.

Mr. FRIAS [continuing]. With a firm answer on that.

Ms. SCHRIER. Thank you. No, I am trying to work through, you know, why this loan program is—has really failed Indian country to date. And it sounds like that is the reason that having this new system, where we don't have just a loan guarantee, but direct loans from the Department of Energy will make such a difference for Indian country.

And then can—I think that may be the end of my question. I just—I mostly wanted to kind of get you to point out what the failing was with the prior system, and how this could make things better. And I think you have explained that this will allow for money to flow to tribes more easily.

Is there anything else that you wanted to add to that?

Mr. FRIAS. Yes. If I could reemphasize, Congresswoman, you know, funds weren't appropriated for this program until 2017. So while on paper it appears that the program has been around for a long time, it was around without funds. And so the first solicitation didn't go out until 2018. And then 2020, the pandemic hits, and we have this reallocation of funds in Indian country.

We are all looking at different things. Indian country was hit, I think, in some ways harder than other parts of America, due to multi-generational families and—multi-generational homes, I mean, and other factors. And so, but for the impact of the pandemic, I think we would have seen further progress.

I think this change is really important, because it takes out a really complicated extra step that we don't necessarily need.

Ms. SCHRIER. Thank you, and I yield back.

Mr. MCNERNEY. The gentlewoman yields back. The Chair now recognizes the gentleman from Virginia, Mr. Griffith, for 5 minutes to ask questions.

Mr. GRIFFITH. Thank you very much, Mr. Chairman.

Mr. Lieberman, Mr. Pugliaresi, thank you for your responses to my colleague, Mr. McKinley, in regard to what we could actually do to lower the price of gasoline for consumers.

And I would have to agree that a number of those would work, particularly the expectations, as you said, Mr. Lieberman. When you have the President of the United States, first as a candidate and then on day one saying we are not going to have any more drilling, we are not going to do the Keystone XL pipeline, how can you then expect those folks who normally would do the exploration, the drilling, the investment in new equipment, new refineries?

As I understand it—and tell me if you have heard this, as well—our refineries are actually operating at about 93 and 94 percent, which is about as good as you can get. Is that your understanding, too, Mr. Lieberman?

Mr. LIEBERMAN. Yes, it is. And one of the things refineries are struggling with is CAF greenhouse gas standards for vehicles that will essentially require electric vehicles. So there is regulations that would constrain the amount of gasoline that can be used in the future effectively, and that raises questions about whether investing now in more capacity would be worth it.

Mr. GRIFFITH. Yes. And somebody used the term "delusional" earlier, and I would concur with that, as well.

All right, that—let me switch gears, and let me go to something different. Let's talk about the weatherization.

Now, Mr. Lieberman, I like weatherization a little bit better than you do, based on your earlier comments. But I am concerned about this repair or reconstruction of a home before you get there. And I know that the bill has on page four a limit average for average cost per unit basis. But in some parts of the country—and that may include parts of my district—if the home is in disrepair, you might hit that average cost, based on prices in more expensive areas of the country. The average cost might actually mean that you invest more money in the home than the home is actually worth, even after repairs.

Can you comment on that? Should we have something in there, if we are going to do it—and I know you don't like the program that much, but if we are going to do it, shouldn't we have something in there that says that it should be a percentage of what you expect the home would be worth after you have done all this work on it?

Mr. LIEBERMAN. Yes, I think that would be a good safeguard to improve the bill.

I will say generally about the weatherization program—and this is just anecdotal evidence—there is a fair amount of waste that goes on. I think something less than 100 cents on the dollar has been spent wisely. A lot has been spent on the program. One would think that that much more wouldn't be need needed to be spent if the previous amounts were allocated more wisely.

I don't know the specifics of your particular question.

Mr. GRIFFITH. Right.

Mr. LIEBERMAN. But again, I think, with the tremendous amount of funds that weatherization is already getting, I think there ought to be increased oversight.

Mr. GRIFFITH. Right. I agree with that.

H.R. 5292 on the agenda today is a common-sense bill. I support that. It deals with making sure that, if somebody has gotten a DoE loan in the past, that they—and they have defaulted, they can't get another one.

Do you think we should also say that for not only—Mr. Lieberman, not only for DoE loans, but for loans of any type from the Federal Government, that if somebody has defaulted in the past they shouldn't be eligible for a new DoE loan? Yes or no?

Mr. LIEBERMAN. Yes.

Mr. GRIFFITH. OK. And then I want to move on to something that I think is significant, and that is I think we probably also ought to have civil penalties for Federal employees who knowingly and willfully violate the law, because that is what I believe happened in the Solyndra situation. Everybody heard about the $527 million that was spent in Solyndra. That isn't what got my goat. My goat was the 95 million that was given to Solyndra subsequent to their default on December 1st of 2010.

And when the code specifically says—I am reading right now from the code—"the obligation"—that would be the DoE loan—"shall be subject to the condition that the obligation is not subordinate to other financing." And in that case, I believe that some parties at DoE decided to subrogate the law, and disregard it because the law clearly said after default there weren't supposed to be any more moneys.

They then came up with this plan to subordinate 75 million, which cost the government, or cost the people 95 million to outsiders. They did so with a series of emails back and forth. And one of the requirements on default was that you talk to the Treasury and the Department of Justice. When this scheme came forward and they mentioned it to Treasury, Treasury actually sent an email back at the time that said, "Hey, we don't think you could do this. Maybe you should check with the Department of Justice." But they never checked with the Department of Justice. I suspect that is because they didn't want to find out they weren't allowed to do it, and have somebody from Justice saying that.

Don't you think a civil penalty added in there if somebody willfully and knowingly violates the Federal law passed by Congress, don't you think that would help improve the DoE program, as well?

Mr. LIEBERMAN. That would make for a better program than without it.

Mr. GRIFFITH. Thank you, Mr. Chairman. I yield back.

Thank you, Mr. Lieberman and others.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentlewoman from California, Ms. Matsui, for 5 minutes to ask questions.

Ms. MATSUI. Thank you very much, Mr. Chairman. I want to thank the witnesses for appearing today.

The Weatherization Enhancement and Readiness Act would also make crucial improvements to the Weatherization Assistance Pro-

gram, helping more families lower their energy costs, while making their homes more energy efficient.

In addition to the benefits that consumers will see on their bills, weatherization and energy efficiency play an important part in our fight and our efforts to fight climate change.

Mr. DeLaski, can you please elaborate on the climate benefits of the Weatherization Enhancement and Readiness Act?

Mr. DeLaski?

Mr. DELASKI. Thank you for that question. Absolutely. You know, saving energy in homes, whether it be through the weatherization program or other programs such as the Appliance Standards Program and others, are effective policies for reducing energy use, and that helps to lower consumers' utility bills. And where power is being generated by—from fossil generation sources, that helps to reduce climate change emissions.

Ms. MATSUI. OK.

Mr. DELASKI. The——

Ms. MATSUI. Can you please talk about how the Weatherization Readiness Program proposed in the Weatherization Enhancement and Readiness Act complements the Weatherization Assistance Program? What gaps does this bill address?

Mr. DELASKI. Right. It addresses four important gaps.

One gap is that it raises the average cost per unit to $12,000, so that you could actually do the projects that otherwise would be outside the scope of that cap.

The second thing it does is that it allows the program administrators, the weatherization—the local Weatherization Assistance Programs to do basic repairs to homes that allow the weatherization work to be done. Absent those basic repairs, often the weatherization can't even be done.

Ms. MATSUI. OK.

Mr. DELASKI. Those are two of the ways that it improves it.

Ms. MATSUI. Sure. One of the bills before us today takes important steps to modernize standards that govern water heaters, which are one of the most—one of the largest energy uses in our homes and businesses. By making simple updates, we can encourage more efficient and responsive technology, saving consumers money and reducing our energy consumption. But we know other outdated or inefficient consumer technology throughout our homes is not keeping pace.

Mr. DeLaski, can you talk about the relationship between household appliances and consumer technology and our energy consumption?

Moving forward, what options do we have to ensure our standards are keeping up with technological advancements?

Mr. DELASKI. One of the most important ways to make sure that our—is for us to update the appliance standards administered by the Department of Energy. The Department has a legal obligation to review standards periodically to keep pace with technological change.

And it is—the typical new refrigerator sold today uses 25 percent as much as it did 20 years ago. It is huge technological progress, and that progress is driven in large measure by increasing standards.

Ms. MATSUI. Sure.

Mr. DELASKI. That ensures all consumers, whether they buy an entry-level unit or whether they are buying a deluxe unit, get a level of performance that lowers their energy bill, and lowers the emissions that result from using that appliance.

Ms. MATSUI. OK, thank you.

I have long believed that the investments we make in critical infrastructure not only supports our economy, but enhances our national security. This is especially true for the infrastructure within this committee's jurisdiction. Dr. Mulvaney, can you discuss the relationship between local electricity infrastructures and national defense?

And how can we balance the need for needed upgrades with a cost burden on ratepayers?

[Pause.]

Ms. MATSUI. Dr. Mulvaney?

Dr. MULVANEY. Would you mind repeating that one more time? I am sorry.

Ms. MATSUI. Oh. Can you discuss the relationship between local electricity infrastructures and national defense?

And how can we balance the need for needed upgrades with the cost burden on ratepayers?

Dr. MULVANEY. Yes. So a lot of our military infrastructures and installations are, obviously, around—in rural communities, and these are often—sometimes they could be co-ops, and not even major parts of our major utilities in the State, and they can often be burdened with very high bills.

And it sounds like, from the context for the bill, that these infrastructure upgrades are needed for national security, to make sure that, you know, these critical infrastructures are up to speed, in terms of the most secure facilities, and that they have the latest gear in there, and all that stuff. But that is expensive. And when a co-op or a—even a utility has to build those infrastructures, the ratepayers have to pay for that.

Ms. MATSUI. Right.

Dr. MULVANEY. So in terms of—so there is a couple of ways to protect low-income customers. One is you have outside investment help that, and that could be supported by the government. But you could also have programs to protect low-income ratepayers. Like, California has a law—has the California——

Ms. MATSUI. Thank you very much.

Dr. MULVANEY. —[inaudible] program that allows them to——

Ms. MATSUI. Dr. Mulvaney, I have run out of time.

Ms. SNYDER. Sorry.

Ms. MATSUI. Thank you, I yield back.

Ms. CASTOR [presiding]. The gentlewoman yields back.

Next up, Mr. Johnson, you are recognized for 5 minutes.

Mr. JOHNSON. Well, thank you, Madam Chairwoman. Well, here we are, right in the middle of this preventable, in my opinion, intentional energy crisis.

Five-dollar-a-gallon gasoline in rural Appalachian Ohio for my constituents means having to choose between food, medicine, getting to your job, taking the kids to school, or driving to take an elderly loved one for some hospital care. And what does President

Biden and his Administration have to say? Well, they say just go out and buy an electric car, and join us in this—and I quote—incredible transition to green energy.

I mean, our Treasury Secretary actually agrees. She recently said—and I quote—"The critical thing is that we become more dependent on the wind and the sun that are not subject to geopolitical influences." How ridiculous. Excuse me, Madam Secretary.

Mr. Pugliaresi, I can't believe we need to clarify this, but can you please explain how critical minerals and metals for solar panels and batteries and the rare earths to make specialized magnets for wind power generation and electric motors are very much subject to geopolitical influences, not to mention subject to the whims of our geopolitical adversaries?

Mr. PUGLIARESI. Well, until we develop domestic or more secure supplies from reliable trading partners, we are going to find that some of these—many of these critical materials and minerals are sourced out of China, the Congo in Africa, and very, very unreliable sources, which would be in a position to not only generate a great deal of revenue from the sale of these products to the United States, but also to withhold them or to extract wealth from us by charging prices well above market levels.

Mr. JOHNSON. So basically, we are going to be making ourselves more dependent on some of the worst people in the world.

Mr. PUGLIARESI. I believe, without the proper measures, we could end up taking a position of relative energy security to one of energy insecurity.

Mr. JOHNSON. Well, let me pivot for a moment to this water heater legislation regarding so-called demand response technology, which I think is better described as the capability to remotely control the American people technology.

I don't know about you all, but my constituents would be extremely concerned if an outside entity—say the power company, or the EPA, or the Department of Energy—at the push of a button tells them, "Sorry, you have got to take cold showers today because the grid is overloaded."

Friends, the solution here is to make policies and implement policies that make electricity generation more affordable, more reliable, and more abundant, not look at ways to micro manage household energy use.

So, Mr. Lieberman, you mentioned it briefly in your testimony. Can you describe to us the concept of—I quote—"forced demand response"?

And can you explain why, without effective guardrails—I mean, could you see this expanding beyond water heaters to other home appliances, and perhaps even electric vehicles?

Mr. LIEBERMAN. Well, yes. There are some very legitimate concerns about privacy here.

What this program would do—essentially, it strikes me as trying to make up for the intermittency of wind power by allowing extra wind to be used to heat your water when it is available, or extra solar. And that would require turning on the water heater at that time. What strikes me is it is really getting away from the consumer focus of the Energy Policy and Conservation Act, which is

supposed to save consumers money, and do so in a way that doesn't compromise any product performance features, reliability, choice.

The more I learn about this program, the more—maybe cockamamie is too strong a word, but at least convoluted. I just don't believe that it could ever happen in a way that wouldn't be a lot of problems for consumers. And in any event, if any homeowner wants to go along with this, more power to them. But we need to prevent this from being mandated.

And, you know, in response to maybe the argument, well, this doesn't mandate it, it gives DoE the option of mandating it, well, you know, maybe I would be impressed with that if this was my first week in Washington. But we know that regulatory agencies always take every opportunity to expand their power. And so this will mandate the demand response capability.

Mr. JOHNSON. Yes. Well, I thank you for your comments.

Madam Chair, I yield back. It is mind boggling to me that we are even talking about something like this.

Mr. MCNERNEY [presiding]. The gentleman yields back?

Mr. JOHNSON. I yield back.

Mr. MCNERNEY. Thanks for the gender promotion.

Mr. JOHNSON. Sorry, I thought my colleague from Florida was still——

Mr. UPTON. It is that new haircut.

Mr. JOHNSON. I didn't even look over there.

Mr. UPTON. It was that new haircut. It was that new haircut of his.

[Laughter.]

Mr. JOHNSON. That is all right.

Mr. MCNERNEY. The Chair now recognize the gentlewoman from Florida, Ms. Castor, for 5 minutes to ask questions.

Ms. CASTOR. Well, thank you, Mr. Chairman, and thank you to our witnesses for being here.

This is a very timely hearing, because we know that our neighbors are really grappling right now with the higher cost of energy, driven by Putin's unprovoked war in Ukraine, the squeeze put on by oil and gas companies because of America's continued addiction to oil. So we have got to invest in our energy infrastructure to lower costs for families, and at the same time tackle the climate crisis and protect our communities from the costly impacts of climate change that we can no longer avoid.

So we are making progress. Many of the bills we are discussing today will help advance clean energy and lower cost to energy efficiency, from equitable access for weatherization to expanding the use of distributed energy sources for demand response for a more flexible, innovative grid to ensuring the resilience of our military installations.

I want to thank Representative Peters, especially, for the GRID Act that is focused on innovation at DoD. You know, think about how our national security is reliant on consistent energy, but to fulfill those critical defense and strategic missions we have got to ensure that energy supply to those bases is continuous and reliable. I have a base in Tampa, MacDill Air Force Base, and we are very concerned about, over time, the resilience of that base and energy supply.

But let's talk about a flexible grid with more renewable energy, because more efficient electric space and water heaters will save Americans money on their electric bills. We have the technology to do this. I—some of these arguments are, like, from 20 years ago, we can't do this in America. We can do this. We have the innovative technologies to do it.

So, Mr. DeLaski, help us understand how water heaters with demand response could help facilitate a more flexible electric grid. What is demand response? You have heard it criticized here today. And why are water heaters well suited for it?

Mr. DELASKI. Thank you for the question. Water heaters are very well suited for providing demand response services because, in essence, they act as a battery. All of us—or most of us—have a water heater in our home that has got 40 or 50 gallons of water in it. We aren't using that water on a continual basis. We can heat it up when power is cheap, and we can reduce our bills tremendously if we have that capability in our water heaters.

One thing I want to point out is that it is much cheaper to add that capability at the point of manufacture than to retrofit it once that water heater has been installed. For a utility to send a truck out to someone's home to retrofit a water heater is hundreds of dollars. Doing it in a factory so that it comes equipped, so that customer has the choice—they don't have to join a demand response program, but we want them to have the choice.

This bill gives the consumer the choice, if acted on by the Department, if the Department takes advantage of the authority, it would give consumers the choice to be able to participate in demand response programs, if offered by their utility.

Ms. CASTOR. Mr. Greene, what do you think?

Mr. GREENE. Thank you, Congresswoman. To be very short and efficient and candid here from a manufacturer's standpoint, we have been involved in both pilots, as well as DR programs with water heating equipment for the better part of a decade. And while these programs are nascent, they are all voluntary.

What we are really asking for, as manufacturers, as relates to technology innovation, is standards that we all can meet. And just having the water heater have the capability, and therefore giving a consumer that may want to enter into a DR program the ability to do so, for us it is all about business certainty and manufacturing to a national standard versus bespoke standards that may be coming into the future.

Ms. CASTOR. So innovation, lower energy bills for consumers, this makes enormous sense. And I am a little confused to why our GOP colleagues are criticizing this today, because still on their website today they are highlighting our bipartisan work in 2015 to ensure energy saving, grid-enabled water heaters continue to be manufactured and sold, a solution to facilitate greater cooperation and save money. So we need to move these bipartisan efforts forward, and focus on real solutions to lowering consumers' energy bills. I know we can do it.

And I will yield back my time, thanks.

Mr. MCNERNEY. The gentlelady from Florida yields. The gentleman from Indiana, Mr. Bucshon, is recognized for 5 minutes for questions.

Mr. BUCSHON. Thank you, Mr. Chair. I am pleased we are coming together today to discuss concrete actions we can take to help bolster our energy infrastructure and deliver reliable, affordable, and clean energy to our constituents. However, I must emphasize my disappointment in the majority's unwillingness to discuss some of the most pressing issues facing my constituents and our constituents on the energy front.

Last week gasoline prices climbed over $5 a gallon nationwide. In my home State of Indiana, Hoosiers are paying, on average, $5.11 per gallon for regular gasoline and over $6 per gallon for diesel.

My constituents are also facing the potential risk of rolling blackouts this summer due to insufficient grid resource capacity. And this isn't my opinion. This is according to MISO, the Midcontinent Independent System Operator, and also some utilities in the region.

Our constituents are hurting from the Biden Administration's ideologically motivated energy agenda that puts the goals of the radical environmental groups above the needs of the American families. As has been said many times in this committee by my colleagues and I, this is a dangerous approach that will significantly hamper our ability to reliably and affordably meet our energy needs moving forward.

Some countries around the world are already experiencing dramatic reckonings resulting from such an approach that is being proposed by the Administration, and are being forced to take drastic action, literally, as we speak. For example, Germany, the Netherlands, Italy, and Austria recently announced intentions to bring back some coal-fired power plant generation due to their inability to meet energy needs with intermittent renewables without Russian gas. Who would have thunk that the Russian gas would go away?

You have to have capacity yourself. This may put them back at the starting gate when it comes to decreasing their carbon emissions and their climate goals over time. In fact, some politicians in Germany are now discussing openly, publicly the possibility of overturning the country's 2017 ban on hydraulic fracturing, or fracking, to increase the domestic supply of gas. Wow, what an idea. We should think about that in some of our states here, in America.

Why would America, with our own vast resources, follow down the pathway we are witnessing in Europe? We are not trying to reinvent the wheel here.

So Mr. Pugliaresi, when I questioned you before a joint hearing of the Environmental and Energy Subcommittees last fall, you said that we could affect prices if we ensure that our domestic oil and gas industry remains efficient and produce at capacity. So prices are continuing to rise. What are we missing out on here?

Mr. PUGLIARESI. I think part of the problem, of course, was that the lockdowns, in my view, were excessive. And they resulted in a lot of our supply chains being disrupted. So we had a real problem coming out of the lockdowns.

But we also have a real problem on expectations, as Ben had spoken about previously.

I would like to point out one thing. Recently, President Biden visited Japan. And the two——

Mr. BUCSHON. And I was just there, too, myself.

Mr. PUGLIARESI. Yes. Prime Minister Kishida and the President issued a lot of joint statements. But when it came time to make a joint statement on the importance of LNG exports and the importance of more investment in U.S. oil and gas, only Prime Minister Kishida was on that statement. President Biden refused to join him in calling for more investment in U.S. oil and gas.

We need to kind of change the dialog. These investments in oil and gas production and infrastructure, they are long-term. They require regulatory certainty, and they require investment certainty. And we don't have that right now.

Mr. BUCSHON. Yes. I mean, on my recent trip to Japan with some other members, bipartisan, the prime minister told us—and his people told us the same thing—you know, when we were talking energy policy, they want to be partners, and they are completely dependent on imported energy, as you probably know. And they want to be partners with us on LNG and other sources of energy. They are desperate to work with us on these issues.

Mr. PUGLIARESI. Absolutely.

Mr. BUCSHON. So the rolling blackouts looming in Indiana and elsewhere across the country are there. I mean, it is also for you.

How can we increase grid resource capacity to minimize the possibilities of power outages? How do we minimize that? I mean——

Mr. PUGLIARESI. We have not invested enough in the grid, and we have not invested enough in systems that can back up and provide reliability for intermittent power. And, you know, there are a lot of ways to address this.

I have always—I—some time ago I spoke to Chairman Chatterjee, when he was chairman of FERC. And I said, "Why don't we have everybody bid firm power? Let the solar folks, the wind folks come to the table with 24-hour power, and at least we would have some price discovery." We don't really know what the cost of intermittent power is, because it is not the same as baseload power. It is a different product.

Mr. BUCSHON. Understood. I yield back. Thank you very much.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentleman from Arizona, Mr. Schrader, for 5 minutes for questions.

Mr. SCHRADER. Well, Oregon is a good State, too.

Mr. DeLaski, my question pertains to Congresswoman Dingell's bill to create a new demand response system for residential water heaters. Do you envision that the provisions regarding demand response capability for hot water heaters could rely on the internet, as opposed to in person only?

Mr. DELASKI. So some programs that exist today in states such as Oregon and Washington and others do rely on being able to control, being able to—consumers can opt into programs where they can gather information, for example, for a water heater to respond to a price signal so that the water heater knows that, when prices are low, it is a good time to charge up. And then, when prices are high, it is a good time for that element not to be activated. So, yes,

that information would travel over the internet, and the—to know what is happening with prices in real time.

So yes, technology has advanced tremendously, and being able to use the ability of real-time knowledge to make the water heater decide when it is going to operate is a benefit that could be achieved through a smart, well-designed program created by a utility.

Mr. SCHRADER. That could be a win-win, and save money for the consumer, as well as the utility and rates overall.

Do you expect such demand response technology to be open standard or proprietary?

Mr. DELASKI. So there are three states now, or a number of states that have set standards on manufacturing, and they are generally requiring an open standard. And that would be part of what would make sense, as the Department considers doing a national standard.

One of the benefits that we see in having standards is that they—open standards that would allow any number of market participants to participate in that market to provide demand response services, so that it is not proprietary, and not controlled by anyone—so that we get competition in the market. That is the objective of an open standard.

Mr. SCHRADER. Yes. Because otherwise, it could be extremely costly to the utilities, the ratepayers, and kind of confusion in the marketplace for the consumer that thinks they can hook up and have that demand response that you alluded to earlier.

The Department of Energy is supposed to determine the economic viability and technological feasibility of these demand response technologies. Do you expect such technology to be put in place here in the short term, next year or so?

Mr. DELASKI. Well, as I mentioned earlier, there are a number of states that have requirements today, including up and down the West Coast, and then a number of states have authority for that

[inaudible] for standards to be required, as well. So that is already starting to shift the markets and creating a range of requirements on manufacturers that are coming in the

[inaudible] at different times, different

[inaudible].

The technology is there today. I think the question is, do we try to normalize this and have a national approach? Or do we let it go State by state?

Mr. SCHRADER. Very good, very good. Yes. No, it seems like the sooner we move to some uniformity in that area, the better off we will all be.

With that I yield back, Mr. Chair.

Mr. MCNERNEY. Well, the gentleman from Oregon yields back. The Chair now recognizes the gentleman from Michigan, Mr. Walberg, for 5 minutes.

Mr. WALBERG. Thank you, Mr. Chairman, and thanks to the panel for being here. While I am glad we are discussing some of the bills today, I know our time could be better served by addressing the energy crisis happening across the country.

Today it has been reported to me the average price of gasoline in Michigan is $5.13 a gallon. In Washtenaw County, in my district, where University of Michigan is, the situation is even worse,

with prices hitting nearly $5.23 a gallon, which is $0.30 higher than the national average.

My constituents are struggling. And as members of the Energy Committee in the House, we need to be doing more to address this issue because it is, as some of my colleagues have said already, is impacting people's lives, literally, with choices that they shouldn't have to make that are really life-changing choices.

There are some good bills before us today, as I said, but the scope of the challenge calls for much more. It is unfortunate that the Republican legislation that would help alleviate high prices at the pump, like the American Energy Independence from Russia Act, the Strategic Production Response Act, and My PIPES Act are not up for discussion.

That being the case, Mr. Pugliaresi, in your testimony you outline that there is a fundamental misunderstanding of the impact of government policies on energy markets. Can you talk about that misunderstanding, and how it has led to higher energy prices?

And how can we transition back to a more realistic approach to energy policy?

Mr. PUGLIARESI. Right. I think one misunderstanding is the scope and the scale of the energy transition. It is much, much harder than most of our analysts and our—much of which the government believes. This is a worldwide problem. Even if the U.S. were to go to net zero, and all our OECDs were to go—all our member countries in the OECD were to go to net zero, in the absence of a transformation through Asia Pacific and the rest of the world, the reduction in greenhouse gas emissions in 2050 would probably be about 20 percent less.

So the real issue here is that economic growth and prosperity, human development is going to take a massive commitment of continued production of fossil fuels.

And the United States is blessed with extensive resources of oil and gas. But we have made a lot of mistakes. We have not provided the infrastructure, the regulatory programs to allow the infrastructure to build these resources out and to make energy more affordable for the American people.

Mr. WALBERG. Yes, yes. And hearing comments that Americans are addicted to oil and fossil fuels—we are addicted to success. We are addicted to a good standard of living. We are addicted to future opportunities. And I don't think most of us mind doing away with fossil fuels if we have something better. What we want to have is our continued lifestyle in the United States, which benefits the world.

Turning now to the legislation before us, last Congress I was a cosponsor of an earlier version of H.R. 7962, which aims to fix an Obama-era regulation and modify the definition of water heater under the energy conservation standards. This has been a long process, and I commend the stakeholders for continuing to work together to come to an agreement. I am also a cosponsor of the current iteration. However, there are still some questions that remain which may impact my continued cosponsorship.

Mr. Greene, the current version of the legislation has some new language involving demand response, as we have talked about, for residential hot water heaters. Why was this provision necessary,

and how does your company and the broader industry feel about its inclusion?

Mr. GREENE. Thank you, Mr. Walberg. The industry does support the language as a threshold matter, No. 1.

No. 2, the language was inserted, based upon stakeholder input from the prior iteration of the bill, and working with one particular stakeholder, the National Rural Electric Cooperative Association, and deriving language that would help maintain the ability of consumer choice for electric storage water heaters.

The DR language, the demand response language, is more about manufacturers coming together and having the Department have one national standard on the capabilities that the water heater would have to have. Not that there is mandatory enrollment in DR programs, but just so we, as manufacturers, have one standard to manufacture two, rather than bespoke standards around the country.

Mr. WALBERG. OK. Well, thank you. My time is expired, and I have other questions that I will submit for the record.

[The information appears at the conclusion of the hearing.]

Mr. WALBERG. But thank you, and I yield back.

Mr. MCNERNEY. The gentleman yields back. The Chair now recognizes the gentleman from Alabama, Mr. Palmer, for 5 minutes to ask questions.

Mr. PALMER. Thank you, Mr. Chairman. I have got so much that I want to run by, I need 30 minutes. But I will do the best I can.

I just want to point out some things. And for the record, I am tired of the Biden Administration trying to put blame on others for the energy price increases. I want to say for the record that price increases are not the result of the pandemic. They are not the result of Putin. They are not the result of profits. They are the result of policies. And until the Administration adopts policies that will change the situation, we are going to continue to see energy prices go up. And they are going to have a devastating impact on low-income households and households on fixed incomes.

We see it played out day after day. We have seen it in Europe, with their mad dash to convert to renewables. We have seen it manifest itself in some ways that a lot of people don't think about.

There is numerous reports out about excess winter deaths, excess winter deaths as a result of low-income individuals, people on fixed incomes not being able to afford the price of heating their homes adequately. This is not freezing to death. This is people with cardiovascular respiratory illnesses, and we are talking about 20,000 to 30,000 now being reported in England and Scotland and Wales and places like that, and all around Europe.

So there are consequences for these actions. It is not just economic consequences. It is across the board. And I am really, frankly, tired of listening to this Administration try to blame the pandemic or Putin or energy company profits for a problem that they have themselves created.

And Mr. Pugliaresi, I have really appreciated the graphs that you put up. I would like to see those graphs, but you laid out a visual for where we are, in terms of our energy policy.

The other thing that I want to point out is—and I think both you and Mr. Lieberman have commented on this—is the importance of

the natural gas reserves that we hold. We will never run out of natural gas. I mean, just a few years ago they were predicting that we were going to run out of everything. But we will never run out of natural gas. We will never run out of oil.

And the thing that I want to point out in this, again, this push toward renewables, if you build a natural gas facility to generate electric power, it will have a generating life cycle of about 60 to 65 years. You build a next gen nuclear facility, which can use spent fuel rods that retain 90 percent of their energy, and that facility will operate for 100 years. I mean, you can only imagine the technological advances that will occur in that 60 to 100-year period. But you build—if you rely on solar or wind power, those facilities have a life cycle of 25 to 30 years. And on the wind power, the turbines start losing generating capacity after ten years.

And I want to add one other thing. To get the same power generation from a—that you can get from one next gen nuclear that can be sited on 640 acres, it would take 70,000 acres for a wind power facility.

So people need to understand what is going on here. And we can come in here and we can ask questions. You start talking about the materials that we are going to need, and a lot of times we start talking about rare earth elements, but we are talking about iron, we are talking about copper, and others that are not rare earths. And you have got the Biden Administration wanting to utilize the Defense Production Act to increase the mining and production of these metals. But at the same time, the Administration is using regulations to block it.

I mean, this is what we have got in this Administration, and the policies that we are getting from the Democrats who have the majorities in both Houses of Congress, policies that are going to drive our economy into the ditch, policies that are going to result in more excess winter deaths, policies that are going to increase the number of Americans living in poverty because inflation is off the rails and will continue to go up, and no policies, no sensible policies, no sane policies that will get us going in the right direction.

Now, I know I am supposed to come in here and ask you some questions. I will send you some in writing.

[The information appears at the conclusion of the hearing.]

Mr. PALMER. But I just think that we need to have clarity in this discussion, and I am going to repeat it for the third time: this is not the pandemic, it is not Putin, it is not profits; it is the Biden Administration policies.

With that, Mr. Chairman, I yield back.

Mr. MCNERNEY. The gentleman from Alabama yields back. The Chair now recognizes the gentleman from Arizona, Mr. O'Halleran, for his 5 minutes.

Mr. O'HALLERAN. Thank you, Mr. Chairman, and Ranking Member, for holding his meeting today.

In the Fiscal Year 2022 omnibus Congress authorized the DoE to provide direct loans through tribal energy loan guarantee programs. My bipartisan bill, the Tribal Energy Investment Act, would extend current law, ensuring tribes have access to capital to invest in energy products—projects vital to our communities which create

good-paying jobs, and renewable energy to the grid, and encourage resiliency.

Mr. Frias, can you describe what barriers tribes and tribal organizations face when financing energy projects?

How does the Tribal Energy Loan Program play a role in lowering those barriers?

Mr. FRIAS. Thank you, Mr. O'Halleran, for your question.

You know, tribal communities face difficulty getting access to capital across the board in all forms of economic development. By removing—and these—let me step back for a second.

You know, these projects are complex, and there is a number of components to it. By removing the need for finding a financial institution to fund this project, and allowing for direct loans, you simplify the process and make it easier for tribes to invest in energy development and create, as you have mentioned, jobs: high-paying, quality, long-term jobs in Indian country.

Overall, there is difficulty getting financial institutions to work in Indian country. The difficulty was in access—accessing capital in Indian country, something that we work on quite a bit at NAFOA, and it is why we have made so many comments on the original NPR for the Community Reinvestment Act, and why we are looking at the joint NPR, the Community Reinvestment Act, because getting capital into Indian country is harder than I believe it should be.

Mr. O'HALLERAN. Thank you, Mr. Frias. In your testimony you note that the energy development can transform communities. We have certainly seen that go both ways.

In Northern Arizona, in 2019, the closure of the Navajo Generating Station cost hundreds of Arizonans, mostly members of the Navajo and Hopi tribe, to lose their jobs. But other energy projects like hydrogen, hydropower, solar, wind, natural gas present opportunity—present opportunities for significant economic development.

I look forward to working with my colleagues to ensure this fix is made permanent, and tribes have access to the resources they need to thrive in the 21st century energy economy, and also that we take into consideration, as these plants close, the families and the jobs that are going to go with them, to make sure these areas in rural America stay as part of the permanent structure of our landscape.

In my remaining time I would like to focus on what America can do to secure our critical minerals supply chain. I was disappointed to read yesterday that mining companies taking a page from the playbook of big oil are prioritizing stock buy backs over investment in projects essential to securing America's clean energy supply chain. We need a diversified, critical minerals supply chain, but some seem to present a false choice, pitting our transition to renewable energy against American commitments to clean water, protecting our lands, and respecting tribal sovereignty.

We don't need to compromise American values to build a strong, critical minerals supply chain. We need to understand the makeup of that supply chain in the world, and become dominant in those areas that are—where we are now weak. We need to identify clearly how we are going to strengthen those supply chains and, if possible, bring a lot of that back to America, where it belongs.

I am committed to working across the aisle to find common-sense solutions to ensure we aren't trading with—which authoritarian regimes plague us into an energy crisis, and instead invest in a future where America is truly energy independent

[sic].

Article after article after article has clearly identified—and studies—that we are not in the right place when it comes to the resources that we need to both address the challenges our society is facing, and to address the needs of a cleaner climate and less carbon future.

And with that, Mr. Chairman, I yield.

Mr. MCNERNEY. The gentleman from Arizona yields. The gentlewoman from Arizona is now recognized for 5 minutes to ask questions.

Mrs. LESKO. Thank you, Mr. Chair. It is Arizona time, I think.

I want to make a statement first before I ask a couple of questions. I really think, on H.R. 7962, we need to remove the demand response system program. I understand that you want a national standard, but from a consumer point of view, I can tell you that my constituents are going to go epileptic if they think the utility companies are going to shut off their water heater in the middle of a shower. And so I think that that is a problematic part of it.

I have a question for Mr. Pugliaresi. In Arizona we have a lot of mining. And so we have—we produce about 65 percent of America's entire copper production.

There is also another mine in Superior, Arizona owned by Rio Tinto, where they have invested $2.3 billion. And under the Trump Administration, it was given the green light. But two months into the Biden Administration it was—pulled the plug. And it could produce about 25 percent of all the copper that is needed or consumed in the United States.

We also have a—large lithium deposits in Arizona.

So my question is, how do you think H.R. 1599, which is Representative Upton's bill, would help produce and encourage mining in the United States, which, of course, is needed if we are going to move to, you know, send—wind and solar and EVs?

Mr. PUGLIARESI. So I think the bill would permit DoE to identify the importance of these materials. It is not going to fix the Interior Department, right? I presume these mines are on public lands, and particularly in Arizona, and they are—unfortunately, we are going to eventually have to reform NEPA.

I am not sure why the Administration pulled the plug on those mines, or whether they were acting on a court case. But we are going to have to find a way to develop resources in this country that is—meets environmental standards, but can go through a regular approval process, rather than endless delays and fighting over a very uncertain set of standards. So in that sense, it is a much more serious reform problem we need to undertake.

Mrs. LESKO. And I agree with you. We need to promote not only mining, U.S. mining production, but U.S. oil and gas production to solve some of our problems and be less reliant on China, quite frankly.

My next question is for Mr. Lieberman. H.R. 7947, the Weatherization Enhancement and Readiness Act of 2022, creates a new

weatherization readiness program to provide grants to State and tribal organizations for low-income residents. I have been a supporter of the Low-Income Home Energy Assistance Program, LIHEAP, which provides Federal funded assistance in managing costs associated with home energy bills.

My question is, do you think this bill, this new program established by this bill, would be duplicative of LIHEAP?

Mr. LIEBERMAN. It could be. LIHEAP helps pay the energy bills after they have been incurred. Weatherization, if it works right, prevents the energy from being used in the first place.

Again, I think the problem with the weatherization program, how much bang for the buck are we getting, how many cents on the dollar are being spent wisely, I think that we are doling out more money after more money after more money without taking a look at what past money has succeeded at and failed at.

And in terms of the larger issues, I think if a low-income household had a choice between a completely unweatherized home and the energy bills of the recent past, or a heavily weatherized home but today's energy prices, I think most would go with the unweatherized home. It would probably be cheaper for them. So we really need to get those energy costs down through more production. That is job one.

Mrs. LESKO. Great. Well, I thank all of you for being here, and those online and testifying. And let's work together and help America.

And with that, I yield back.

Mr. MCNERNEY. The gentlelady yields back. I understand that there are members that wish to come back after recess for questions.

So at this point we are going to be calling recess until immediately after votes.

[Recess.]

Mr. MCNERNEY. I call the subcommittee back to order.

The gentlewoman from Delaware, Ms. Blunt Rochester, is now recognized for 5 minutes for questions.

Ms. BLUNT ROCHESTER. Thank you, Mr. Chairman, for calling this hearing, and thank you to all of the witnesses for your testimony today.

Even though summer officially began yesterday, we are already entering the third week of excessive heat and humidity across the continental United States. These record high temperatures and extreme weather events will continue to put pressure on the country's energy sector, which is why it is more important than ever to work together on legislation that makes our energy infrastructure more efficient, more resilient, and more affordable.

Electricity is a necessity to our everyday life, from the heating and cooling of our homes and buildings to the use of important medical technologies. The public health and safety of our constituents requires reliable access to electricity. The demand for electricity only continues to grow. We need to invest and upgrade our energy infrastructure in ways that will help optimize energy and help our country combat the ongoing impacts of climate change. And it is critical that we work together on this legislation, so that we can help expand and modernize our Nation's energy infrastruc-

ture, making it cleaner, safer, and more dependable, and more affordable for all Americans.

Dr. Mulvaney, the renewable energy transition is a key component of addressing climate change by lowering harmful emissions and providing more Americans with clean energy. Many of these low-carbon technologies, however, still rely on critical minerals that need to be mined from the Earth. And like many renewable technologies, the solar panel supply chain is quite complex. Environmental technology standards are becoming more common, such as the "ultra-low carbon" standard that you are advising through the Green Electronics Council.

What would ultra-low carbon technology mean, not only for emissions, but also for environmental justice communities, where residents are already overburdened by mineral processing and recycling facilities?

Dr. MULVANEY. Thank you for that wonderful question. There are a few ways.

First of all, I think, to your second point, recycling processes—you know, here I am talking about advocating for recycling technologies. They are often located in low-income communities, and have their own environmental justice consequences. So recycling is a partial solution to this, but we have to be cognizant of these particular—you know, particularly heavy metal issues. I am thinking of Southern California and the Exide facility that left a really bad legacy, and the communities there who are still dealing with that cleanup. So we have to be very, very careful about how we site new recycling facilities, and where we put these, and ensure that the communities and stakeholders are there.

And I will just add one other potential source I think that is missing from the conversation so far is mining—industrial residues. So mining waste. A lot of these critical metals are actually onsite at existing mines already in tailings piles. I am thinking of coal ash as a potential source for rare earth elements. I mean, that stuff would be pretty easy to permit, and you could start processing that right away.

And another example here, Rio Tinto, you know, a major mining company, just expanded their copper mining processing facility to also recover tellurium. Now, tellurium is about 1,000 times more rare than rare earth elements, and it is a critical ingredient to the semiconductor technology that the major—largest manufacturer of solar panels in the United States, First Solar, is using. And they did that by not adding new greenfield mines, but by strategically investing in certain pieces of equipment on their own sites.

So I hope I answered all of your questions.

Ms. BLUNT ROCHESTER. You did—very, very comprehensive.

I guess my next question to you is that many of my colleagues have already noted that H.R. 8053, the GRID Act, would address national security threats. Can you talk about how energy efficiency upgrades to critical defense facilities help to combat national security threats?

Dr. MULVANEY. Well, I think that there are a lot of probably inefficient uses, historically, of energy on military facilities.

So one, I think there is—just upgrading that equipment is going to benefit, generally, the national security, even just kind of, you

know, new wires, new transformers. Things like that, I think, are really key there.

But also the power of procurement, I think, a little bit, too. I think, you know, when you think about using the Department of Defense or government—Federal investments to kind of spur new industries, I think that that could also be a side effect of these investments.

Ms. BLUNT ROCHESTER. Great, thank you. And my next question is for Mr. Greene. And I only have 20 seconds, so I might have to submit this to the record.

So I will give you some food for thought. We were talking specifically earlier about H.R. 7962, of which I am a proud cosponsor. And my question, which I will ask you for the record, is how can legislation that focuses specifically on residential energy efficiency, such as this bill, help alleviate the growing cost to Americans, and help combat climate change?

We will ask you on the record.

[The information appears at the conclusion of the hearing.]

Ms. BLUNT ROCHESTER. And thank you so much, Mr. Chairman, and I yield back the time.

Mr. MCNERNEY. The gentlelady yields back. The Chair now recognizes the gentleman from Virginia, Mr. McEachin.

Mr. MCEACHIN. Well, thank you, Mr. Chairman, and thank you for pulling this meeting together, and to our witnesses. I extend you greetings, and thank you for your testimony today.

Mr. DeLaski, your organization works to advance standards that reduce emissions, and that contribute to climate change and public health harms. Whether through weatherization or through better appliance standards, what type of financial savings can be realized by reducing energy use, particularly for those of low to moderate income?

And what might—what impacts might these savings have, sir?

Mr. DELASKI. Thank you for the question. I will start with the weatherization program.

The weatherization program is a proven successful program for lowering energy bills for low-income households. The typical savings, or the average savings for a participant—participating household is $372. That is real money. That is real money that matters for households that are making decisions between, you know, how do I pay for my medicine, how do I pay for my medicine versus utility bills versus food. This is an incredibly important amount of savings that makes a real difference.

I also want to point out that the program is very cost-effective. The data that we have, and that I think is well documented, is that for every dollar invested in the weatherization program, $1.72 is generated in energy saving benefits. Those are direct benefits.

And while those energy saving benefits are important, those same investments are resulting in an additional $2.78 in non-energy benefits that are perhaps even more important for vulnerable communities. This is like lower asthma rates, reduced respiratory illness, money to pay for medications. This is, you know, better home comfort. So the benefits aren't just energy savings. They are making the homes more safe for the people who live there who are the lowest income households.

The Appliance Standards Program also delivers very large savings for average households. The typical U.S. household is spending $500 less this year on their utility bills than they would be spending if we never had appliance standards. The program works because it has a proven track record of success, and it is delivering savings today. Those savings can be increased by improving our standards over time to keep pace with technological change in a cost-effective way.

Mr. MCEACHIN. Thank you for that. Sir, you have spoken today in support of H.R. 7962. And while this bill would do a great deal, one particular piece I am interested in is around the creation of a new demand response program for residential water heaters. As we move to electrify as much as possible and decarbonize our grid, demand response will be key.

Can you discuss the benefits of demand response as it relates to water heaters, but also what this program, should it be signed into law, could demonstrate about how consumer demand response programs and technologies may work on a day-to-day basis?

Mr. DELASKI. Yes. Thank you for that question.

We have a bit of a chicken-and-egg problem with demand response. The chicken-and-egg problem is that, for this program to work for the average consumer, most demand response programs today are directed at large commercial and industrial customers. They are the ones who get the benefit of being able to shift their demand in response to price signals from the utility companies, and to save money to reduce their energy bills. It is—can be very hard for households to choose to participate in these programs, because they aren't designed for them and, in part, because they don't provide the scale.

So to achieve scale, to be able to get significant demand response benefits, it is important that the technology be deployed in a lot of homes. Consumers may or may not choose to take advantage of it, but we need to ensure—what this bill would do is create the possibility for the Department to set requirements that would enable large numbers of water heaters deployed in people's homes to give them the choice of participating in demand response programs that can let them opt in to lower utility rates.

Absent this kind of national requirement, it is a onesie/twosie type of approach to achieving the scale that is needed to be able to let the average consumer take advantage of demand response and take advantage of the lower rates that are available at certain times a day. And those power resources are often the cleanest power resources that are being under-utilized during parts of the day when we could be charging up our water heaters.

Mr. MCEACHIN. Thank you, sir.

Mr. Mulvaney, the text of H.R. 1599 is language that says—or directs the Department of Energy to improve technology that reuses and recycles critical energy resources. And you have in your testimony noted that, at least with regards to lithium ion batteries, we could do much better. Can you talk a little bit about that?

And what would it look like for the Department of Energy to take the direction in this legislation, and what would be the benefits of so doing?

And you have all of 20 seconds. I apologize to——

Dr. MULVANEY. No, that is OK.

I think either—some Federal electronic waste law could benefit collection. It spurred collection of this stuff in Europe. Or, if the private sector adopted probably industry-wide extended producer responsibility that made sure the polluter paid for the end of life of their product.

Mr. MCEACHIN. [Inaudible.]

Mr. MCNERNEY. The gentleman yields. That concludes the member questions.

I would like to thank our witnesses for participating in today's hearings. I remind members that, pursuant to committee rules, they have ten business days to submit additional questions for the record to be answered by the witnesses who have appeared. I ask the secretary to respond promptly to any questions you may receive.

Before we adjourn, I receive unanimous consent to enter the following questions—records into the testimony for the record.

[Pause.]

Mr. MCNERNEY. OK. I am going to backtrack a little bit. We have one more member for questions.

Mr. Joyce from Pennsylvania, you are recognized for 5 minutes.

Mr. JOYCE. Thank you very much. First, I want to thank the chairman and the Ranking Member Upton for allowing me to waive on to this important subcommittee hearing. And thank you to the witnesses for appearing with us here today.

As we have heard from many of my colleagues, America is in the midst of an energy crisis, a crisis that was created by the Biden Administration. Each and every day I hear from constituents who are shocked by the skyrocketing gas and electricity prices that they face each month. What America needs right now is more affordable, reliable, and clean baseload power.

Our nation has the ingenuity and the capability to lead the world in this transition. By investing in innovative technologies like carbon capture and hydrogen storage, we can take advantage of the energy reserves beneath the feet of my constituents, and keep our coal and our natural gas power plants online.

On Sunday the Financial Times reported that Germany would reopen several shuttered coal plants in order to avert the potential natural gas shortage for the upcoming winter months. Germany will fire up these coal plants, despite the fact that the country has committed to phasing out coal by 2030. Meanwhile, its three remaining active nuclear plants are scheduled to go offline later this year, and the government has no plans to extend them.

Here in the U.S. we are facing a similar sort of energy crisis because we are not adequately taking advantage of the resources that are under our feet, whether it is coal, natural gas, or nuclear energy.

My first question is for Mr. Pugliaresi.

Mr. Pugliaresi, what steps can we take in order to learn from Germany's errors, so that we can smartly transition to clean, reliable baseload power, while at the same time regaining our energy dominance?

Mr. PUGLIARESI. I think at first we have to have a realistic view about—that some of the alternative fuels we are trying to promote

now have limitations that are not fully appreciated, particularly by both government policymakers and the public.

And in the case of Germany, it is quite clear, when you choose a very narrow set of fuels—in this case they had a high reliance upon gas and wind—solar in Germany is pretty limited—and it might seem stable, it might be—it might make a lot of sense in the beginning, but it is like an investment portfolio. The—you face a lot of risks when you make too narrow a choice. So we need a widely diverse set of very productive fuels to power our economy.

Mr. JOYCE. Mr. Pugliaresi, I agree with you. I think that you have elicited that we need reliable and resilient and diversified power sources to maintain the power grid. And it is more important than ever, as we see an evolving market forces.

As more intermittent resources—such as you mentioned, wind and solar—get brought online, and more EVs are placed on the road, the grid must accommodate demands in ways that it was never designed to do so. How can we encourage the collaboration with grid operators and utilities so as to better plan for the future, and to preserve and promote the resiliency that we need to see in the grid?

Mr. PUGLIARESI. So I think we have under-invested in our grid for a lot of reasons. It has been kind of an afterthought. And the time has come now where utility systems and the regional—you know, the transmission organizations, we are going to have to put a lot more money into the grid, and a lot more effort in upgrading it and modernizing it so that it can undertake a wide range of fuel sources and generating power.

Mr. JOYCE. My final question is for Mr. Lieberman.

Your testimony touches on reining in government spending and strengthening consumer and taxpayer protections. Unfortunately, this Administration seems focused on expanding Federal agencies on the taxpayers' dime, while using regulation to prevent unlocking the resources that would actually provide the consumer with some necessary relief. Permitting is a big part of this.

Could you speak to the energy infrastructure permitting reforms that might allow the U.S. to unlock its energy potential and bring down the prices, the prices that the average American is facing right now?

Mr. LIEBERMAN. I remember when President Biden mentioned that there were 9,000 permits that weren't being acted upon, oil and gas permits. And I looked into it, and others looked into it. And of those 9,000, there is a number of other ways that the government can actually stop the actual process of drilling, even for permitted projects. There is just so much going on. There is so many different ways to block production, and they are all being aggressively used right now.

One thing I would mention is the National Environmental Policy Act, or NEPA. The previous Administration made some modest but useful reforms to that that I think have been—that have been largely reversed by this Administration. That is heading in the wrong direction. We need to have a much more streamlined permitting process, or the same mines we are talking about today we will be talking about them five or ten years from now.

Mr. JOYCE. The streamlining of the permitting process is absolutely necessary.

Mr. Chairman, thank you. I appreciate you allowing me to waive on to this important hearing.

And I thank all the witnesses for your participation.

Mr. MCNERNEY. The gentleman yields.

At this time I request unanimous consent to enter the following documents into the record: No. 1, a June 21st, 2020 letter from the Air Conditioning, Heating, and Refrigeration Institute to the Committee on Energy and Commerce in support of H.R. 7962; a June 22nd—June 21st, 2022 letter from the National Community Action Foundation in support of H.R. 7947; No. 3, a June 22d, 2022 letter from the U.S. Department of Energy on the underlying legislation of today's hearing; No. 4, a June 22d, 2022 letter from the National Mining Association in support of H.R. 1599; No. 5, an October 14th, 2021 letter from Representative Don Young on H.R. 5292; and last, No. 6, a June 21st, 2022 letter from the Joint Associations in support of H.R. 7962.

Without objection, so ordered.

Mr. MCNERNEY. At this time the subcommittee is adjourned.

[Whereupon, at 2:22 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE
we make life better®

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June 21, 2022

The Honorable Joe Manchin
Chairman
Energy & Natural Resources Committee
U.S. Senate
Washington, D.C. 20510

The Honorable Frank Pallone
Chairman
Energy & Commerce Committee
U.S. House of Representatives
Washington, D.C. 20515

The Honorable John Barrasso
Ranking Member
Energy & Natural Resources Committee
U.S. Senate
Washington, D.C. 20510

The Honorable Cathy McMorris Rodgers
Ranking Member
Energy & Commerce Committee
U.S. House of Representatives
Washington, D.C. 20515

Dear Chairman Manchin, Chairman Pallone, Ranking Member Barrasso, and Ranking Member McMorris Rodgers:

We, the undersigned Officers and Directors of the Air-Conditioning, Heating, and Refrigeration Institute are writing to support legislation (H.R. 7962/S. 4061) to amend the Energy Policy and Conservation Act (EPCA) to clarify the definitions of residential and commercial water heaters.

The water heater definition legislation corrects an error in a final test procedure rule issued in November 2016 by the U.S. Department of Energy (DOE) for commercial water heaters that required manufacturers to rate certain commercial water heaters using residential water heater efficiency standards. This created turmoil within the industry and resulted in property and small business owners spending resources to find alternative solutions because the commercial water heating equipment that fit their needs was no longer available. In response to industry and business consumer concerns, DOE granted a temporary reprieve through a "non-enforcement" policy, which expired at the end of 2021.

To permanently correct this error, a technical amendment to the statutory definitions of water heaters in EPCA is necessary. This technical amendment is narrowly tailored to clarify by statute the definitions of residential and commercial water heaters in EPCA.

Leading manufacturers of air conditioning, heating, commercial refrigeration, and water heating equipment, who make the most innovative, energy efficient products available in the world today, are grateful to Senators Stabenow and Blackburn, and Representatives Dingell and Walberg for introducing this much-needed technical amendment that will realign the legal definitions of commercial and residential water heating equipment enable more appropriate product choices for small businesses and provide business certainty for water heater manufacturers. We stand ready to aid the Senate Energy and Natural Resources Committee and

the House Energy and Commerce Committee leadership in whatever manner you deem most beneficial to help ensure water heater definition legislation is enacted at the earliest possible opportunity.

Sincerely,

Stephen R. Yurek
President and CEO
Air-Conditioning, Heating, and Refrigeration Institute

Kevin J. Wheeler
President & CEO
A.O. Smith

Kevin Beckett
President & CEO
R.W. Beckett Corp.

R. Bruce Carnevale
President & CEO
Bradford White Corporation

Christopher Drew
President and COO
Burnham Holdings, Inc.

Keith Coursin
President
Desert Aire LLC

Brent A. Schroeder
Group President – Heating & Air Conditioning
Emerson Commercial & Residential Solutions

Gary S. Bedard
EVP, President/COO Refrigeration
Lennox International

Ron Duncan
President
Magic Aire

Megan Fellinger
President & CEO
Morrison Products



Chris Peel
President & CEO
Rheem Manufacturing Co.



John Swann
President
SPX Corporation

National Community Action Foundation
Connecting Communities to Washington Since 1981

June 21, 2022

The Honorable Bobby Rush
The Honorable Fred Upton
Subcommittee on Energy
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Rush and Ranking Member Upton,

I am the Director of the National Community Action Foundation (NCAF), which represents most local Weatherization Assistance Program (WAP) providers known as Community Action Agencies (CAAs) and their Weatherization partners. Our member organizations enthusiastically support H.R. 7947, the Weatherization Enhancement and Readiness Act of 2022.

The Weatherization Assistance Program has been assigned the welcome job of investing $3.5 billion above the historical program levels to implement the bipartisan Infrastructure Investment and Jobs Act (IIJA) that originated in this Committee. While this venerable program is a proven success, as confirmed by multiple evaluations, it has become snared in red tape and hobbled by obsolete standards that are relics of its origin's decades ago.

At present, the program solves a 20th century problem – wasteful usage of fossil fuels and electricity in homes – by making investments that safely reduce the use of those same fuels by about 20 percent, improve indoor air quality and provide basic safety improvements.

WAP must be updated so that our teams can use 21st century tools and technologies to retrofit homes so they withstand the 21st century's extreme weather threats to lower-income communities and individuals. H.R. 7947 addresses all the statutory stumbling blocks to an appropriate program and we urge its enactment as soon as possible. The IIJA Weatherization initiative is slated to start up this fall. The four essential changes addressed in this legislation are:

1. **Investing more per home on average**

The statutory state average cost per unit (ACPU) spending limit is set at a more reasonable $12,000, about 50% above the current ceiling. It is essential for several reasons.

Market Conditions: This change will allow our teams to acquire building materials and equipment that have skyrocketed in price since the pre-pandemic years and to pay competitive wages to the workforce.

National Community Action Foundation
400 N. Capitol Street 780 Washington, D.C. 20001
Phone: (202) 842-2092 | Fax: (202) 842-2095 | Email: info@ncaf.org

Labor Goals: Today, most local programs pay wages so low that both installers and their supervisors could be eligible for the program themselves if they were not employed by it. In most states, the current constraints keep wages below the market wages reported for each state by the Department of Labor for comparable jobs. Unless this bill is enacted, our teams will be required to install far fewer measures in apartments so as to pay the good wages required by statute.

CAAs share the goal of the IIJA – attracting and training labor from the disadvantaged communities they serve and offering good jobs with a future. As it is, once new workers have completed the rigorous WAP training, they are soon lured to the private sector construction industry with its more reasonable pay. Because of the IIJA resources, as well as the energy markets, there is plenty of competition for these trainees. Weatherization can only retain the workforce it will need if we can pay family-supporting wages under more reasonable expenditure caps.

Resiliency Measures: The new ceiling may also allow our teams to include materials and the addition of climate-resilience elements, including electrification, renewable energy and structural improvements.

Energy Justice: The proposed change also undergirds WAP's energy justice purpose. The most vulnerable people with the highest energy burden are typically those in the most dilapidated, inefficient homes. These houses need more work and major equipment replacements. To maintain a lower average cost, WAP teams today must seek out homes that need very few improvements so that the lower cost of weatherizing those better-off units offsets the work in the most climate-vulnerable homes. This is a source of extreme frustration to local teams who would prefer to focus all help on the people and places with the deepest disadvantages. The change will allow more of the most disadvantaged households to participate in the program.

Additional Recommendation: NCAF respectfully requests that the Committee consider adding language that gives DOE the authority to increase the ceiling if future market conditions warrant. Such a provision has been included in the Senate companion bill, S. 3769. Future policy, technology and workforce conditions will disrupt the market and prices for traditional efficiency services and products. Construction materials and labor are famously variable in price. We believe the Department should have the authority to calibrate the program if appropriate.

2. Fixing the eligible homes

H.R. 7947 authorizes the "Weatherization Readiness" fund for making major repairs that make homes structurally sound and safe enough for the installation of efficiency and renewable energy measures. This fund is not currently authorized, but the Biden FY2022 and FY2023 Budget Request and House Energy and Water Appropriations Bills for FY2022 and

FY2023 contain such funding. It needs to be authorized in order to allow our local teams to prepare the most dilapidated homes for the WAP services they need.

According to a Federal Reserve Bank of Philadelphia study, millions of homes need major repairs. Over the past few years, CAAs have deferred literally tens of thousands of eligible homes for lack of funds to make them Weatherization-ready. During the period of performance of IIJA, more than 220,000 homes may be weatherized. CAAs will be seeking out the most disadvantaged residents and neighborhoods.

3. Normalizing renewable technology

H.R. 7947 modernizes WAP by removing sections, 6865 (c) 4 and (5) of the current statute that treat renewable energy differently from other energy technologies used by the program. It assures that mature renewable energy systems will be evaluated as all WAP investments are. The procedures that validate all other technologies selected for WAP installations should apply to renewable systems.

For many reasons, it will remain challenging to offer access to renewable energy to eligible, low-income homeowners, including landlords, in the CAAs' communities. However, the decades-old restrictions in WAP rules would keep the WAP program resources entirely out of the renewable transformation "toolbox." This program can make a major contribution to giving lower-income communities more access to renewables if it can partner with utilities and the emerging industry in state, utility and local programs. The current constraints are an unreasonable barrier to getting the benefits of renewable energy into low-income communities and this bill removes them.

4. Clarifying the "re-Weatherization" restriction

H.R. 7947 corrects a long-standing "red-tape" issue. USC Section 6865 (c) 2, 42 reads "Dwelling units weatherized (including dwelling units partially weatherized) under this part, or under other Federal programs (in this paragraph referred to as "previous weatherization"), ..."

As interpreted by the Department of Energy, this section of current law means CAAs need to find files from any federal program delivered by any grantee or contractor that might have served that building in the past. The CAA would either need to demonstrate that there was no service in the past 15 years or, in the few cases where work might have been installed, ascertain that whatever work was done was not an energy conservation measure. CAAs only have records for LIHEAP-funded and DOE funded work. The task is not only impossible but it is also unnecessary. Weatherization teams perform thorough inspections before determining what investments, if any, will be installed. A home that has been weatherized in the past will not qualify as needing a WAP job.

Eliminating the requirement simply ends the paperwork burden of verifying the negative by waiting on other federal programs to comb through their past records.

This is a terrific piece of legislation. Enactment is going to smooth the path to delivering the expanded program over the coming years and we applaud the sponsors and the Subcommittee for moving so expeditiously to bring the Weatherization Assistance Program into the present.

Sincerely,



David Bradley
CEO
National Community Action Foundation

Department of Energy
Washington, DC 20585

June 22, 2022

The Honorable Bobby Rush
Chairman
House Energy Committee Subcommittee on Energy
U.S. House of Representatives
Washington, DC 20515

The Honorable Frank Upton
Ranking Member
House Energy Committee Subcommittee on Energy
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Rush and Ranking Member Upton:

The Department of Energy thanks you for the opportunity to provide written testimony today on bills related to a variety of important energy topics.

DOE's work to strengthen America's prosperity and security by addressing its energy, environmental, and nuclear challenges spans the research, development, demonstration, and deployment (RDD&D) continuum. This work includes developing and implementing energy efficiency standards to deploy energy- and cost-saving technologies, and providing loans and loan guarantees for innovative and high-impact energy technologies when private lenders cannot or are unwilling to intervene. DOE also works to secure the nation's energy infrastructure, including the electric grid and supply chains, work that has received added emphasis since the passage in 2021 of the historic Bipartisan Infrastructure Law, also known as the Infrastructure Investment and Jobs Act.

The Department appreciates the opportunity to provide testimony on these bills on important topics including efficiency standards for water heaters, critical electric infrastructure, the Tribal Energy Loan Guarantee Program, critical minerals supply, and DOE's loan guarantees.

H.R. 2975 – To amend the Energy Policy and Conservation Act to modify the definition of water heater under energy conservation standards, and for other purposes. *[Note: Bill reintroduced on 6/7 as H.R. 7962. Updated bill text not yet available].*

This proposed legislation would provide an exclusion for certain categories of water heaters that the draft legislation is defining as intended exclusively for commercial use, but that are currently regulated as consumer products under Energy Policy and Conservation Act (EPCA). The proposed legislation would establish criteria that define those water heaters that should be "excluded" from the consumer part of EPCA and regulated as commercial equipment. The

proposed legislation would set forth a backstop provision if the shipments increase by 25% and requires compliance with the consumer regulations within one year.

The proposed legislation also would add a new category of water heater referred to as "multi-input electric storage water heater," which is defined as a non-heat pump electric storage which can have multiple configurations above or below 12kw. The legislation specifies multi-input electric storage water heaters would be subject to the test procedures and standards for both consumer and commercial water heaters.

In addition, the proposed legislation would require DOE to consider demand response requirements for water heaters. More specifically, the proposed legislation would require DOE to set standards for demand response based on the statutory criteria for promulgation of a rulemaking. In setting such standards, DOE would be required to consider industry consensus standards, such as the Air Conditioning, Heating, and Refrigeration Institute (AHRI) 1430, as part of its test procedure. The proposed legislation would address preemption from state standards, including an allowance for those state standards already in effect such as California, Washington, and Oregon.

H.R. 5135 – To provide the Secretary of Energy with the authority to enter into contracts and cooperative agreements to improve the resilience of defense critical electric infrastructure and reduce the vulnerability of critical defense facilities to the disruption of the supply of electric energy to those facilities. *[Note: Bill reintroduced as H.R. 8053]*

Critical Electric Infrastructure

The energy sector provides the power all 16 U.S. critical infrastructure sectors depend on to operate. A disruption in the energy system can have a devastating impact to national security, the U.S. economy, and the livelihoods of millions of Americans.

The U.S. electric grid continues to grow in complexity and become ever more interdependent due to technology innovation and greater connectivity. These rapid changes are increasing the threat surface area for the energy sector, creating a multi-threat environment. Cyber threats remain one of the most significant strategic risks for the United States. We continue to see an increase in the frequency and sophistication of attacks by a range of actors, including foreign near-peer adversaries, domestic extremists, and cyber criminals.

Critical Defense Facilities/Electric Infrastructure

The Federal Power Act defines a Critical Defense Facility (CDF) as "critical to the defense of the United States," and "vulnerable to a disruption of the supply of electric energy provided to such a facility by an external provider" and Defense Critical Electric Infrastructure (DCEI) as "any electric infrastructure that serves" a Critical Defense Facility, "but is not owned or operated by the owner or operator of such facility."

The current statutory definitions for these terms limits CDFs and DCEI to facilities and infrastructure located in the 48 contiguous states or the District of Columbia.

DOE, in coordination with the Department of Defense, identified facilities located outside the 48 contiguous states and the District of Columbia to be critical to U.S. defense and vulnerable to

electric energy supply disruptions. However, under the Federal Power Act, DOE is not currently authorized to designate these installations as CDFs, and the infrastructure serving them therefore cannot qualify as DCEI. This limitation means these facilities are not eligible for the same protective measures as those designated under the current statutory provisions. Ineligible facilities are put at a significant security disadvantage, and it can be significantly more difficult for DOE to work with the infrastructure owners on key security initiatives, including participation in threat information sharing and technical assistance programs through the Infrastructure Investment and Jobs Act.

H.R. 5135 would expand the number of jurisdictions in which DOE may designate CDFs and in turn the number of jurisdictions that may contain DCEIs, to include all 50 states, the District of Columbia, and United States territories. The expansion would address the significant security disadvantage for facilities located in Alaska, Hawaii, and U.S. territories resulting from current statutory restrictions.

A bill to provide for direct loans to Indian Tribes and Tribal energy development organizations for energy development, and for other purposes. *[Note: Bill introduced as H.R. 8068]*

This bill continues, in FY 2023 and beyond, the legislative change made in the FY 2022 Consolidated Appropriations Act to broaden Tribal Energy Loan Guarantee Program (TELGP) authority to allow applicants to apply to Loan Programs Office (LPO) for direct loans via the U.S. Treasury Federal Financing Bank guaranteed by the Department in FY 2022, in addition to partial loan guarantees to third party lenders. Due to the timing of FY 2022 appropriations and FY 2023 Budget formulation, the Budget appendix and credit supplement report were unable to reflect the direct loan authority. The Department plans to issue a solicitation supplement in the coming months to implement the change from the FY 2022 Omnibus. Combined with recently announced changes in FY 2022 to the TELGP solicitation to clarify project ownership requirements and eliminate certain fees, this expanded authority is expected to increase interest in and accessibility to loan guarantees and loans under TELGP. The Department looks forward to continuing to work with the Committee to evaluate the best legislative pathway for making this legislative change in FY 2023 and beyond.

H.R. 1599 – Securing America's Critical Minerals Supply Act.

H.R. 1599 would instruct DOE to conduct assessments of critical energy resources and their supply chains and to strengthen these through diversification of supply, increasing domestic production, developing substitutes and alternatives, improving reuse and recycling technologies, and evaluating the energy security risks of reliance on imports.

The Department has already undertaken many of the activities this legislation would require. In response to President Biden's Executive Order 14017 on America's Supply Chains, DOE published "America's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition" in February of this year. This report includes deep-dive assessments of supply chains for 11 key energy technologies, including where they use critical minerals and materials. These assessments covered the national security risks of reliance on imports. As part of its recent organizational realignment, DOE also created the Office of Manufacturing and Energy Supply

Chains to ensure the energy industrial base is supported by a clean and resilient domestic supply chain. DOE also participates in the Federal Consortium for Advanced Batteries (FCAB), an interagency group partnering to accelerate the development of a robust, secure, domestic industrial base for advanced batteries. Last year, FCAB published a National Blueprint for Lithium Batteries, which included securing access to the critical minerals needed for commercial and defense applications.

R&D on critical energy materials is largely conducted through the Office of Energy Efficiency and Renewable Energy's Advanced Manufacturing Office (AMO), the Office of Energy and Carbon Management, and the Office of Science. AMO supports a portfolio of work including the Critical Minerals Institute (CMI) led by Ames National Laboratory. CMI pursues research in diversifying the supply of critical minerals, developing substitutes, and improving reuse and recycling. DOE aims to increase domestic manufacturing by improving extraction techniques and increasing domestic manufacturing of some critical energy materials. Funding from DOE's Loan Programs Office is also available to support the domestic critical minerals and materials supply chain, as well as recycling and reuse projects. In April, LPO announced a conditional commitment to lend up to $107 million to Syrah Technologies to expand its capacity to produce critical materials for lithium-ion batteries at its facility in Vidalia, Louisiana.

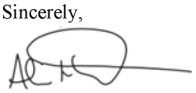
H.R. 5292 – Energy Accountability Act. *Prohibits the Secretary of Energy from making a loan guarantee if the borrower has previously defaulted on an obligation guaranteed under such title*

The Department does not have a position on this pending legislation, which would prohibit DOE from making a loan guarantee if the borrower has previously defaulted on an obligation guaranteed under such title. However, LPO continuously works to improve program oversight, manage project risk, and achieve its mission of investing in the deployment of innovative technologies where commercial debt markets cannot or are unwilling to intervene. Despite the amount of risk that is actively managed by LPO, the portfolio is robust and healthy, as indicated in LPO's FY 2021 Annual Portfolio Status Report.

Conclusion

Thank you for the opportunity provide written testimony on these bills. The Department looks forward to working with you as we protect America's energy security while transitioning to a clean energy economy. *[Note: H.R. 7947 "Weatherization Enhancement and Readiness Act of 2022 is not reflected in this written statement as it was added to the hearing agenda after testimony was complete]*

Sincerely,



Dr. Ali Nouri
Assistant Secretary for Congressional and
Intergovernmental Affairs



RICH NOLAN
President & CEO

June 22, 2022

The Honorable Frank Pallone, Jr.
Chairman
House Energy and Commerce Committee
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Cathy McMorris Rodgers
Ranking Member
House Energy and Commerce Committee
2322 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Bobby L. Rush
Chairman
House Energy and Commerce
Subcommittee on Energy
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Fred Upton
Ranking Member
House Energy and Commerce
Subcommittee on Energy
2322 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Pallone, Ranking Member McMorris Rodgers, Chairman Rush, and Ranking Member Upton:

On behalf of the National Mining Association's (NMA) mineral producers, I write to express our support for the Securing America's Critical Minerals Supply Act (H.R. 1599) and the committee's continued efforts to prioritize a domestic mineral supply chain that supports key manufacturing and energy sectors. The global race for energy security hinges on minerals security.

As we have seen from the pandemic and Russia's invasion of Ukraine, too much reliance on foreign nations weakens our economy and threatens our economic and national security. In 2021, the U.S. was more than 50 percent import-dependent for 47 minerals and 100 percent import dependent for 17 of these. At every turn, our import dependence is both outsized and unnecessary, but there is still hope.

The U.S. is home to an estimated $6.2 trillion in mineral resources and is capable of producing the copper, lithium, cobalt and nickel needed for new technologies, manufacturing, infrastructure and electrification demands. H.R. 1599 encourages new domestic mining by directing the Department of Energy (DOE), in coordination with other federal agencies, to increase domestic production, separation and processing of the very materials necessary to ensuring a strong foundation for our future economy. The bill also directs the assessment of supply chains, their strategic vulnerabilities as well as the criticality on which our supply chains are based. Further, in keeping with efforts to better understand the impact of our nation's import dependence, the bill directs DOE to evaluate how U.S. energy security is affected by the importation of critical energy resources from foreign sources.

This legislation is part of a comprehensive minerals strategy that addresses short and long-term efforts by encouraging more domestic production, prioritizing recycling and reuse, and taking

practical steps towards securing our supply chains. We urge you to support H.R. 1599 and public policies that will help responsibly utilize domestically sourced mineral resources.

Sincerely,



Rich Nolan

DON YOUNG
CONGRESSMAN FOR ALL ALASKA
WASHINGTON OFFICE:
2314 RAYBURN BUILDING
WASHINGTON, DC 20515
202-225-5765



Congress of the United States
House of Representatives
Washington, D.C. 20515

COMMITTEE ON
NATURAL RESOURCES
CHAIRMAN EMERITUS

COMMITTEE ON
TRANSPORTATION & INFRASTRUCTURE

REPUBLICAN
POLICY COMMITTEE

CANADA-U.S.
INTER-PARLIAMENTARY GROUP

October 14, 2021

The Honorable Nancy Pelosi
Speaker of the House
U.S. House of Representatives
H232 Capitol Building
Washington, D.C. 20515

The Honorable Kevin McCarthy
Minority Leader
U.S. House of Representatives
H204 Capitol Building
Washington, D.C. 20515

Dear Speaker Pelosi and Leader McCarthy,

As Dean of the House and a Member who has tried throughout my time in Congress to work effectively across the aisle whenever possible, I am writing to request your support for a simple, common sense bill that I recently introduced to reduce the risk to taxpayers of additional failed and defaulted Department of Energy (DOE) alternative or renewable energy projects. My bill, H.R. 5292, the Energy Accountability Act, would help protect taxpayers by prohibiting the extension of any funds, loan guarantees, and program assistance made available by DOE to project sponsors, owners, or contractors who have previously failed to pay back or defaulted on federally guaranteed loans for alternative or renewable energy projects.

All Members of Congress should be able to agree that we should safeguard our taxpayers with respect to the public funding and financing of alternative and renewable energy projects by making sure that those who have defaulted or failed on previous large-scale, publicly funded and supported projects, cannot evade accountability and come back for another bite of the apple. The protections afforded by my bill will make the entire DOE Loan Guarantee Program more sound, especially as we expand funding, and the number of projects, under the program in the years ahead.

I note that the Senate, in the recently passed bipartisan infrastructure bill, adopted a bipartisan amendment by Senators Van Hollen and Rounds (agreed to 97-0), to provide taxpayer protection for the Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan Guarantees approved by the Department of Transportation. Certainly, the DOE Loan Guarantee Program, for which the Senate added language to ensure that guarantees are not made "on the basis of political considerations," also deserves the addition of the taxpayer protections provided by my bill.

Thank you for your consideration of this bill, in its standalone form, or its possible inclusion in a larger legislative vehicle this Congress as we move forward. If you have any questions or concerns, please feel free to reach out to me or my office.

Sincerely,

Don Young

Don Young
Congressman for All Alaska

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1-866-990-5979

June 21, 2022

The Honorable Bobby Rush
Chairman
Subcommittee on Energy
Committee on Energy & Commerce
U.S. House of Representatives
Washington, D.C. 20215

The Honorable Fred Upton
Ranking Member
Subcommittee on Energy
Committee on Energy & Commerce
U.S. House of Representatives
Washington, D.C. 20215

Dear Chairman Rush and Ranking Member Upton:

We the undersigned organizations are writing to support H.R. 7962, legislation introduced by Representatives Debbie Dingell and Tim Walberg to amend the Energy Policy and Conservation Act (EPCA) to clarify and update the definitions of residential and commercial water heaters and authorize national demand response capability requirements for consumer water heaters.

The legislation in part responds to a final rule issued in November 2016 by the U.S. Department of Energy (DOE) that revised test procedures for commercial water heaters in such a way as to effectively require manufacturers to recategorize commercial water heaters to meet residential efficiency standards.

A temporary "non-enforcement" policy from DOE expired at the end of 2021. Therefore, an amendment to the statutory definitions of water heaters in EPCA is necessary to clarify and update the definitions of residential and commercial water heaters in EPCA and rectify this reduction in options for commercial consumers.

The bill also addresses the growing need for water heater demand flexibility. Increased severe weather events, such as the heat wave that affected much of the country last week, are driving higher peak electricity demand levels that can threaten grid reliability and increase electricity prices. Additionally, in many parts of the country, underutilized low-cost renewable power is available at certain times, such as nighttime wind resources. Grid-flexibility technology that enables storage water heaters to respond to grid conditions and variable electricity prices can help reduce peak demand and consumer costs by heating water when power is cheap, clean and plentiful.

Several states have now enacted or authorized manufacturing requirements to ensure that new water heaters are factory-ready to provide grid-flexibility services. By authorizing a national approach, the bill would provide a pathway that could improve business certainty for manufacturers and for utilities, facilitate broader access to use this technology, and strengthen grid flexibility and reliability.

Thank you for your prompt attention to this request. If you need additional information or have other questions, please contact Lino Peña-Martinez with the Committee staff at (202) 225-2927.

Sincerely,

Frank Pallone, Jr.
Chairman

Attachment

cc: The Honorable Cathy McMorris Rodgers
Ranking Member
Committee on Energy and Commerce

The Honorable Bobby L. Rush
Chairman
Subcommittee on Energy

The Honorable Fred Upton
Ranking Member
Subcommittee on Energy

Attachment—Additional Questions for the Record

Subcommittee on Energy
Hearing on
"Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"
Wednesday, June 22, 2022

Joshua C. Greene, Esq., Corporate Vice President, Government and Industry Affairs, A. O. Smith Corporation

The Honorable Debbie Dingell (D-MI)

H.R. 7962

1. Mr. Greene, can you explain for the Committee what is demand response and how many utilities offer demand response programs nationwide?

RESPONSE:

Congresswoman Dingell, demand response is a mechanism used by utilities to motivate consumers, though incentives, to reduce their electricity use during high-use (peak) times, when electricity prices are high or when grid reliability and stability are needed. Demand response programs are offered by hundreds of utilities across the country. In 2020, there were a total of 11.7 million customers enrolled in demand response electricity programs in the United States. Approximately 11.3 million of these customers came from the residential sector.

2. Are demand response programs mandatory?

RESPONSE:

Congresswoman Dingell, no, demand response programs offered by utilities are voluntary, and customers must opt-in. The demand response language in H.R. 7962/S. 4061 does not require any consumers or businesses to enroll in a demand response program.

3. Are there privacy protections for consumers that are enrolled in demand response programs?

RESPONSE:

Congresswoman Dingell, yes, customers that opt-in to demand response programs are afforded privacy protections under state laws, and each utility must demonstrate that their program are following those laws.

4. What are the benefits for consumers when enrolled in a demand response program?

RESPONSE:

Congresswoman Dingell, the primary benefit to consumers is a reduction in their monthly and annual energy bills in exchange for reducing their energy usage.

5. What kind of appliance does a consumer need to participate in a demand response program?

RESPONSE:

Congresswoman Dingell, to participate in a demand response program, a consumer needs an appliance with certain technological capabilities that are embedded within or affixed to it (e.g., hardware), along with software enabling the appliance to communicate with the utility. Appliances such as furnaces, boilers, air conditioners, heat pumps, lights, on-site batteries, and water heaters are examples of appliances used in demand response programs.

6. How are water heaters used in demand response programs? And are there water heaters currently on the market that are able to participate in a demand response program?

RESPONSE:

Congresswoman Dingell, once a homeowner opts into the utility demand response program for an electric water heater, for example, the unit is then able to respond to signals sent directly from the utility, allowing it to be used as a grid asset. During times of excess power generation, the utility can use the water heater as a "thermal storage device," conserving energy for later use. At such times, commonly when hot water usage is low (e.g., outside of early morning or evening hours or when consumers aren't home) the utility "charges up" the water heater to a higher temperature for later use. Then, when hot water demand is higher and the grid is stressed (i.e., demand is higher than generation), the utility sends a signal to the water heater to not draw energy unless a consumer overrides it. This limited duration allows a utility to balance power demand with power generation capacity.

7. Can a consumer enrolled in a water heater demand response program lose access to their hot water while taking a shower or washing their dishes?

RESPONSE:

Congresswoman Dingell, no, water heaters enrolled in demand response programs are "storage tank" water heaters that typically hold 40 to 80 gallons of hot water. Therefore, when a utility sends a demand response signal, the consumer would still have access to the hot water contained in the unit. If the consumer needed greater access to hot water, they could override the utility's demand response signal.

8. Have States begun to adopt demand response standards for water heaters? And what is the value of having a federal demand response standard?

RESPONSE:

Congresswoman Dingell, yes, several states, including California, Oregon, Washington, and most recently Illinois, have enacted demand response capability requirements for electric storage water heaters. Having a federal demand response capability requirement will enable residential electric storage water heater manufacturers to comply with one, nationwide requirement, rather than numerous, potentially differing, standards. A federal standard will not only help lower costs of consumer demand response programs but also will provide manufacturers, distributors, and retailers with business certainty and allow them to minimize duplicative inventories, reduce product development costs, and enjoy more predictability in their supply chains.

9. What does the demand response language in H.R. 7962 direct the Department of Energy to do exactly?

RESPONSE:

Congresswoman Dingell, the legislation directs the Department of Energy (hereinafter "DOE") to conduct a notice and comment rulemaking to consider whether residential electric storage water heaters must possess demand response capabilities, so long as they are technologically feasible and economically justified.

10. Does the demand response language in H.R. 7962 require that Department of Energy must establish a demand response standard?

RESPONSE:

Congresswoman Dingell, no, the legislation only directs the DOE to conduct a notice and comment rulemaking to consider whether residential electric storage water heaters must possess demand response capabilities, so long as they are technologically feasible and economically justified.

11. Does the demand response language in H.R. 7962 authorize the Department of Energy, and by extension the federal government, to mandate that States, utilities, or consumers enroll in a demand response programs?

RESPONSE:

Congresswoman Dingell, no, the legislation does not grant DOE the authority to require consumers to enroll in a demand response program, as that decision rests with consumers and their local utilities. Rather, the legislation solely directs DOE to determine whether residential electric storage water heaters should possess demand response capabilities at the point of manufacture. This would allow consumers to voluntarily enroll their electric storage water heaters in a demand response program if one is made available by their local utility.

12. If the Department of Energy moves forward with a demand response standard is it required to use an industry-consensus standard as part of its final rule setting forth a national standard and capabilities requirement for residential electric storage water heaters?

RESPONSE:

Congresswoman Dingell, H. R. 7962/S. 4061 requires DOE to consider industry-consensus standards developed or recognized by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) as part of any final rule setting a federal demand response capability standard for residential electric storage water heaters.

13. If the Department of Energy finds that it is economically justified and technologically feasible to require residential electric storage water heaters to carry the capability to participate in demand response programs, how would the demand response standard effect the States that have already enacted standards and requirements of their own?

RESPONSE:

Congresswoman Dingell, States that have already enacted their own demand response capability requirements and standards would be allowed to retain what they already have in place.

14. Does the demand response language in H. R. 7962 authorize the Department of Energy to establish demand response requirements for other appliances or electric vehicles?

RESPONSE:

Congresswoman Dingell, no, H.R. 7962/S. 4061 specifically directs DOE to explore establishing a demand response capability standard for a limited number of residential electric storage water heaters and does not authorize the establishment of demand response capability requirements for any other covered appliance under its Appliance Standards Program.

The Honorable Kurt Schrader (D-OR)

H.R. 7962

1. Do you envision that the provisions regarding demand response capability for hot water heaters in my Michigan colleague's bill would rely on the internet? And either way, should there be alternative ways for hot water heaters to receive communications, in case the internet is down?

RESPONSE:

Congressman Schrader, currently, utilities that offer demand response programs for electric storage water heaters enable participation via the internet (or "Wi-Fi" connection), a FM radio

signal, or cellular data among other modes of communication. It is certainly feasible for utilities to have redundancy in the modes and methods by which to receive/send signals to appliances, including electric storage water heaters.

2. Do you expect such demand response technology to be open standard, or will it be proprietary? And, if it's proprietary, would that make it more costly for utilities to offer voluntary demand response programs?

RESPONSE:

Congressman Schrader, currently electric storage water heaters that are enrolled in demand response programs primarily utilize two communication standards – OpenADR or ANSI-CTA-2045-A (soon to be updated to CTA-2045-B). Both protocols enable an open standard for communicating signals directly via a common language to and from the appliance to the utility or third-party aggregator working on behalf of the utility-sponsored demand response program. Regarding proprietary standards, there are certain instances – primarily based on the type/size of the appliance that manufacturer-specific communication is necessary. However, even in those circumstances open standards can accommodate that need by enabling a specific API (i.e., application programming interface), which is specific software code that enables communication between two devices.

3. The Department of Energy is supposed to determine the economic viability and technological feasibility of demand response technology for different categories of hot water heaters. Do you expect such technology to be economically viable and technologically feasible for all types of hot water heaters? If not, what are the chief determinants?

RESPONSE:

Congressman Schrader, there are four States – California, Illinois, Oregon, and Washington that have promulgated rules or regulations that require residential electric storage water heaters sold and distributed in those states to have demand response capabilities. Moreover, there are utilities in States outside of the four mentioned above, that currently incentivize residential consumers to enroll demand response capable electric storage water heaters in demand response programs across their respective service territories. As a result of this activity, water heater manufacturers would assert that demand response capabilities are technologically feasible and economically viable for most residential electric storage water heaters. One limitation for electric storage water heaters will be the size of the [storage] tank. For the most part, manufacturers do not see electric storage water heaters below 20 gallons of capacity being able to meaningfully participate water heater demand response programs due to the smaller amount of stored thermal energy.

Attachment—Additional Questions for the Record

Subcommittee on Energy
Hearing on
"Legislative Hearing to Strengthen Energy Infrastructure, Efficiency, and Financing"
Wednesday, June 22, 2022

Ben Lieberman, Senior Fellow, Competitive Enterprise Institute

The Honorable Cathy McMorris Rodgers (R-WA)

1. Mr. Lieberman: Under the Energy Policy and Conservation Act (EPCA), the Department of Energy (DOE) issues energy efficiency standards for more than 70 categories of appliances and equipment, including everyday household products, such as microwaves and dishwashers.

    a. How does DOE determine whether or not to initiate a rulemaking for a new or updated efficiency standard?

RESPONSE: The Energy Policy and Conservation Act (EPCA) sets out procedures for initiating new and updated efficiency standards. DOE is required to revisit existing standards every six years and consider making them more stringent. The agency must determine if tighter standards are technologically feasible and economically justified – and it usually answers in the affirmative and sets a more stringent standard. It is worth noting that the program has been in existence for decades and that by now many home appliances have been subjected to 4, 5, or even 6 rounds of successively tighter standards, with diminishing or nonexistent marginal returns. It appears that the Biden DOE sees climate change as a rationale for further rounds of standards. In addition to regulations initiated by the agency, any person may petition DOE to undertake a rulemaking for an appliance.

        i. How often do environmental groups intervene with lawsuits to compel DOE to initiate rulemakings or complete reviews?

RESPONSE: At any given time, upwards of ten appliances are subject to litigation from energy efficiency activists and/or environmental groups. There has been an increase in such activity now that these groups see tighter efficiency standards as part of the climate change agenda. Note also that most appliances are subject to regulations by other agencies, and there is often litigation over these provisions as well. For example, several environmental organizations have petitioned the Environmental Protection Agency to regulate emissions from natural gas appliances such as furnaces, water heaters, and stoves under the Clean Air Act. Thus, pro-regulation litigants are hitting some appliances from multiple sides, with the potential for very negative consequences for consumers.

b. Does DOE do an adequate job protecting consumers from efficiency standards that result in additional costs?

RESPONSE: No. While there are provisions in EPCA that protect consumers from excessively stringent standards, these provisions are frequently ignored. For example, the statute requires DOE to compare the expected energy and/or water savings from a proposed rule against any increase in the purchase price of the appliance as well as other costs such as increased maintenance. There are several examples where the DOE's own analysis finds that a new standard would impose net costs on many consumers, but the agency finalized the rule anyway. The statute sets out a rebuttable presumption that a standard that pays for itself in three years or less is considered economically justified, but DOE routinely finalizes standards that take a lot more than three years to recoup the higher up-front costs. For many consumers, the payback period is longer than they own the appliance, and thus they never earn back the higher costs.

c. Do all DOE efficiency standards result in significant energy savings?

RESPONSE: No. While EPCA has a provision forbidding the agency from promulgating a new rule unless it saves a significant amount of energy, the statute itself does not quantify the term and the provision is routinely ignored by the agency. In March 7, 2019 testimony before this Subcommittee, Assistant Administrator Dan Simmons noted that the relatively few appliance rulemakings estimated to save at least 0.5 quads of energy are responsible for 96 percent of the energy savings from the program, and that the others that saved less than 0.5 quads only account for 4 percent of the savings. Given that DOE is chronically behind schedule on reviewing its appliance standards, he added that it would make good sense to prioritize the timely promulgation of those rulemakings that save at least 0.5 quads. The Trump DOE indeed imposed this commonsense and statute-based reform, but the Biden DOE has subsequently reversed it. Thus, the system is once again clogged with dozens of rulemakings at any given time though only a few will deliver significant energy savings.

d. Are there examples of DOE efficiency standards that have negatively impacted the speed, performance, or capabilities of a product?

RESPONSE: Yes. Although EPCA explicitly forbids any new or amended standard that compromises product quality in any way, this provision has been ignored. One clear example can be seen with dishwasher standards that resulted in much longer times to complete a load of dishes. Another example currently being considered by the agency is the proposed new standards for residential furnaces that will effectively force non-condensing furnaces off the market, in spite of the fact that they are the best fit for many homes.

e. To what extent does DOE rely on monetized estimates of emissions impacts, including the "social cost of carbon," when justifying regulations that increase the cost of appliances?

f. Does DOE conduct analyses to validate assumptions made in prior standards or evaluate the impacts of existing regulations? If not, should they?

RESPONSE:
The above-mentioned proposed furnace rule includes social cost of greenhouse gas emissions. It is worth noting that, by taking climate change and other environment considerations into account, the agency is no longer focused on what is best from a consumer standpoint.

No. The agency never does "look back." If it did, it would have to admit that it has frequently exaggerated the claimed energy savings, understated the increases in purchase price, and often failed to foresee performance issues with many regulated appliances. A recent National Academy of Sciences report on appliance standards suggested the agency make more of an attempt to learn from and correct its mistakes. It is also worth noting that DOE often initiates the next round of standards before products complying with the previous standard have even hit the market, which means there is little opportunity to learn from the prior standard.

g. Are you concerned that the DOE efficiency standards rulemaking process could be abused in such a way as to result in a ban on products that use natural gas or fossil-fuels?

RESPONSE: Yes, and the pending furnace standard is a clear example of this. By making natural gas furnaces both more expensive and less desirable, it is skewing the market towards electric furnaces. Doing so violates the provisions in EPCA that preserve consumer choice and would also raise costs on consumers as natural gas appliances are often the more affordable option to own and operate. It should be noted that climate activists have strongly targeted the direct use of natural gas, and that the Biden Administration has made doing so a part of its government-wide climate agenda. Both are using the efficiency standards program towards that end.

2. Mr. Lieberman: Do you believe that DOE should have the ability to mandate that appliances come equipped with demand response capabilities, to provide the grid operator or utility with remote monitoring and operational control of the appliance?

RESPONSE: No. EPCA makes clear that DOE cannot impose on consumers appliance characteristics that they do not want.

a. What are the consumer protection and privacy considerations associated with demand response?

RESPONSE: Demand response takes control of appliances out of the hands of consumers and into those of governments and utilities. It would also make publicly available a good deal of personal information regarding the use of impacted appliances.

b. What are the operational, technical, or regional grid-related considerations associated with a Federal demand response mandate?

RESPONSE: Demand response appliances would essentially make millions of homeowners guinea pigs in a risky experiment with the nation's electric system. This is the last thing we need, especially now when reliability of the electric grid is already a concern.

c. Would mandating demand response capability increase the cost of an appliance?

RESPONSE: Adding demand response capability could raise costs, especially if done in a manner that forces consumers away from natural gas versions of appliances in favor of electric ones. But the larger issue is one of whether homeowners retain control over their appliances or have to relinquish that control to utilities and governments.

d. Are there states considering mandating demand response capabilities for appliances? If so, which ones?

RESPONSE: California often leads the way with problematic appliance measures, and demand-response is no exception, along with a few other states that tend to follow California's lead. Regardless of how many states are doing so, the federal government has an obligation to protect those consumers in states not interested in imposing demand response.

3. Mr. Lieberman: In light of the recent Supreme Court decision in West Virginia v. Environmental Protection Agency (EPA), restricting the agency's authority to regulate carbon emissions without congressional approval, what role, if any, should climate change considerations play in appliance and equipment standards?

RESPONSE:

Nowhere in EPCA's detailed instructions to DOE on how to set appliance efficiency standards is there any mention of climate change. Any attempt by the agency to essentially rewrite this 1975 statute decades later and turn it into a climate policy tool would violate the precedent set by the Supreme Court in West Virginia v. EPA.

