

**THE DEPARTMENT OF ENERGY'S DUE DILIGENCE
PROCESS FOR AWARDING COMPETITIVE
GRANTS AND LOANS FUNDED THROUGH THE
INFLATION REDUCTION ACT AND THE BIPAR-
TISAN INFRASTRUCTURE LAW AND THE DE-
PARTMENT'S OVERALL INNOVATION INVEST-
MENT STRATEGY**

HEARING
BEFORE THE
COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ONE HUNDRED EIGHTEENTH CONGRESS

FIRST SESSION

OCTOBER 19, 2023



Printed for the use of the
Committee on Energy and Natural Resources

Available via the World Wide Web: <http://www.govinfo.gov>

U.S. GOVERNMENT PUBLISHING OFFICE

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THE DEPARTMENT OF ENERGY'S DUE DILIGENCE PROCESS FOR AWARDING COMPETITIVE GRANTS AND LOANS FUNDED THROUGH THE INFLATION REDUCTION ACT AND THE BIPARTISAN INFRASTRUCTURE LAW AND THE DEPARTMENT'S OVERALL INNOVATION INVESTMENT STRATEGY

THURSDAY, OCTOBER 19, 2023

U.S. SENATE,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The Committee met, pursuant to notice, at 10:00 a.m. in Room SD-366, Dirksen Senate Office Building, Hon. Joe Manchin III, Chairman of the Committee, presiding.

**OPENING STATEMENT OF HON. JOE MANCHIN III,
U.S. SENATOR FROM WEST VIRGINIA**

The CHAIRMAN. The Committee will come to order.

First, let me welcome our newest member, Senator Alex Padilla from California. It's so good to have him, and so everyone knows the changes that were made, Senator Kelly was a tremendous asset for this Committee, but he had an opportunity, and I think it was a wise move from his standpoint, to be able to go on to Intel with his background, his training, and everything of that sort. So we lost one and gained one. So I think it's a pretty good swap. Anyway, Senator Padilla represents the largest number of Americans, and the second largest consumption of energy from his state. I know he will dive right in on so many important issues, including hydrogen, forestry, wilderness, western water, and other issues of importance to California that our late, great Senator Feinstein worked on diligently. We got an awful lot of input from her on this Committee, but also from all of you and we appreciate that so much.

So with that, we will get started.

I also want to briefly express, at the outset, my strong concerns about the news last night that our Administration has lifted most sanctions on Venezuelan oil for the next six months. On the heels of announcing the smallest five-year offshore oil and gas leasing plan in decades for the United States, the Administration is turning to Venezuela to help make up the production that they refuse to allow in America. And they know I have a problem, I am sure maybe you all have all different feelings on this. They are one of

the world's dirtiest energy producers and an oppressor of their own people. I understand that the Administration believes that this will encourage Venezuela to make democratic reforms, but that has been tried, and we failed before. It makes no sense at all to reward bad actors before they actually take the action you want. We tried that with Iran and now here we are with Venezuela.

Now, turning to today's topic—when I look back to when I became Ranking Member of the Committee in 2019, we had not done a comprehensive update to our nation's energy policy in over ten years. Since then, we have worked hard to address that gap. First, we set our energy policy goals in the bipartisan Energy Act of 2020. Then, we provided the investment needed to make those policies a reality in the Bipartisan Infrastructure Law and the Inflation Reduction Act. These bills will transform our nation's energy landscape for years to come. I am extremely proud of these pieces of legislation and the opportunities within them that will make us more energy secure while creating good jobs across our nation.

For instance, I was pleased to join a bipartisan group of federal and state lawmakers and business and community leaders to welcome Secretary Granholm and Under Secretary Crane to West Virginia this week, on Monday, to announce that the Appalachian Regional Clean Hydrogen Hub won a \$925 million award to bring a hydrogen hub to West Virginia and parts of Ohio and Pennsylvania, which is the three-state region. This funding, which came from the Bipartisan Infrastructure Law, will ensure West Virginia will be able to be a new epicenter of hydrogen in the United States of America. It's just one example. In the past two years, our state has celebrated announcements for battery manufacturing plants, carbon capture projects, microgrid-powered industrial sites, with many more projects on the way that stand to benefit from the DOE support. I will mention that tomorrow, when I go for a groundbreaking for Nucor Steel. Nucor Steel has just signed a contract with Helion, which is a fusion manufacturer, and they are intending, by 2028, to have a Helion fusion manufacturing plant for clean hydrogen to make clean steel. It will be the cleanest in the world, being made in West Virginia, and we are extremely proud of that. That opportunity is unbelievable.

In the case of the hydrogen hub, the private sector is proposing to invest up to \$6 billion on top of the nearly \$1 billion from the DOE. So if you look at the \$1 billion we have, that is a 13 percent investment the United States is making for an 87 percent return. That is a tremendous thing for us to incentivize that, and be willing to share some of that risk that makes these projects possible. The story is also similar across our country—the private sector announcements pouring in as a result of opportunities created by our laws, and all of us should be proud of that.

And while I am thrilled to see all these impactful investments being made, it is also disheartening to witness this Administration distort the intended purpose of the laws to fulfill their agenda. And they know, I think we have had these conversations, and sometimes we are ahead of our skis and we just want to keep them in check. The laws were deliberately crafted to secure energy supply chains, but so far, we have seen too many indications that this Administration is willing to sacrifice security to pursue their unreal-

istic anti-fossil goals. The most apparent example of this is through the implementation of the IRA's EV tax credit. That credit was designed to encourage automakers to onshore their supply chains in order to break our reliance on China, who has dominated the EV supply chain. Unfortunately, actions by this Administration to cut the sourcing requirements in half and water them down in other ways just to get more EVs on the roads, Chinese or otherwise, clearly are not a reflection of the text or the intent of the IRA and Infrastructure Law. Not only is the Administration violating and manipulating the law to implement the legislation they wanted rather than the bills that we passed, but the decisions they are making will have detrimental impacts on American workers and embolden our adversaries.

There is a bipartisan agreement that these laws must be implemented as written, as Congress intended, to secure our own country's energy supply. This is why our Committee expressed bipartisan concern at a hearing earlier this year when DOE was considering providing a grant to Microvast, a battery company with alleged links to the Chinese government. While DOE ultimately made the correct decision not to award this grant, and I thank you for that, this Administration's actions as a whole have made me question what aspects of the laws are at risk of being manipulated. So I felt it was important to invite the Department of Energy here today, and Mr. Crane, we are so glad to have you, and thank you for coming to discuss your approach, and Mr. Shah, you also, we are anxious to hear from you of these new important laws, and especially the review of the Department's due diligence and process for companies and technologies pursuing grant funding or loan guarantees.

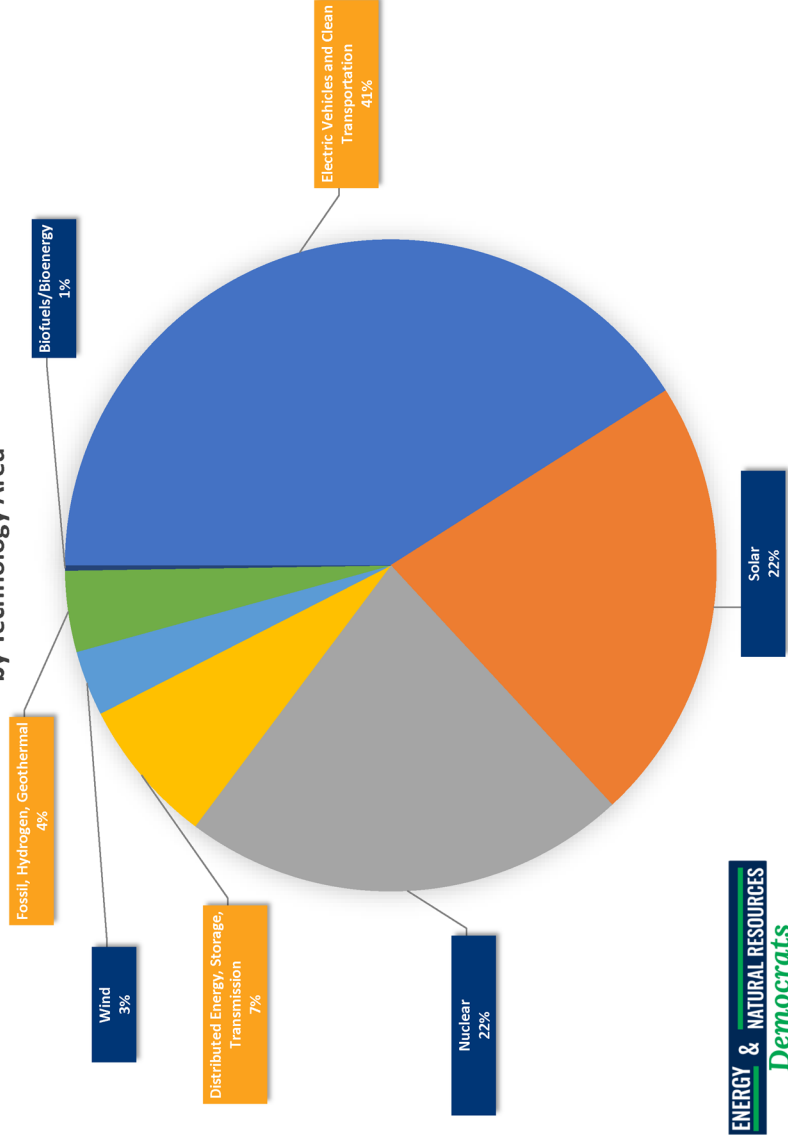
I have two primary questions for our witnesses. First, how are we ensuring that U.S. taxpayer dollars are absolutely not benefiting any of our adversaries? And I think we even have named our adversaries that we are very much concerned about, whether it be China, Russia, North Korea, or Iran. And second, how is the Department ensuring that companies receiving awards have proven technologies worthy of government support to commercialize them? The IRA and the Bipartisan Infrastructure Law are an investment in American energy security to protect ourselves and our allies while breaking our reliance on countries like China, Russia, Iran, North Korea, and other nations who do not share our values and should not be relied upon to provide critical elements of our supply chains. While I was pleased to see that DOE rescinded the Microvast award, I am alarmed that the company was able to get through even the first round of vetting. We continue to hear about our companies seeking to use taxpayer dollars to make a devil's bargain with Chinese technology providers, like Ford's potential licensing deal with CATL seeking to qualify for IRA credits, or the conditional loan approved by DOE for Kore Power that involves purchasing technology from a Chinese firm. Let me be clear: I do not want—and I don't believe any of our Committee members wants—a cent of the funding benefiting China in any way and being held hostage. So I hope today's witnesses will shed some light on the vetting process to make sure China and Chinese companies

are not turning taxpayer-funded American innovation into a wind-fall for our geopolitical adversaries.

Between the IRA and the Bipartisan Infrastructure Law, the Department of Energy received nearly \$100 billion to support new or existing energy, advanced technologies, grid modernization, and clean manufacturing programs. Both bills emphasized an all-of-the-above approach so that we could innovate—not eliminate—our way toward a cleaner environment, while at the same time, increasing our energy security and creating new economic opportunities here in the U.S. These bills were designed to be balanced and ensure that the best technologies of all types win, not just those favored by any given administration. Historically, DOE's Loan Programs Office has fallen short of a balanced approach. If you look at the chart here, it shows you basically where we are investing our dollars.

[The chart referred to follows:]

Percentage of Awarded and Announced Loan/Loan Guarantee Funding from LPO Since 2009 by Technology Area



The CHAIRMAN. Forty-one percent went to electric vehicles and clean transportation. Solar was 22 percent. Nuclear was 22 percent. Distributed energy, storage, transmission was only seven percent. Wind was only three percent. Fossil, hydrogen, geothermal is four percent. Now, if you look at where our energy comes from today, 81 percent comes from energy production in fossil fuels and cleaner innovation—81 percent—with a four-percent investment. Eight percent is nuclear power. Nuclear, 22 percent investment, eight percent right now. And renewables, you can look at all the renewables, 13 percent is where we get our energy from. So we have a long way to go, but we have to be realistic enough to know where our power is coming from today so we don't short-sight it and get the cart in front of the horse and say go ahead and start pushing. It does not work that way.

To correct this, the IRA created the new 1706 loan guarantee program specifically to support investments in our dispatchable fossil fuel plants, such as adding CCUS or other environmental controls. I am also pleased to see that the LPO is supporting a number of hydrogen projects, a proven technology that we just have not focused on commercializing until the past few years. It is my hope that the Department will adhere to a balanced approach moving forward. I look forward to hearing how DOE is taking that balance into consideration as they work through the decision-making process for these important funding opportunities. I would also like to hear the Department's plans to ensure that taxpayer dollars are being spent efficiently, effectively, and responsibly.

Without a doubt, the Department of Energy's loan programs have had successes over the years. And it is notable that the interest on loans returned to taxpayers has exceeded losses in investments by roughly four times over. That is excellent. That being said, it's no secret that problematic projects from previous years are still very much on our minds. Mr. Shah, I hope you are able to assuage any concerns this morning about the efficacies of the loan programs and demonstrate how the Department is working to prevent the next Solyndra. Being responsible with all this funding also means DOE's offices should not be working in a vacuum. There needs to be a cohesive strategy to ensure that we are not duplicating efforts and missing key gaps. So I hope that we can hear from Mr. Crane this morning about how he works with Mr. Shah and other offices within the DOE and across the agencies to make sure that funding is being used in the most effective and efficient ways possible. If implemented effectively, the Bipartisan Infrastructure Law and the Inflation Reduction Act have the power to truly transform our country for the better. And that is why it is so important that we get this right. I will provide all the support I possibly can to DOE to help the agency get it right and achieve Congress's intent. At the same time, it will be of no surprise to hear that I fully intend to continue our Committee's robust oversight of the Department, which is our jurisdiction and responsibility.

And with that, I am going to turn to my Ranking Member, Senator Barrasso, for his opening remarks.

**OPENING STATEMENT OF HON. JOHN BARRASSO,
U.S. SENATOR FROM WYOMING**

Senator BARRASSO. Well, thanks so much, Mr. Chairman.

I want to join you in welcoming Senator Padilla to the Committee. Given his degree in engineering from the Massachusetts Institute of Technology, we welcome both your participation and your expertise. So welcome to the Committee. I look forward to working with you.

Mr. Chairman, thank you for holding this hearing today. Recent horrifying events provide a disturbing backdrop for today's hearing. Hamas terrorists have viciously attacked Israel. Hamas committed atrocities against innocent civilians, including infants and children. People are sickened by what has occurred. And there is a reason to believe that Iran helped plan and finance this evil attack on our ally. The risk of a wider, regional war in the Middle East continues to grow. Meanwhile, Russia continues to wage its unprovoked war against Ukraine, and as you might have seen, Putin and Xi are together today. And China is, at the same time, growing more aggressive by the day as it pursues global domination.

These are consequences of weakness by our nation. They demonstrate that our energy policy needs to be about more than a blind allegiance to tackling climate change. That is what makes the laughably named Inflation Reduction Act so dangerous. Let's be clear: President Biden's energy transition obsession is going to move us from energy independence to energy and mineral dependence on China and Russia and OPEC. It's not the kind of transition Americans want or need. Today, I issued a report exposing how the inflationary IRA will actually make America weaker and our adversaries stronger. Starting with its name, everything we have heard from Democrats about this disastrous bill is a lie. This partisan bill—truly one-sided bill—is going to send America and our nation further in the red while enriching red China. It is going to leave taxpayers on the hook for hundreds of billions of dollars in new borrowing, and with a debt of \$33 trillion, which is growing. We cannot afford that.

President Biden has a terrible track record of protecting taxpayer money. As Vice President, he personally announced the award of a loan guarantee to politically connected solar company Solyndra. And Mr. Chairman, you made mention of that company in your opening remarks. We all know how it turned out—\$500 million bankruptcy, with taxpayers footing the bill. With the IRA, the American people can expect to see more Solyndras. The recent revelation that the Department of Energy selected Chinese-connected companies, which you referenced, Mr. Chairman, for financial awards should alarm every American, but should not surprise us. The White House said it welcomes Chinese companies as big players in renewables and electric vehicle markets. The Administration has said it's perfectly happy to work with China on electric vehicles, and the IRA encourages more of this. It is a terrible mistake. Republicans and Democrats should be able to agree that taxpayer dollars shouldn't be used to strengthen China. It's not just foolish awards that benefit China, this ill-conceived bill is going to push the United States away from the fuels and the technologies that we dominate toward those that China and others control.

And as your poster and map showed, Mr. Chairman, it points out these things perfectly. Chinese companies have led wind turbine, solar panel, and battery production for many years. That is not changing. Now, China is the world's largest manufacturer of electric vehicles. China also controls the supply chains of many of the critical minerals that these technologies use. So while the Biden Administration has been selecting Chinese companies for grant awards, it has been working to block mining in the United States. Even if we could do more mining here in America, we would still need huge amounts of critical minerals from China, Russia, and elsewhere to make up for the number of electric vehicles that Joe Biden is demanding. It's not possible to do it otherwise.

Contrast this future dependence with America's recent global leadership in oil, natural gas, and coal production. President Biden and Congressional Democrats seem happy to surrender America's energy advantage. And Mr. Chairman, you mentioned in your opening comments what we see happening now in Venezuela with allowing drilling there that we are not allowing in the United States, and we do it much more safely and with more respect for the environment than they ever will.

So let's be clear about what this means. It means more pleading with dictators, like Russia and Iran and Venezuela, as the Administration just did yesterday. It means U.S. businesses and workers being held hostage to the whims of our enemies. It means stronger adversaries, weaker allies. We do not need a pro-Iran and pro-China energy policy. That's what we are getting out of this Administration. We need to return to a pro-America, all-of-the-above energy strategy that is good for America and for the free world. The stakes are too high, Mr. Chairman. The IRA, to me, should stand for irresponsible, reckless, and alarming. It can't be salvaged. It needs to be repealed.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Barrasso, and the great thing about our democracy is, we can be friends and agree to disagree. And I will say in response, with the IRA, a lot of implementation—you know that I have a concern about how it's being implemented, but we have to be clear about the facts. We are producing more energy in the country today than ever in the history of our United States of America—4.6 billion barrels of oil is being produced as we speak, 37 trillion cubic feet of gas. We are at 13.5 billion cubic feet of LNG a day. That is going to go to 25. We have increased our wind and solar production. We have doubled it in one year. It's an all-in policy that is working.

Now, the differences we have is sometimes some Administrations want to do a little bit more than what the bill intended. But the balance we have right now, it has done that job. And I will say with my dear friends on my Republican side, my Republican friends, a lot of that thought that went into that bill was things that we discussed for four or five years because we need more energy. We need an all-in policy. What we are afraid of though, is we might need a little bit longer until we have the new technologies that can replace the dispatchable fuels that people want to replace. And we are not going to take something away until we can do it as good, if not better, and that is where we are.

So with that being said, I want to turn to our witnesses today. We have the Honorable David Crane, the Under Secretary for Infrastructure, Department of Energy, and we are glad to have him.

We have Mr. Jigar Shah, Director of the Loan Programs Office, Department of Energy, and glad to have him here.

And we have the Honorable Teri Donaldson, Inspector General, Department of Energy.

So with that, we are going to our witnesses' remarks, and we are going to start with the Honorable David W. Crane, from the Department of Energy.

**STATEMENT OF HON. DAVID W. CRANE, UNDER SECRETARY
FOR INFRASTRUCTURE, U.S. DEPARTMENT OF ENERGY**

Mr. CRANE. Thank you, Mr. Chairman and Ranking Member and distinguished members of the Committee. Thank you for this opportunity to discuss the Department of Energy's implementation of the BIL and IRA. All of us at DOE are extremely grateful for the leadership of this Committee informing and enacting these landmark pieces of legislation and the ongoing partnership during their implementation. We are bolstering our national energy security at this time of global instability. We are creating millions of lasting, good-paying jobs and helping communities across the country tackle huge challenges and take full advantage of opportunities made available to them by these landmark pieces of legislation. We are also assisting communities in realizing the impacts of rapid energy technology transitions and ensuring that cities and towns across America have access to new energy technologies that can reduce families' and businesses' energy bills as quickly as they can be deployed.

Between BIL and IRA, Congress has provided more than \$97 billion for over 60 new programs under the purview of the Department of Energy. I am proud to say, as we sit here today, that we have announced 111 funding opportunities, totaling over \$72.8 billion for applications from the public and private sectors, with a special mission to ensure that tribes and underserved and traditional energy communities have a seat at the table. Of this total, we have selected so far 455 recipients for award negotiations, totaling \$17.8 billion through competitive funding and \$14.3 billion through allocated formula funding, including the home rebates program. In fact, in just the last week, we have announced award selections for over \$10 billion between hydrogen and transmission awards. From selection, we move directly to negotiation of awards and then to full design project development and groundbreaking. During all these phases, we must ensure that the taxpayer dollars are well spent on well-developed, impactful projects that drive innovation. We are here to demonstrate technology and drive market adoption and stimulate private-sector financing of projects that will serve as fundamental elements of the 21st century economy for decades to come.

I look forward to sharing how DOE is meeting these goals through a thoughtful program design, extensive community and stakeholder outreach, rigorous and merit-based decisions led by career staff who are subject matter experts, ongoing project management, and a robust risk and vetting process for awardees and ap-

plicants. The Department takes seriously its responsibilities to match competitive funding opportunities and loan programs purposefully to the benefit of the taxpayers. It is of great importance, both to me and to this Committee, that we have a robust due diligence and oversight mechanism to ensure integrity in our programs and to ensure we are meeting and exceeding the goals of the legislation. The majority of the programs under BIL and IRA are competitive funding opportunities to demonstrate and to deploy next-generation energy infrastructure. For FOAs, we conduct extensive outreach to industry, communities, non-profits, and think tanks, other stakeholders, and with other DOE offices to develop a better understanding of the opportunities and challenges.

Once applications are submitted, we undertake a rigorous merit review process that includes an initial check for eligibility, followed by review by a panel of independent experts. This includes a review of technical merit, financial and market viability, the work plan, management team, and the proposed community benefits. This review may include additional questions to the applicants, potential interviews, and review by the RTES—Office of Research, Technology, and Economic Security—which I will explain more. With the enactment of BIL and IRA, it has become more important than ever for the Department to have a comprehensive and rigorous approach to research, technology, and energy security—or as we say, RTES—for both awards and loans. Over the past year, DOE developed and continues to improve upon a number of measures to mitigate risks that foreign governments who are adversarial to the U.S. pose to our scientific and technological development ecosystem supply chains and intellectual property.

DOE enhanced its existing vetting processes to ensure that risks of undue foreign influence are considered earlier in the competitive process and throughout the life of a DOE support project loan. DOE also included strict RTES requirements for financial assistance and loan programs. For example, no person participating in a foreign talent program sponsored by a country of risk may participate in a project. We are examining foreign connections associated with individuals and entities proposed to participate in the project. This includes sharing some intellectual property, foreign collaborations, foreign ownership, and foreign affiliations.

In conclusion, the Department of Energy looks forward to seeking the guidance of this Committee as we continue to ensure the integrity of the implementation of the BIL and IRA. These historic laws provide an unparalleled catalytic investment to our nation's infrastructure and energy security, and the Department stands ready to meet this moment while ensuring that we are executing stringent oversight and stewardship of the taxpayer dollar. As we look to secure the U.S. global leadership in energy technology development and infrastructure, we also know that the investment in our nation's energy infrastructure is not just a five-year or decade-long project, it is a very long-term investment in the energy future of the United States. We look forward to working with this Committee and for the partnership between the Department of Energy and the members of this Committee.

Thank you, Mr. Chairman.

[The prepared statements of Mr. Crane and Mr. Shah were submitted as one document, and appear after Mr. Shah's opening statement on page 12.]

The CHAIRMAN. Thank you, sir.

And now we are going to have the Honorable Mr. Jigar Shah, Director of the Loan Programs Office, Department of Energy.

STATEMENT OF JIGAR H. SHAH, DIRECTOR, LOAN PROGRAMS OFFICE, U.S. DEPARTMENT OF ENERGY

Mr. SHAH. Chairman Manchin, Ranking Member Barrasso, and distinguished Committee members, I, too, would like to express my gratitude for the opportunity to join you today. I have had the privilege of serving as the Director of the Loan Programs Office, or LPO, since 2021. LPO supports the DOE's private-sector-led, government-enabled approach to developing a new American industrial strategy.

The United States faces a deployment challenge. LPO exists to help bridge that gap. Since 2005, LPO has financed innovative energy and manufacturing projects, catalyzing the deployment of nuclear power, utility scale wind and solar, and domestic advanced technology vehicle manufacturing, while directly supporting nearly 50,000 family-sustaining jobs in the process. At the same time, LPO has prioritized its responsibility to protect taxpayer resources. Since the creation of LPO, dedicated federal staff have strengthened program oversight, institutionalized world-class risk management practices, and implemented portfolio-wide safeguards and monitoring of all LPO projects. The fact is, similar to what Under Secretary Crane explained for competitive funding opportunities, LPO conducts rigorous due diligence that is comparable to, if not more stringent than, what might be done in the private lending market.

The Bipartisan Infrastructure Law and the Inflation Reduction Act enhanced and augmented LPO's authorities, sending a signal that Congress trusts and expects LPO to meet this moment. And the private sector has noticed. Our applicant pipeline has 177 active applications seeking over \$157 billion in financing from advanced nuclear to carbon management to sustainable aviation fuels. We do not pick and choose the technologies that come to our door, and we evaluate applications across all statutorily eligible technologies on a level playing field. Since the start of the Biden-Harris Administration, LPO has issued or committed more than \$21 billion for projects across the country, including in Arizona, Kentucky, Louisiana, Nevada, Utah, and other states. These projects support deployment of clean hydrogen technology, virtual power plants, domestic critical materials production, and more.

We have also clarified our application process for borrowers and are implementing recent changes, including Section 1706 and State Energy Financing Institution (SEFI) authorities. LPO will continue partnering with the private sector to finance high-impact projects while taking measured risk and exercising rigorous due diligence to ensure that our future energy is built by American workers on American soil.

I look forward to answering any questions you might have.

[The jointly prepared statement of Mr. Crane and Mr. Shah follows:]

**STATEMENT OF DAVID CRANE,
UNDER SECRETARY FOR INFRASTRUCTURE
AND
JIGAR SHAH, DIRECTOR, LOAN PROGRAMS OFFICE
U.S. DEPARTMENT OF ENERGY
BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
REGARDING
PROCESS AND DUE DILIGENCE OF GRANTS AND LOANS AND SPURRING
INNOVATION THROUGH THE DEPARTMENT'S SELECTION STRATEGY
OCTOBER 19, 2023**

Introduction

Chairman Manchin, Ranking Member Barrasso, and distinguished Members of the Committee, thank you for this opportunity to provide an update on the Department of Energy's (DOE or Department) efforts to implement the Infrastructure Investment and Jobs Act, also referred to as the Bipartisan Infrastructure Law (BIL), and Inflation Reduction Act (IRA). All of us at DOE are incredibly grateful for the leadership of this Committee in formulating and enacting these landmark pieces of legislation and for your ongoing guidance during their implementation.

These two laws are truly historic investments in renewing American infrastructure for decades to come. We are together rebuilding American manufacturing and increasing American competitiveness. We are bolstering our energy security. We are creating millions of lasting, good-paying jobs and helping communities across the country tackle huge challenges and take advantage of opportunities. We are assisting communities in realizing the impacts of rapid energy technology transitions and ensuring that cities and towns have access to new energy technologies that can reduce families' and businesses' energy bills as quickly as they can be deployed, while enhancing America's energy security.

Overview of BIL and IRA Provisions

Through the BIL, Congress provided more than \$62 billion for programs under the purview of the Department of Energy. The BIL requires DOE to stand up 60 new programs – including 16 demonstration and 32 deployment programs – and expanding funding for 12 existing research, development, demonstration, and deployment programs from wind to clean hydrogen. The BIL also provides funding for many programs authorized by the bipartisan Energy Act of 2020, including energy storage demonstration projects, the Advanced Reactor Demonstration Program,

carbon capture demonstration and pilot programs, industrial emissions demonstration projects, and more.

In the IRA, Congress invested approximately \$35.5 billion in programs administered by the Department of Energy, including \$8.8 billion for the Home Energy Rebates Program, nearly \$6 billion for industrial decarbonization, and increased loan authority for our Loan Programs Office (LPO) to help bolster burgeoning American innovation and domestic energy production.

This longer-term, demonstration and deployment-focused mandate given to the Department by Congress also reflects a departure from other infrastructure packages in recent history – like the American Recovery and Reinvestment Act – which were more focused on research and development initiatives.

The Office of Clean Energy Demonstrations (OCED), which manages more than \$25 billion in funding, is tasked with scaling emerging technologies in partnership with the private sector to accelerate deployment, market adoption, and the equitable transition to a clean energy future. This year OCED announced selections to negotiate \$189 million in Federal funding for eight carbon capture front-end engineering and design (FEED) studies, up to \$1.2 billion to advance the development of two commercial-scale direct air capture facilities in Texas and Louisiana, and up to \$325 million for 15 long duration energy storage projects across seventeen states, one Tribal nation, and six national lab sites. Recently, OCED announced seven selections to negotiate \$7 billion in awards under the Regional Clean Hydrogen Hubs Program.

The Department's Loan Programs Office (LPO) is tasked with providing financing to support the commercialization and deployment of innovative energy infrastructure and advanced vehicle technology manufacturing projects in the United States. The LPO portfolio spans technology sectors, from transmission and storage to advanced nuclear and critical materials projects. The BIL and IRA included significant resources to enhance longstanding LPO programs – such as the Tribal Energy Financing and Title 17 Clean Energy Financing (Title 17) Programs. The legislation also provided new abilities to support projects that will reinvest in energy infrastructure that has ceased operations or make operating energy infrastructure more efficient (Section 1706) and non-innovative energy projects that receive support from an eligible state energy financing institution (SEFI). LPO has developed an active and wide-ranging applicant pipeline, with 177 active applications from every part of the United States currently seeking \$157.1 billion in cumulative financing across its programs.

In the last year, through LPO's Advanced Technology Vehicles Manufacturing (ATVM) Program, the Department has issued or committed more than \$13 billion for projects across the electric vehicle and battery storage supply chain in Arizona, Kentucky, Nevada, Tennessee, and Texas, playing a key role in the Administration's goal to onshore and re-shore manufacturing of zero-emissions vehicles and critical materials production. In the Title 17 program, LPO closed a \$504.4 million loan guarantee to the Advanced Clean Energy Storage project in Utah – helping finance the construction of the largest clean hydrogen storage facility in the world – and, more recently, announced the closing of a \$3 billion partial loan guarantee to Sunnova Energy Corporation's Project Hestia to make distributed energy resources, including rooftop solar,

battery storage, and virtual power plant (VPP)-ready software available to more American homeowners.

The impacts of BIL and IRA investments will touch every corner of the country through grants, formula funding, rebates, and loan programs that are thoughtfully designed and diligently administered by DOE experts, including career civil servants, after thoughtfully incorporating extensive feedback, including from the private sector and other stakeholders, into our program design. Awards and selections to negotiate awards are also made by career officials via a merit-based process, with program integrity at the top of mind.

Departmental Realignment

In February of this year, DOE celebrated the one-year anniversary of our strategic departmental realignment, which created the new Under Secretary for Infrastructure and three new offices – the Grid Deployment Office, the Office of Manufacturing and Energy Supply Chains, and the Office of State and Community Energy Programs. This Under Secretariat also includes the BIL-created Office of Clean Energy Demonstrations, as well as mission-aligned program offices, like LPO, the Office of Cybersecurity, Energy Security, and Emergency Response, the Office of Indian Energy Policy and Programs, the Federal Energy Management Program, and the Power Marketing Administrations. This new structure helps maximize the efficacy of BIL and IRA programs and boosts DOE’s ongoing work to reduce energy costs through low-cost clean energy resources, stimulate American manufacturing and industrial competitiveness and create jobs, increase equity and environmental justice, and support meeting ambitious climate goals.

Since its implementation, the strategic realignment has allowed the Department to be nimbler and more responsive in its deployment of BIL and IRA, and to meet the challenges of implementing these historic laws. In addition, these structural changes set DOE up for success in carrying out all of our missions – and to carry them forward for the coming years and decades. Seizing this opportunity requires active engagement with the private sector and communities as we deploy and oversee this unprecedented level of Federal clean energy investment, including in some areas and types of activities that are new to the Department. Our strategic realignment optimizes the world-class expertise of our talented staff and maximizes our ability to bring in new talent and skillsets that will serve the American public for decades to come.

Process and Due Diligence of Financial Assistance

The Department takes seriously its responsibilities to manage competitive funding opportunities and loan programs purposefully to the benefit of the taxpayer. We engage in the necessary due diligence and oversight mechanisms to ensure integrity in our programs and to be responsible stewards of the taxpayer dollar. Below, we highlight our due diligence process for competitive financial assistance opportunities from the perspective of the Office of Clean Energy Demonstrations, as well as our process for loan programs from the perspective of the Loan Programs Office.

Competitive Financial Assistance Opportunities

To ensure the transition from new energy technological discovery to commercial readiness, and in recognition of the challenges of administering any demonstration project in addition to navigating the significant barriers to private sector adoption of new technologies, OCED established four key tenets for federally-funded demonstration projects:

1. Create a pathway to technical and commercial risk reduction and make projects commercially viable by addressing technology challenges and driving down cost curves;
2. Target relevant operational environments, scales, and timeframes to validate the performance, cost, and value;
3. Enable downstream market adoption and deployment to accelerate scale-up; and
4. Mitigate substantial risk and the known and unknown risks factors that impact project outcomes.

This process begins at the Funding Opportunity Announcement (FOA) development stage, where OCED conducts extensive outreach to industry, communities, non-profits and think tanks, other stakeholders, and with other DOE offices to develop a better understanding of the opportunities and challenges facing any given sector. The feedback from this outreach and the direction provided by Congress informs the FOA design to maximize strong applications and ultimately reach the programs goals.

Once applications are submitted, OCED undertakes a rigorous merit review process that includes an initial check for eligibility followed by review by a panel of independent experts on the projects; technical merit, financial and market viability, workplan, management team, and Community Benefits Plan. The Community Benefits Plan is required as part of all BIL and IRA funding opportunity announcements and is based on a set of four core policy priorities: investing in America's workforce; engaging communities and labor; advancing diversity, equity, inclusion, and accessibility; and implementing Justice 40. In most cases for grants, these plans are scored at 20 percent of the technical merit review of proposals. Specific asks for Community Benefits Plans may vary due to the range of project types. For example, large place-based demonstration and deployment projects will require the most robust plans. When an applicant is selected, their Community Benefits Plan will be part of the contractual obligation of the funding recipient.

The merit review may include additional questions to the applicants, potential interviews, and review by the Office of Research, Technology, and Economic Security. And as part of the review, OCED may evaluate applicant risks such as financial stability; quality of management systems, personnel, and ability to meet management standards, history of performance; audit reports and findings; an applicant's ability to effectively implement statutory and regulatory requirements, as well as an assessment of community and labor engagement, availability of a skilled workforce, and public and worker health and safety considerations. The steps OCED takes in its due diligence process are comparable to those taken in the private sector, in line with industry best practices and project management standards.

After the merit review process is complete, OCED makes selections for award negotiations for a cooperative agreement, wherein OCED and the selectee will negotiate key terms and milestones of the first phase of the project.

OCED divided its project management oversight into four phases:

1. Phase one is detailed project planning where activities focus on completing specific details about the overall project plan and analysis to refine projections submitted as part of the proposal. These activities must provide assurance to DOE that the overall project plan is technologically, financially, and legally viable, and appropriately incorporates input from relevant local and community partners.
2. Phase two is project development, permitting, and financing, which encompasses advanced planning activities. Recipients finalize their project development plans, commercial agreements, and financial structure, and complete the necessary permitting and approval activities required to begin construction.
3. Phase three is installation, integration, and construction. This phase focuses on implementation and requires recipients to employ industry-standard project management tools and provide regular status updates as well as track, manage, and report on previously and newly identified risks.
4. Phase four is ramp-up and sustained operations. In Phase four, recipients transition to operations and commence with completion of award-specific criteria negotiated in prior phases.

At each phase OCED negotiates specific goals and milestones required to advance to the next phase of the project and can halt a project if those milestones are not met. Funding for projects is available based on budget periods within each phase to ensure maximum insight into project progress. OCED recognizes that each project and each phase present unique opportunities and challenges and so milestones and key performance indicators are negotiated per award and phase based on the proposed project.

The Department's commitment to project oversight goes beyond the rigorous vetting of applicants and individual project management of OCED's programs. DOE established the Demonstration and Deployment Advisory Board (DDAB), which focuses on demonstration and deployment projects throughout the Department funded with financial assistance over \$100 million. The DDAB is made up of the Under Secretary for Infrastructure and the Under Secretary for Science and Innovation, as well as the directors from offices across the Department to ensure maximum oversight.

The Department has also established processes for independent project reviews of demonstration projects receiving over \$100 million in federal funding, consistent with Congressional direction. The Department has already undertaken three such reviews for the two Advanced Reactor Demonstration Program projects as well as a demonstration project managed by the Office of Nuclear Energy.

These processes are in place to ensure that the Department is receiving the highest quality applications, can meet Congressional intent in its programming, is able to target the most effective and maximally impactful projects in selection, and make certain that selected projects

have strong oversight to ensure their success and that taxpayer dollars are being used to maximum effectiveness.

LPO Application Process and Rigorous Due Diligence

The LPO takes seriously its responsibility to protect taxpayer resources. Ever since its first loan programs were authorized by Congress in the Energy Policy Act of 2005, LPO has been evolving and making improvements to the office that have increased both internal and interagency oversight, clarified its management responsibilities, institutionalized risk management practices, and put in place portfolio-wide safeguards and monitoring of all LPO projects, among other enhancements.

For example, since the time of the 2012 independent audit of LPO and its portfolio known as the Allison Report, LPO has bolstered or refined its practices by:

- Developing a robust and consistent process for deep due diligence of applications in review;
- Improving internal and external coordination of the processes involved in the oversight of LPO programs, including through added transparency;
- Proactively monitoring and managing transactions after loan closing through a dynamic portfolio management process; and
- Establishing an updated leadership and organizational structure, including a Risk Management Division (RMD) and Portfolio Management Division (PMD), staffed with professionals with deep experience in underwriting and monitoring complex transactions and for whom responsible stewardship of taxpayer money is a top priority.

It is important to note that, based on the authority provided by Congress, LPO evaluates applications across all statutorily-eligible technologies on a level playing field. LPO does not pick and choose the technologies that come to the office and that are ultimately offered a conditional commitment or issued a loan. Applicants are invited to contact LPO and submit applications at any time.

LPO conducts rigorous due diligence that is comparable to, if not more stringent than, what might be done in the private sector. Eligible projects are vetted by LPO in a multi-step application process and must meet the specific requirements of the program. As supported by industry-leading third-party advisors, LPO conducts rigorous due diligence of every application, and if an eligible project meets all application requirements, only then provides financing (subject to available authority).

LPO's rigorous evaluation and underwriting process includes vetting a potential borrower's inputs and assumptions about the proposed project, including but not limited to the project sponsors' financial and technical assumptions, the market for their output, and project risks including provisions relating to foreign ownership and control. In addition, during its evaluation of a potential project, DOE employs mitigation measures against the assessed risks of a potential project, as is routine in the evaluation and underwriting of any project loan. These factors are also carefully evaluated outside of LPO by a Department vetting process that includes Committee on Foreign Investment in the United States (CFIUS) expertise in the Office of

International Affairs. For all potential project sponsors and borrowers, LPO employs robust Know Your Customer policies, background checks, and other measures to ensure a clear understanding of the potential borrower.

After a conditional commitment is offered, and prior to DOE issuing a loan, this rigorous process continues. In negotiating a term sheet and financing documents with any borrower, LPO includes binding provisions that ensure the issues flagged in due diligence are appropriately addressed to the Department's satisfaction prior to financial close and through the life of the loan.

Together, these practices have allowed the portfolio to grow in a way that takes measured risk to accelerate deployment of innovative technologies in various clean energy sectors and of technologies that increase the manufacturing competitiveness in the domestic supply chain—all while protecting taxpayer dollars. While supporting the build out of first-of-a-kind technologies, the LPO portfolio has simultaneously achieved the following through extensive due diligence and proactive portfolio management.

- LPO maintains a healthy loan portfolio concentrated in creditworthy assets, with 70% of exposure held by investment-grade borrowers, and it maintains a low aggregate loss rate of around 3% of funds disbursed.
- Of the approximately \$33 billion that has been disbursed to date, \$14.17 billion in principal has been repaid, along with \$4.74 billion in interest.
 - Every active LPO borrower remaining in the portfolio repaid principal in FY2022, achieving \$1.7 billion in principal retirement and \$523 million in interest payments to the U.S. Treasury.
- FY2022 marked a significant milestone as the portfolio achieved an internal investment-grade rating equivalent to BBB-, the first time in history that the overall weighted portfolio rating reached investment-grade by the end of the fiscal year.

A combination of the robustness of LPO's due diligence, underwriting, and oversight capabilities, and the conservative approach LPO has taken to selecting and modeling projects and approving financing, has amounted to a healthy, effective portfolio. As LPO continues to implement its mandate, DOE looks forward to doing so in a transparent and responsible manner.

Because LPO projects are often first movers in key energy sectors, a rigorous risk management approach across LPO's portfolio like the one described above is critical. By providing flexible access to capital for borrowers in clean energy sectors where traditional commercial debt is unavailable, LPO can help U.S. companies scale up domestic manufacturing capacity, help support American entrepreneurs' ability to deploy new technologies, and scale up domestic supply chains and create good-paying American jobs. Investment in American manufacturing helps the United States lead the world in clean energy industries and positions U.S. firms to export these technologies to our global partners.

Spurring Innovation in the Private Sector

Earlier this year, DOE launched a department-wide initiative to drive public and private sector engagement critical to the development of effective clean energy industrial strategy. The

Pathways to Commercial Liftoff effort, coordinated through DOE’s Office of Technology Transitions and contributed to by the offices testifying today as well as a number of other DOE program offices, are a series of reports that provide a valuable, engagement-driven resource on how and when certain technologies—including industrial decarbonization, virtual power plants, clean hydrogen, advanced nuclear, and long duration energy storage—can reach full scale deployment.

The Liftoff reports provide insights that will help steer public sector and private sector investments at a critical time. The BIL and IRA provided DOE billions of dollars to invest in and support large-scale demonstration and deployment of clean energy technologies over the next decade. These historic investments are intended to drive commercialization and unlock trillions in private investment to set the nation on a course to hit critical long-term decarbonization objectives. Public and private partnerships are more important than ever in enabling the nation’s broader industrial strategy—creating high quality American jobs, strengthening domestic supply chains and global competitiveness, and facilitating an equitable energy transition. Look no further than the recent Regional Clean Hydrogen Hubs announcement, where our \$7 billion is attracting over \$40 billion in private investment.

Importantly, the Pathways to Commercial Liftoff reports are developed through extensive stakeholder engagement and a combination of system-level modeling and project-level financial modeling – leveraging insights from conversations with several hundred private sector partners to date, as well as public sector experts. The Liftoff reports are designed to be “living documents,” and will continue to be updated to add new private and public sector insights as the commercialization outlook on each technology evolves and as other technologies are addressed by new Liftoff reports in turn.

Research, Technology, and Economic Security

With the enactment of BIL and IRA, it has become more important than ever for the Department to have a comprehensive and rigorous approach to research, technology, and economic security (RTES) policy and procedures for its awards and loans. DOE developed, and continues to improve upon, a number of RTES measures to mitigate risk that malign foreign governments pose to our scientific and technological development ecosystem, supply chains, and intellectual property.

To ensure a robust RTES approach, DOE took three major actions to address the many forms of RTES risks. First, DOE enhanced its existing vetting processes to ensure that risks of undue foreign influence are considered early in the competitive process and throughout the life of a DOE supported project or loan. DOE also included strict RTES requirements for its financial assistance and loan programs. For example,

- No person participating in foreign talent program sponsored by a country of risk may participate in a project.
- Entities applying for funding must be fully transparent regarding foreign connections associated with individuals and entities proposed to participate in the project. Transparency includes sharing sources of intellectual property, foreign collaborations

related to the project scope, foreign ownership, and foreign affiliations. Continued transparency is required during the life of a project.

Second, DOE established a department-wide RTES working group to review, develop, and assist in the implementation of RTES policies. Third, the Department established a new RTES Office to implement DOE's enhanced vetting process for financial assistance and loan projects, build awareness internally within DOE on RTES issues, engage with external stakeholders, and review DOE national lab agreements involving foreign entities.

Engagement with the Office of Inspector General

The Office of the Under Secretary for Infrastructure has been engaging from day one and will continue to routinely engage with the Office of Inspector General (OIG) to mitigate risks. The Department's OIG plays a critical oversight function in ensuring that new programs mitigate the risk of fraud, waste, and abuse – from the program design phase all the way through to the project management phase. The OIG has coordinated with Department leadership to review spending plans and has recommended prospective actions that DOE and its program offices can take to best protect taxpayer dollars and program integrity. The OIG will also continue to engage in periodic performance reviews and audits while also responding to complaints and tips on behalf of DOE employees and the general public.

To that end, the Department appreciates the OIG's prospective considerations for the implementation of the BIL, which came in the form of several Special Reports in 2022. While these were not the end products of traditional audits – which normally provide the Department with repeated opportunities to engage with OIG staff and review draft reports and to provide context, suggested factual corrections, and feedback, and which generally contain formal recommendations – they contain and collect helpful historical context and guidance on best practices going forward. Some common tips from across those reports included setting aside sufficient resources for adequate Federal staffing, building out strong internal controls to ensure Government and taxpayer protection, and developing comprehensive policies and procedures to minimize fraud, waste, and abuse in these new programs.

One key recommendation from the Inspector General relates to adequately staffing the Department to provide critical oversight of funded programs and projects. Accordingly, we have been focused on hiring sufficient staff from day one, particularly on hiring project and program oversight specialists, grant management and contracting specialists, and financial and audit oversight staff to responsibly oversee the tremendous investment Congress has made.

Conclusion

The Department of Energy looks forward to seeking the guidance of this Committee as we continue to ensure the integrity of the implementation of the BIL and IRA. These historic laws provide an unparalleled catalytic investment to our nation's infrastructure and energy security, and the Department stands ready to meet this moment, while ensuring that we are executing stringent oversight and stewardship of the taxpayer dollar along the way.

As we look to secure the United States' leadership in energy technology, development, and infrastructure through the BIL and IRA, we also know that the investment in our nation's energy infrastructure is not a five-year or decade-long project. It is a long-term investment in our economic and energy future that will require continued leadership from Congress and partnership between the Department and this Committee. We look forward to having further conversations about how we can make that long-term vision a reality.

Chairman Manchin, Ranking Member Barrasso, and Members of the Committee, thank you again for the opportunity to testify before you today. We look forward to answering your questions.

The CHAIRMAN. Thank you, sir.
 And now, we have the Honorable Teri Donaldson, Inspector General, Department of Energy.

**STATEMENT OF HON. TERI L. DONALDSON,
 INSPECTOR GENERAL, U.S. DEPARTMENT OF ENERGY**

Ms. DONALDSON. Thank you, Mr. Chairman. Thank you, Ranking Member Barrasso, and members of the Committee for inviting me to speak here today.

I am going to comment on just a few of the many risk factors, then I am going to talk for a little while about due diligence and why the private sector model isn't going to work. So in my testimony, we lay out 12 different categories that all present substantial risks. I want to emphasize, probably the most important fact that brings me here today is that all of those things are happening at the same time, and I have never seen that. Seventy-one new programs all trying to develop criteria, including due diligence criteria. You have massive amounts of money moving quickly. All of these things happening at once create a level of risk that may, candidly, be unprecedented in terms of amounts of federal money moving in such a complicated landscape. You know, even the PRAC money, huge amounts of which were lost and stolen, had simpler criteria than the dollars we are talking about here today. So I cannot say often enough that this is a very risky landscape.

On the issue of not funding our adversaries, I am greatly concerned about how things are going in that regard. The Department has set up a vetting center, which is a step in the right direction, but it's now six months old. It has three employees. It has no written procedures. There is no clear path on what projects will be vetted or what criteria will be used when they are vetted. It has a very, very long way to go, and that is of huge concern to me.

Now, a few minutes on due diligence. My background is—I was in a very large law firm and I was doing due diligence on large energy deals for many years. So this is something I know a little bit about. Private sector due diligence is two groups of trained gladiator lawyers going into a room with a very clear goal that the project make money. And that model works really well. I was one of those gladiators in the room—blood, guts, and hair—but it works really well because there is a clearly defined goal. You are protecting your clients' interests. In this setting, clearly defined goals really don't exist. Loss has not even been defined, right? What amount of loans defaulting will even be successful? So due diligence is very different.

The huge difference is that on the government side of this equation, it's not their money, right? And back in the '70s, the Federal Government finally responded to what I refer to as the "Monopoly money syndrome." It is a lot easier to spend the government's money than to spend your own or even your client's money. Clients hold people highly accountable. So in response to that, they came up with the Inspector General Act. So what inspectors general do is perform that independent audit function, and they answer the question of where did the money land. So I am not accountable to anyone other than you, right, to say did this even work. So there has to be a clearly defined goal.

The analogy in the private sector is the audit chair on the board. Completely independent. It typically does not report to anyone other than the board, and that function is very, very well-funded. So there is a graph in my materials which shows what volume of these dollars, what amount of projects I am currently funded to audit. And I will tell you that in the private sector, you would never see a graph that looks like that. Projects are rigorously audited, and they are audited independently for a very, very important reason, because that is how you know whether or not you got the benefit of the deal, by having an independent set of eyes looking at those materials.

So as we sit here today, I am the poorest-funded inspector general in the Federal Government, viewed proportionately. The Department of Energy took on massive new mission elements, massive amounts of money. I was funded very, very little. And as we sit here today, I don't have the support of the Secretary in seeking to transfer some of those already appropriated funds over to the Office of the Inspector General, and that is unfortunate, because at the end of the day, inspectors general don't lose money, they make money. The more you audit, the more you recover. So a dollar for an inspector general, at least as of 2021, the Council of the Inspectors General was calculating return on investment at about 1 to 20. So a dollar to an inspector general is \$20 you get back. So the more you care about those mission elements, the more you should pay attention to making sure that your independent audit function has the staff and the people to be doing its job.

Thank you.

[The prepared statement of Ms. Donaldson follows:]

U.S. Department of Energy
Office of Inspector General

Statement
of
The Honorable Teri L. Donaldson, Inspector General
U.S. Department of Energy

before the

U.S. Senate
Committee on Energy and Natural Resources

October 19, 2023

Teri L. Donaldson
Inspector General
Department of Energy

Introduction

Chairman Manchin, Ranking Member Barrasso, and members of the committee:

Thank you for inviting me to testify today on the risks arising from the major expansion of both the Department of Energy's loan programs and its grant¹ programs, as funded by recent pieces of legislation which collectively appropriated \$99 billion to the Department and increased the Department's loan authority by an estimated \$385 billion.

The current situation brings tremendous risk to the taxpayers — the combination of standing up 72 new Department programs, a real risk of funding entities with foreign ownership or control, and a historic expansion of the Department's loan program. As you know, these loan packages are on an accelerated schedule. One category of loan guarantees worth an estimated \$250 billion will expire on September 30, 2026. Another category of loan guarantees worth an estimated \$40 billion will expire on the same date—\$290 billion over the next 3 years or, put another way, roughly \$8 billion per month over the next 36 months. There is no precedent in the Department for this level and pace of financing. To put that amount into perspective, Wells Fargo, one of the Nation's largest banks, had an outstanding domestic commercial and industrial loan balance of \$292 billion as of the end of 2022.² Further, many of these projects are designed to promote innovation by financing projects not otherwise acceptable by private equity investors — projects the markets do not view acceptable.

These massive new risks to the taxpayer are occurring in tandem with substantial underfunding of the Office of Inspector General (OIG). Underfunding oversight makes an inherently risky situation much more amenable to fraud, waste, and abuse. Without substantially increased resources, the OIG's oversight will be a fraction of what it should be, and it will not include any oversight of many key areas. For example, with current funding, the OIG may only be able to conduct 50 oversight projects pertaining to the \$65 billion of grant and financial assistance awards, even though we have determined that more than 400 oversight projects are necessary to protect the taxpayers. Moreover, the OIG will not be able to provide the near-term audit and inspection assistance that the President has specifically requested to minimize the longer-term impacts from the large-scale frauds that often plague Federal programs that provide such funding on an expediated timeline. The current level of OIG funding for oversight is both inadequate and irresponsible.

Additionally, without proper funding, critical pre-existing risk areas such as research security, contracting and payment integrity, stockpile stewardship, environmental cleanup, and pit production—to name a few—will not receive appropriate OIG oversight.

¹ For purposes of the document, the term "grants" includes cooperative agreements and other transactions such as direct subsidies, prize competitions, etc. Both grants and cooperative agreements deliver Federal funds to recipients. With cooperative agreements, the Federal Government may be more involved in guiding or participating in project activities.

² <https://www08.wellsfargomedia.com/assets/pdf/about/investor-relations/annual-reports/2022-annual-report.pdf> (p.18)

As the Pandemic Response Accountability Committee (PRAC) continues to identify the billions and billions of dollars lost or stolen from the pandemic related federal funding programs, there are lessons to be learned. Earlier this year, PRAC chairman Michael Horowitz testified about the use of over 69,000 questionable social security numbers to obtain \$5.4 billion in fraudulent pandemic loans and grants.³ PRAC estimates a total of \$60.4 billion has been lost to fraud from the total \$655 billion in benefits provided in response to the pandemic, and other sources place that number at over \$200 billion.⁴ Fast money must be balanced against the need for thoughtful and effective internal controls and independent audits.

Due to the spending caps proposed in the Fiscal Responsibility Act of 2023, I am recommending that Congress reallocate funds from the Department's unobligated balances under the Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA), and Puerto Rico Energy Resilience Fund to provide 0.35 percent of funding in those statutes to the OIG. This can be done with no increases in appropriations. This makes sense. In fact, the Environmental Protection Agency has already agreed to transfer additional funds to its OIG in the same manner for the same reason.

I have asked for the administration's support of this proposal. I am here today to ask the same of this committee, and to further discuss some of the risks associated with this unprecedented influx of funding. Please support my request to be properly funded as discussions continue to finalize the fiscal year 2024 budget.

Recent Legislation Increased Loan Program by \$385 Billion

Three recent legislative actions expanded existing Department authorities for loans and loan guarantees by an estimated \$385 billion. Beginning with the most recent legislation:

- The 2023 Consolidated Appropriations Act expanded the Department's loan guarantee authority by \$15 billion. This authority supports commitments to guarantee loans for eligible projects under title Title XVII of the Energy Policy Act of 2005 for Innovative Technology Loan Guarantee, Section 1703. Eligible projects must: (1) avoid, reduce, or sequester air pollutants or anthropogenic greenhouse gas emissions, and (2) employ new or significantly improved technologies. This authority does not have a statutory expiration date but is available until the appropriations for credit subsidy supporting it are expended.

³ Congressional Hearing, February 1, 2023, on Federal Pandemic Spending: A Prescription for Waste, Fraud, and Abuse (Page 3): oversight.house.gov

⁴ Pandemic Unemployment Insurance: How much has been paid to fraudsters?: pandemicoversight.gov

- IRA expanded the Department’s loan and loan guarantee authority up to approximately \$350 billion, covering several authorities:
 - Title XVII Innovative Technology Loan Guarantee, Section 1703, was expanded by \$40 billion and covers the same type of work as discussed in the preceding paragraph. This authority is available until September 30, 2026, or until the appropriations for credit subsidy supporting it are expended.
 - Title XVII Innovative Technology Loan Guarantee, Section 1706, authorized and appropriated funds to support guarantees of up to \$250 billion. Section 1706 should be used to help retool, repower, repurpose, or replace existing energy infrastructure that has ceased operations, or to enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. This authority is available until September 30, 2026, or until the appropriations for credit subsidy supporting it are expended.
 - Advanced Technology Vehicles Manufacturing Direct Loan Program is estimated to support approximately \$40 billion of loans. These loans finance U.S. manufacturing of fuel-efficient, advanced technology vehicles and qualifying components. Although the legislation does not provide a “cap” for this loan authority, the Loan Programs Office (LPO) estimates that appropriations for credit subsidy may support an estimated \$40 billion.⁵ This authority is available through September 30, 2028, or until appropriations for credit subsidy costs supporting it are expended.
 - Tribal Energy Loan Guarantee Program (TELGP). IRA changed and increased this \$20 billion program. These loans can finance a broad range of energy development projects owned by Tribal Nations. The math for this authority contains two parts: (1) \$18 billion in new IRA expanded TELGP authority, (2) plus IRA created new rules and applicability for an existing \$2 billion TELGP authority that was authorized in the FY 2017 Consolidated Appropriations Act (Public Law 115-31) in such manner as to subsume the prior \$2 billion authority and to combine it with the new \$18 billion IRA authority, resulting in \$20 billion. This authority is available until expended.

- The IIJA authorized and appropriated funds for the Carbon Dioxide Transportation Infrastructure Finance and Innovation Program loan guarantee program by an estimated \$20 billion. The LPO will manage this Program in partnership with the Department’s Office of Fossil Energy and Carbon Management. The loans are designed to support large capacity, common carrier carbon dioxide transport projects. The legislation does not include a ceiling for the maximum amount of loans that can be made for this authority; however, the LPO estimates that appropriations for credit subsidy and administrative costs may support an estimated \$20 billion.⁶ This authority is available until expended.

⁵ The LPO Annual Portfolio Status Report (Page 4): <https://www.energy.gov>

⁶ The LPO Annual Portfolio Status Report (Page 5): <https://www.energy.gov>

The preceding information is summarized in the following table:

Law	Amount	Program	Purpose	Expiration	Statutory or estimated
2023 Consolidated Appropriations Act \$1.5 billion	\$1.5 billion	Section 1703. Title XVII Innovative Loan Technology Guarantee	Eligible projects must (1) avoid, reduce, or sequester air pollutants or anthropogenic greenhouse gas emissions, and (2) employ new or significantly improved technologies	Available until credit subsidy appropriation is expended	Statutory ceiling
Inflation Reduction Act \$350 billion	\$40 billion	Section 1703. Title XVII Innovative Loan Technology Guarantee	Identical to 2023 Consolidated Appropriations authority described above	Sept. 30, 2026	Statutory ceiling
	\$250 billion	Section 1706. Title XVII Energy Infrastructure Reinvestment Program / Innovative Loan Technology Guarantee	Retool, repower, replace, or repurpose existing energy infrastructure that ceased operations, or to enable energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases	Sept. 30, 2026	Statutory ceiling
	\$40 billion	Advanced Technology Vehicles Manufacturing Direct Loan Program	Finance U.S. manufacturing of fuel-efficient, advanced technology vehicles and qualifying components	Sept. 30, 2028	IRA removed a \$25 billion cap. \$40 billion is current estimated amount that may be supported by the credit subsidy appropriation
	\$20 billion	Tribal Energy Loan Guarantee Program	These loans can finance a broad range of energy development projects owned by Tribal Nations	Available until expended	Statutory ceiling
Infrastructure Investment and Jobs Act \$20 billion	\$20 billion	Carbon Dioxide Transportation Infrastructure Finance and Innovation Loan Guarantee Program	The loans are designed to support large capacity, common carrier carbon dioxide transport projects	Available until expended	Estimated amount based on the loan dollars supported by the credit subsidy appropriation

Recent Legislation Expanded Department's Grant Programs

Of the \$99 billion in supplemental appropriations to the Department, we estimate that \$65 billion will be distributed in grants and other financial assistance awards,⁷ including the creation of 72 new programs. Beginning with the most recent legislation:

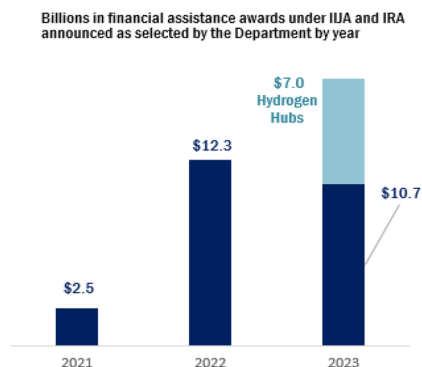
- The 2023 Consolidated Appropriations Act⁸—Congress added \$1 billion to the Department's appropriations to provide grants to the Puerto Rico Energy Resilience Fund to build energy system resilience to major natural disasters. This is a new grant program.

⁷ In this context, "grants" include all types of Financial Assistance programs, including grants, cooperative agreements, direct subsidies, prizes, and other non-contractual transactions. It is important to note that this number is not settled since awards are still being made, and the Department has some flexibility in the manner that the program funds are disbursed.

⁸ Public Law 117-328

- IRA⁹—Of the \$35 billion in appropriations, we estimate that \$16 billion is slated for grants. The legislation funds 21 programs,¹⁰ 15 of which are new programs.¹¹
- IIJA¹²—Of the \$62 billion, we estimate that \$48 billion is slated for grants. The legislation funds 69 programs,¹³ 56 of which are new programs.

The Department is already moving these funds. The Department reports that more than \$32 billion in awards have been selected, increasing rapidly over time, as shown in this chart. The volume and pace of these awards will increase significantly from FY 2024 through FY 2025. By way of comparison with historical awards volumes, in FY 2021, the Department awarded \$3.9 billion in financial assistance awards for enduring mission grants, not including the IIJA funds.



Due Diligence Challenges Facing Both Loan and Grants Programs

History teaches us that certain factors make applied due diligence less rigorous, even when due diligence procedures may seem well drafted.

Fast moving funds incentivize cutting corners in due diligence. One category of loan guarantees worth an estimated \$250 billion expires on September 30, 2026—3 years from now. Another category of loan guarantees worth an estimated \$40 billion expires on the same date—\$290 billion over the next 3 years or, put another way, roughly \$8 billion per month over the next 36 months. There is no precedent for this level and pace of financing. In the interest of moving these funds out, on schedule, the Department may be incentivized to cut corners and skip rigorous due diligence steps that are needed to properly manage the risk of default.

Similarly, for grant programs, Department officials are under pressure to award grants and thereby move the clean climate program forward as quickly as possible. This goal directed pressure may also lead to cutting corners in due diligence procedures.

There is a real risk that awards will be made to ineligible recipients. For the innovative technology loan guarantee program, the loan applicant must demonstrate innovation

⁹ Public Law 117-169

¹⁰ <https://www.energy.gov/infrastructure/clean-energy-infrastructure-programs-department-energy>

¹¹ One of the new programs is Department Oversight for \$20 million, which captures funding for the OIG.

¹² Public Law 117-58

¹³ <https://www.energy.gov/infrastructure/clean-energy-infrastructure-programs-department-energy>

in the technology being financed in the project. There is a real risk that “innovation” claims will be exaggerated by the applicant, or that baseless or marginally innovative proposals may be awarded financing. Compounding this risk is the pressure on the Department to make loans before authority expires. Should this occur, there is less money available for truly innovative technology projects.

Similarly, in the grants program, due diligence is crucial to ensure that awardees satisfy program participation criteria. The same incentives exist for grant applicants to cheat on eligibility and for Federal officials to approve the applications with too little verification.

Due diligence is essential to prevent awards to foreign entities. Both IJA and IRA include requirements that call for both loan and grant awards to be made to entities that advance the agenda of domestic technology development and jobs creation, and that seek to prevent awards to foreign entities. To help manage this risk, in March of this year, the Department set up a pilot “vetting” process through the “Research, Technology, and Economic Security Vetting Center.” This office intends to screen loan and grant awards for foreign influence, ownership, and control. However, this pilot process is new, still under development, untested, and will be called upon to screen numerous projects on a truncated timeline. This office is currently staffed by only three people. All these factors increase the risk that awards will be made to entities with foreign entanglements that go undetected.

Yet, award determinations were already underway, well ahead of the vetting center pilot. One of these projects raises the issue of balancing competing goals. Kore Power, an Idaho-based company that currently makes lithium-ion battery cells in China with Chinese technology and intellectual property, won a conditional commitment from the LPO in June 2023 for an \$850 million loan to help build its first major U.S. manufacturing facility in Arizona. In this case, the Department is moving the project forward on the grounds that U.S. jobs will be created deploying Chinese technology in the U.S., and with the belief that U.S. technology will not go overseas. While it appears that this financing project may support Congress’ goals of U.S. job creation, it clearly does not support the legislation’s goals of U.S. technology development since this project deploys Chinese intellectual property.

The OIG has conducted a number of investigations related to the theft of intellectual property and violations of grant terms and conditions. In fact, 35 percent of the grant fraud cases currently open are related to research security with a real risk that this research will go overseas. For example, a recent investigation conducted jointly by my office and the National Science Foundation OIG found that a principal investigator at the University of Kansas created a scheme to defraud the Government by failing to disclose on grant proposals to the Department an existing affiliation with, and contractual obligations to, a Chinese university. The grant recipient also failed to disclose this conflict of interest to the University of Kansas.¹⁴

There is every reason to conclude that foreign actors will seek IJA and IRA funds to advance development of clean energy technology, and that the Department’s due diligence procedures may not be sufficient to deal with this reality.

¹⁴ <https://www.justice.gov/opa/pr/jury-convicts-university-kansas-researcher-hiding-ties-chinese-government>

Due diligence needed to prevent “double dipping.” Since 2009, there has been a broad prohibition against “double dipping”—the notion that an entity that was funded through one sort of Federal funding, such as a grant, would then use those Federal grant funds to apply for more Federal monies such as a loan. This risk is accentuated with the loan applicants and grant applicants competing for funding to develop innovative clean energy technologies. In other words, projects deemed worthy of grants may be considered as good candidates for the loans as well, but need to be carefully screened to ensure that double dipping is not occurring.

Additional Risks - Loan Program

What rate of loan default is acceptable? The LPO faces enormous challenges. First, these loans are designed to create partial or total financing for projects that are otherwise too risky for commercial banks or private equity to accept. Stated differently, these projects would fail commercial due diligence. This raises the most fundamental question: What amount of risk is acceptable? This question should be discussed; acceptable risk should be defined; overall success for the program should also be defined; and the results should be tracked and reported.

In a commercial setting, default on the loan is what defines failure. If the lender is paid on the loan, the lender has been successful. Here, the LPO will be financing projects in full anticipation of some amount of default. What amount of default of these \$385 billion is acceptable?

Indian Energy Loan Guarantee Program no longer requires “skin in the game.” We note that IRA loosened controls that came with this program’s 2017 authority in two fundamental ways. First, the 2017 authority was for a partial loan guarantee, not to exceed 90 percent. Put another way, the loan applicant had 10 percent “skin in the game.” No deals were closed under these standards. IRA removed the 90 percent partial loan guarantee requirement and now allows for 100 percent financing of project costs. Second, IRA now guarantees loans from, and allows access to, the U.S. Treasury’s Federal Financing Bank loans, which reduces both fees and interest expenses. Together, these changes are certain to increase participation in the program and the risk of default. With increased risk should come increased due diligence procedures to add assurance that the taxpayer is being protected in this increasingly risky program.

Additional Risks - Grants

New programs are pushing out billions in grant money through newly designed processes using untested internal controls. Overwhelmingly, the 72 new programs are for grants and financial assistance awards, awarding an estimated \$65 billion in appropriations. These new Federal programs raise immediate concerns such as acquiring and training expert staff and quickly developing effective internal controls. For these new programs in particular, there is a critical need for external oversight of these new Federal programs to help prevent foreseeable problems as early as possible.

The Department has not taken concrete steps to ensure that sufficient resources are reserved to perform proper oversight over significant increases in grants to states, local government, and tribes. As this money is awarded to these entities, it is then further dispersed to subrecipients. It is not yet clear whether the states, local governments, or tribes are equipped with sufficient staffing, or have adequate internal control systems in place, to protect these funds. Our early indicators are that states' oversight resources are stretched and strained due to multiple competing priorities, including ongoing pandemic oversight commitments. Importantly, the passing of these Federal funds to others neither removes the Federal nature of the expenditure nor excuses Federal oversight, but it certainly increases risk. My office has been notifying Department leadership of these concerns for more than a year.

The Department is planning to disburse billions of dollars using award vehicles it has little or no experience with. The Department has some experience in administering financial assistance programs in the form of grants and cooperative agreements. However, the IJA mandates programs that do not fit neatly into these categories. Some examples of these include direct subsidies for the \$6 billion Civil Nuclear Credit Program, competitive "prize" programs, and others. Accordingly, the Department established a Working Group on Innovative Funding Mechanisms to develop processes, policies, and procedures to use Partnership Intermediary Agreements¹⁵ and "Other Transaction Authority" to make these atypical awards. We note that there are real risks associated with developing new processes to pay billions of dollars using award instruments for which the Department has little or no experience.

Modern data analytics tools are not being used to prevent improper payment or to detect fraud, waste, and abuse in grant programs. Historically, the Department has not gathered or required data from its many grantees in sufficient detail to support modern data analytics capabilities, prevent and detect improper payments, or detect fraud. Other Federal agencies have learned a great deal about the power afforded by data analytics capabilities applied to high volume transactions. In late July 2023, the Department issued program requirements and grant application instructions that appear to miss an opportunity to require the type of data that has served other agencies so well during the pandemic. The OIG is currently evaluating opportunities for the Department to require additional data to be gathered by grantees for rebate program beneficiaries, in a secure manner, that can be used to prevent improper payments and to detect fraudulent patterns and actions. Additionally, the OIG team is exploring questions related to information sharing opportunities and other tools such as using the U.S. Treasury's "Do Not Pay" tool. This work is already well underway. The OIG report will identify additional opportunities for the Department to use on other grant programs to modernize data analytics capabilities.

The Department has a poor track record auditing grantees. Federal regulations require that recipients spending more than \$750,000 in Federal funds must undergo an annual audit by an independent auditor. Commonly called "Single Audits" these audits are designed to help ensure that recipients have adequate accounting systems and effective internal controls. It is critical that these independent audits are conducted. It is also critical that the granting agency monitor compliance and follow up on the issues identified by these and other audits. This

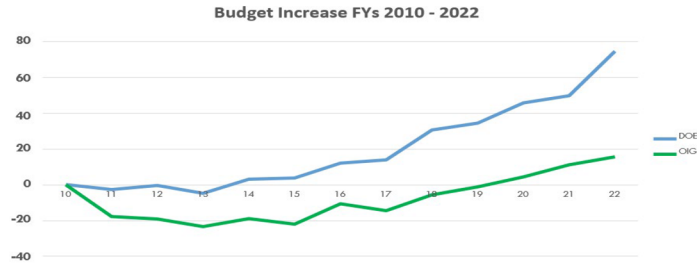
¹⁵ 15 U.S.C. § 3715, Use of Partnership Intermediaries

oversight framework is only effective if it is implemented and overseen appropriately by granting agencies.

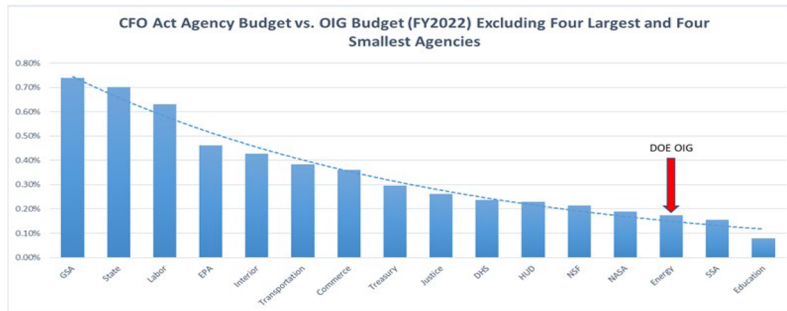
The OIG has identified areas where the Department could improve its oversight in this area. For example, a March 13, 2023, Department OIG audit found that the Department’s Office of Science failed to ensure that required annual audits of for-profit recipients of Small Business Innovation Research grants had been completed. Award expenditures totaling \$56,835,650 that were not audited, as required, exposed the Department to an increased risk of fraud, waste, and abuse.

Underfunded OIG Oversight

Lack of adequate base funding for the OIG. Prior to the passing of the three pieces of supplemental legislation discussed above, the OIG was already significantly underfunded. The following chart demonstrates the long-term and growing gap of OIG funding growth compared with the growth of the Department’s budget prior to the more recent legislation:



The next chart provides a glance of Inspector General discretionary funding for many Chief Financial Officers Act agencies, as of FY 2022:



Supplemental legislation underfunded the OIG. To further exacerbate the historic underfunding issue, the OIG received only \$62 million, or 0.10 percent of the funding provided

to the Department over a 5-year period under IIJA, to provide oversight of these new infrastructure projects. When compared with other OIGs that received money under IIJA, we were again substantially underfunded as shown in the following table:

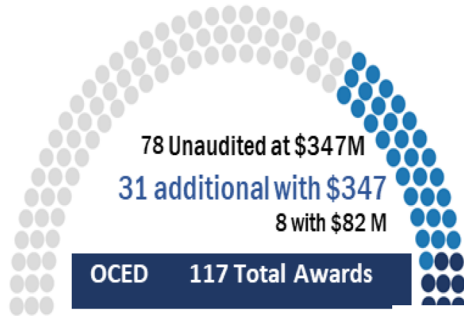
	IIJA Agency Funding	IIJA OIG Funding	OIG Percent of Agency Funding
EPA	\$61 billion	\$269 million	0.44%
HHS	\$4 billion	\$17 million	0.44%
DOI	\$28 billion	\$99 million	0.35%
USDA	\$8 billion	\$27 million	0.34%
DHS	\$8 billion	\$20 million	0.25%
DOE	\$64 billion ¹	\$62 million	0.10%

Also, IRA appropriated only \$20 million to the OIG, or 0.05 percent of the funding provided to the Department, to oversee those programs. Notably, there was no provision for additional OIG funding in the expanded programs in the FY 2023 appropriations to include an expansion of \$15 billion in loan program authority and a new \$1 billion in appropriations for the Puerto Rico Energy Resilience Fund. Notice the pattern: The OIG has increasing oversight mandates for supplemental programs while getting reduced resources for oversight.

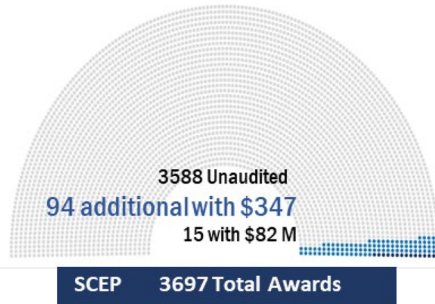
An appropriate starting point for proper funding for the OIG is at 0.35 percent of the Department's budget. We arrived at this conclusion by examining FY 2022 funding levels for the OIGs of the Chief Financial Officers Act agencies, as well as the more current funding of the OIGs impacted by IIJA and IRA. The 0.35 percent falls into the mid-range. Given the significant risks for the Department, this percentage may be too low. However, it is a starting point and much needed.

Needed oversight work is not being performed, and cannot be performed, without significant increases in funding. It is crucial for policymakers in Congress and Department leadership to understand how the current underfunding of OIG programs constrains the OIG's oversight plans. Our oversight plan for audits and inspections is organized into two categories – Federal-level programs and award level projects. First, it is imperative that the Department's 72 new programs receive independent oversight. If properly funded, the OIG's oversight plans would include about 80 audits and inspections for the **Federal-level programs**, including most of the 72 new programs. Currently, the OIG is only funded to perform about 20 reviews of Federal-level programs over a very long-time horizon. Regarding the second category, the OIG's audits and inspections at the **award-level**, the OIG is currently only able to plan for about 50 award-level oversight projects—less than 1 percent of the anticipated more than 5,000 awards. The OIG should be planning more than 400 projects at the award level. This level of oversight is both inadequate and irresponsible.

The following charts show what impact the OIG’s budget shortfall has on our oversight responsibilities. Specifically, the Department’s Office of Clean Energy Demonstrations is the largest new program with about \$25.7 billion in appropriations that anticipates making about 117 total awards. However, the OIG can fund only 8 award-level audits at current funding levels (dark blue) compared with the 31 additional (39 total) award-level projects we conclude that we should do (light blue) given the massive amount of risk.



Similarly, for the Department’s State and Community Energy Program, a \$15.3 billion program that anticipates making about 3,700 awards, the OIG can only fund 15 award level projects at current funding levels (dark blue) whereas risk factors indicate we should perform 94 more (light blue) award-level reviews (total of 109). These are just two examples from our oversight plans.



How much is the OIG funding shortfall? The President’s FY 2024 Budget includes \$165.2 million for the Department OIG to be used until expended. If the President’s Budget is enacted as is, it would leave a remaining shortfall of \$16.8 million in our base budget. However, the current version of the Senate Energy and Water Development Fiscal Year 2024 Appropriations Bill provides only \$86 million to the OIG, leaving a base budget shortfall of \$96 million.

Additionally, the OIG has a shortfall of \$264.7 million to oversee IJJA, IRA, and the Puerto Rico Energy Resilience Fund. The following chart shows the OIG’s funding shortfall to conduct proper oversight of the three pieces of recent supplemental legislation:

Supplemental Shortfall -- Exclusive of the Loan Portfolio					
Bills	DOE	OIG	Current Percent OIG to DOE	OIG Estimated Requirements	OIG Estimated Funding Shortfall
IIJA	\$62.5 B	\$62.5 M	0.10%	\$218.6 M	\$156.2 M
IRA	\$35.0 B	\$20.0 M	0.06%	\$125.0 M	\$105.0 M
PR-ERF	\$1.0 B	\$0.0 M	0.00%	\$3.5 M	\$3.5 M
Total	\$98.5 B	\$82.5 M	0.08%	\$347.1 M	\$264.7 M

The Department is apparently seeking to enhance its own oversight resources using the same type of transfer mechanism. The statutory 3 percent funding cap for Program Direction placed on the Department under IIJA limits the Department's ability to conduct effective oversight. This funding cap applies to the following programs: Energy Efficiency and Renewable Energy; Cybersecurity, Energy Security, and Emergency Response; Electricity; Fossil Energy and Carbon Management; and the Office of Clean Energy Demonstrations. The Department is apparently seeking to correct this. The FY 2024 Senate Bill contains language increasing the 3 percent cap on "Program Direction" to 5 percent. The OIG supports the Department receiving additional funds for conducting its own oversight.

The FY 2024 House Bill provides a transfer of funds from the Department's unobligated balances under both IIJA and IRA to the OIG; however, the transfer falls short of the 0.35% necessary, and does not provide for a transfer of funds from the Puerto Rico Energy Resilience Fund. Our requested transfers would provide the OIG with the \$264.7 million shortfall by transferring funds from the Department's unobligated balances under IIJA, IRA, and the Puerto Rico Energy Resilience Fund. Therefore, the transfers do not require any new appropriations. These transfers are critical for ensuring that the funding provided to the Department under these pieces of legislation are used for their intended purposes.

The OIG has important work underway and planned. Although the OIG remains significantly underfunded, we have engaged in a great deal of work to help prevent fraud, waste, and abuse in the Department's expanded loan and grants programs. Since the passage of IIJA, the OIG has conducted 227 Fraud Awareness Briefings that reached more than 9,160 Federal employees, contractors, grantees, external auditors, law enforcement, as well as state, local government, and tribal representatives. We have also worked closely with other OIGs who have received funding under these pieces of legislation to identify risks and best practices. I am

currently serving as the co-chair of the Council of the Inspectors General on Integrity and Efficiency's IJA Working Group.

Since early 2022, my office has held dozens of meetings with senior Department leadership to pose questions to them regarding risks faced by the new programs and to identify issues the OIG has reported during the performance of prior work. In this way, we have safeguarded our independence while helping the Department identify risks. Additionally, between April 2022 and August 2022, the OIG issued four capstone reports summarizing previous work. These reports targeted specific programmatic areas that will receive substantial funding under the new legislation. These reports discuss the loan program;¹⁶ the Weatherization Assistance Program;¹⁷ financial assistance awards;¹⁸ and Clean Energy Demonstration Projects.¹⁹ Issues reported in these reports include recipient fraud; insufficient Federal staffing; inadequate oversight of projects; circumvention of project controls; inadequate internal controls; and lack of recipient-level controls.

Also, my office has oversight projects underway addressing fraud risk in Home Energy Rebate Program grants; an audit of the Weatherization Assistance Program; adoption and use of data analytics capabilities; and an inspection of the Puerto Rico Energy Resilience Project. We are about to begin working on conflict-of-interest issues in the LPO.

Further, given the importance of the risks posed by foreign actors to Department intellectual property and national security, our Office of Inspections, Intelligence Oversight, and Special Projects has recently begun an inspection focusing on the Department's compliance with requirements of Department of Energy Order 486.1A, *Foreign Government Sponsored or Affiliated Activities*. The Order prohibits Department employees and contractors from participating in foreign government-sponsored talent recruitment programs and also restricts participation in other foreign government-sponsored or affiliated activities of a "foreign country of risk." Additionally, we are planning a joint project with the OIG of the Intelligence Community in FY 2024 to evaluate Department security processes in accordance with the requirements in Security Executive Agent Directives and Department Orders.

Closing Remarks

I would like to recognize the key role that bipartisan efforts from Congressional oversight committees have played over the years in advancing Government transparency and program integrity. We are all aware of the important work that Congressional committees have done with Inspectors General over the years. Thank you for your continued support of the independent oversight work performed by my office and the Inspector General community. We look forward to continuing to work on behalf of the taxpayers to ensure that Federal infrastructure and energy programs are operating effectively and efficiently, and to prevent and detect fraud, waste, and abuse. I appreciate the opportunity to testify here today, and I look forward to answering your questions.

¹⁶ <https://www.energy.gov/ig/articles/special-report-doe-oig-22-34>

¹⁷ <https://www.energy.gov/ig/articles/special-report-doe-oig-22-30>

¹⁸ <https://www.energy.gov/ig/articles/special-report-doe-oig-22-40>

¹⁹ <https://www.energy.gov/ig/articles/special-report-doe-oig-22-39>

The CHAIRMAN. Thank you. We appreciate it very much. And we will start our questions right now and I am going to go right to you, Ms. Donaldson. I think it was a great presentation of what we are concerned about.

With all the good that can be done and all the intent that was done for the good that should be returned, have you taken this to the Secretary? Where do you go for your support? Do you go to the Secretary level and ask for that support?

Ms. DONALDSON. Yes, and to OMB. And many of you—I have briefed many of you on the same subject.

The CHAIRMAN. Okay.

Ms. DONALDSON. So we are about two years behind now. So we have been on the Hill and working to try to correct this problem for about that amount of time.

The CHAIRMAN. And you have not gotten any favorable response you need or the support that you need right now, with all the money that is coming toward that. And I will go right to Mr. Shah now.

The amount of money that is going, unprecedented, to where you have responsibilities and making sure it is done, can you look at the technologies that we are trying to develop here and can you say that there are any pie in the sky that don't have proven technology, or is this a lot of proven technology that hasn't been matured? How would you rate that?

Mr. SHAH. Senator—

The CHAIRMAN. Such as hydrogen. It has been around forever, right?

Mr. SHAH. Thank you so much for your question.

You know, as the Inspector General suggested, I have also been in the private sector for a long time, doing a lot of due diligence on projects. What I would say is that the Department of Energy Loan Programs Office has an ability to do due diligence on these projects that many private-sector banks don't have because we have access to the 10,000 engineers, scientists, and experts on the DOE platform. So for the vast majority of these projects, I would say the technology has actually originated from R&D programs that were funded by the Department of Energy. So for many of these technologies that are, frankly, scary to the private sector, which is why the Loan Programs Office was created, we can do rigorous due diligence and look back into demonstration projects and other data that we have to see whether the technology will work.

So we never take "will it work or won't it work" risk today here at the Loan Programs Office. We do take execution risk, scale-up risk, a lot of other risks that are real risks that we have to do due diligence on. Also, the average due diligence process for the Loan Programs Office is over 12 months. And so, we are hiring independent engineers, market advisors, and others to give us a third-party view, as was suggested and required by the Congress in the 2020 Act.

The CHAIRMAN. Let me ask this question—do you all work together, or are you close, in the same offices, or anything of that sort? Where is your office located?

Ms. DONALDSON. We are all in the exact same building, Senator.

The CHAIRMAN. In the exact same building.

Do you all work on the concerns you have and him being responsible for the loans that go out the door? And what you are saying, I believe, that this has been missed or not looked at, are you all collaborating on that?

Ms. DONALDSON. We do. I have a monitoring project. So we have data that we are collecting on a monthly basis from the Department. That is how I know about the vetting center, and we do have fairly regular meetings where we discuss risk.

The CHAIRMAN. Well, I think you all know, our concern is basically countries that don't have our same values, and basically, right now, it's targeted on China, since China has a monopoly on things that we seem to want to do as an Administration that we don't have a secure supply chain to do it on our own. So we are trying to accelerate how we can get into that market and be more self-reliant or relying on actors that we have that are basically reliable, such as free trade agreement countries, things of that sort. And that's where the credits come in. Are we able to basically find out what maybe China is still receiving? Because we are circumventing what the intent was of the bill to basically make us independent and break as quickly as we can from China dependency and stop that from happening or prohibiting a loan going out.

And next of all, our loans—is money going out the door before people are taking the risk to get a production tax credit or investment tax credit? They have to either be producing or investing. They have to put their own capital at risk. Is any money going out the door before they have come to the table with their risk, you know, their capital risk?

Mr. SHAH. Senator, thank you for the question. I am happy to answer it for the Loan Programs Office and happy to have David answer it for the rest of DOE.

For the Loan Programs Office, we have a deal that we recently announced for Korea, and in that, we are talking about an American company that has been around for 60 years. In order to accelerate bringing lithium-ion battery manufacturing to the United States, they partnered with a Chinese company. That company has put their technology into Arizona, right? And they have—we have done several things here. One is—

The CHAIRMAN. I understand that that technology was basically stolen from the United States to begin with and they matured it.

Mr. SHAH. That is exactly what I was going to say. I mean, you know, as somebody who is an entrepreneur and has done this for a long time, I mean, there really was a policy in this country for commercializing your technology in other continents, right? We did not have the tools here. The Inflation Reduction Act has given folks the tools to be able to commercialize our technology here in this country. Some of that is, you know, being brought back from other continents, back to this country, and there are ways for us to protect the U.S. taxpayer, a couple things. One is, there are foreign entities of concern that are trying to put provisions into board representation. So we do full due diligence on that to make sure that none of those provisions exist. Second, we make sure that all IP licenses are one-way, so the technology comes to the United States, tied to the American worker, but no additional innovations that

occur here can go back to that country. And we did that diligence here.

Third, foreign talent recruitment programs. The vast majority of our companies don't know what a foreign talent recruitment program is. So we have to explain to them what it is, how to monitor for it, and how to make sure that they are not susceptible to it. And the last piece of it is, we need to make sure that they understand that we need to see the ownership stake of those companies going down, so the Chinese ownership stake goes down.

The CHAIRMAN. Mr. Crane, I am over my time. Real quick—I want you to think because I am going to come back and ask at a later time, but the GREET model we have talked about, especially with hydrogen and what it is doing, and you met briefly with some people we have a lot of concern about. I want to get back to that so you can think about that one, okay?

The thing I am more concerned about right now, are any of you all looking at what the CBO score was on the IRA and what is happening now, how you implement that bill that might be greater than what the model was?

Mr. CRANE. An analysis? No, not in my part of the Department of Energy are we scoring.

The CHAIRMAN. Are you scoring, basically looking at CBO score versus what you are looking at now as far as the demand?

Mr. CRANE. No.

The CHAIRMAN. Are you looking at that, Teri?

Ms. DONALDSON. Sir, I don't have a project underway looking at that exact issue.

The CHAIRMAN. Okay. We will get back to that.

At this time, I want to turn to Senator Barrasso.

Senator BARRASSO. Thanks, Mr. Chairman.

Inspector General Donaldson, welcome back to the Committee.

Ms. DONALDSON. Thank you.

Senator BARRASSO. I appreciate you being here and your testimony. It was excellent. You talked about how there are 12 categories of increased risk to taxpayer money and being used properly. Now, you are in a position confirmed by the United States Senate to be responsible in looking at protecting taxpayer money. And what I heard you say is that in proportion to the amount of money going out from the Department of Energy, the ability that you have to look into that from the size of your staff is the worst in government, and you have asked the Secretary for more, and the Secretary has stonewalled or blocked the opportunity to get that money. So there is a concern as we are looking at taxpayer dollars.

So let me talk about this because you said there are 12 categories of increased risk. I am going to ask about this one. So there is a private trade association. It was founded by Mr. Shah, sitting next to you. And he is in charge of the Department of Energy Loan Program. It is called Cleantech Leaders Roundtable. He founded the organization. From what I see, it appears to be a gatekeeper for companies seeking DOE funding from him, and he founded the organization—not anymore, but one is called Sunnova, which recently received a \$3 billion loan from the Department of Energy—\$3 billion. One of the board members of the group that he founded is also on the board of Sunnova that got the \$3 billion, same guy

getting the money, on his board that he founded. My concern is this could be the next Solyndra. Solyndra was \$500 million. This could be \$3 billion of taxpayer money.

Now, Mr. Shah has reportedly been a guest speaker at at least ten Cleantech-sponsored events, a group he founded. And at these events, if you are a member of his group that he founded, they get special access to him. And he is the guy that is directing the loan program. So the Department of Energy, even recently, co-hosted an event with Cleantech, this group that he founded. Do you believe the Department of Energy's safeguards to prevent conflicts of interest in its loaning practices are satisfactory or do they need to be improved?

Ms. DONALDSON. Thank you, Senator Barrasso.

I do have a project underway. It is still very new, looking at conflicts of interest, particularly in the Loan Programs Office. I will say—and there are quite a few facts that you were chatting about there—Mr. Shah does have access to outstanding ethics counsel at the Department of Energy, and I am sure he is already working with her on some of those issues. My job, and how I have structured this project, which will look at conflicts, is not to see whether or not the minimum existing conflicts laws and rules are being met, it is to provide a broader universe of tools that they may want to strap on and enact and follow because of some of the very special circumstances surrounding this program.

So the whole idea of ethical protections is something that you can—you start at the floor, right, the federal requirements. You can certainly do more. So my staff is looking at both—

Senator BARRASSO. Good, appreciate it.

Ms. DONALDSON [continuing]. Are they meeting the floor, and making recommendations on what other things they may want to consider to protect these funds?

Senator BARRASSO. No, I appreciate that because we are talking about \$3 billion.

Ms. DONALDSON. A lot of money.

Senator BARRASSO. Six times larger than Solyndra, but actually, there are hundreds of billions of dollars in play.

So Mr. Shah, you appear to be all-in on the Cleantech Leaders Roundtable. Going to their meetings, special access to members, that's the trade association that you founded. You have spoken to at least ten or more private events hosted by them. You have even given a loan to a company that shares a board member, and that was for \$3 billion, but what this Climatetech executive is now saying is, it's hundreds of billions, hundreds—dollar sign, dollar sign, dollar sign, dollar sign, dollar sign. We love Jigar Shah, love you.

[Poster image with quote from Climatetech executive follows:]



Andrea Luecke · 2nd
Climatetech Exec /
Strategist / Community Bu...
1yr · 🌐

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Hundreds of Billions \$\$\$\$\$\$.

We love Jigar Shah for that and also for co-founding
Cleantech Leaders Roundtable



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Senator BARRASSO. They love you. Hundreds of billions of dollars. I mean, I think conflict of interest, potential conflict of interest, Jigar Shah just became one of the most important players in energy—this is the new CEO of the company that you founded—they get access to you. It is astonishing. This is a social media post from your former trade association's current executive director. It sounds like she thinks she hit the lottery, and apparently she did. She is openly touting Cleantech's access specifically to you, hundreds of billions of taxpayer dollars, that you are the one that is handing it out. I think it's a very bad look for you personally and a very bad look for the Department of Energy.

Will you commit to refrain from associating with your previous trade association for the rest of your tenure at the Department of Energy?

Mr. SHAH. Senator Barrasso, thank you for that very important question. I think it's important to take a step back and understand the role that I have at the Loan Programs Office. The Secretary, when she was in her confirmation hearing, suggested, truthfully, that the Loan Programs Office was dormant. So my job has been to gain private-sector trust. And so, I am all-in, for sure, on American innovators and entrepreneurs. And I have spared no, you know, event or time or conference to figure out how to promote the Loan Programs Office. But because of your excellent oversight and the oversight of the Inspector General, the Loan Programs Office has been substantially improved since 2011 and 2012. We now have a risk management group, a portfolio management group. And so, I have no role to play, whatsoever, in choosing who gets a loan. In fact, those decisions are made by federal staff. My job is to get people to take the extraordinary step of spending a lot of time and effort to participate in the Loan Programs Office and ask us for a loan so that we can evaluate it.

Senator BARRASSO. So Mr. Chairman, let me just reflect that the witness just refused to commit to refrain from associating with his previous trade organization. Hold that back up again. He has refused, in front of this Committee, to commit to refrain from associating with his previous organization that talks about hundreds of billions of dollars from him. I asked him a straightforward question—will you commit to refraining? He refused to answer. So whether or not you found some nice little loophole, this is Ethics 101. It's a bad look for you, it's a bad look for the program, it's a bad look for the Secretary of Energy, and it's a bad look for the Biden Administration.

Thank you, Mr. Chairman.

The CHAIRMAN. We now have Senator Heinrich.

Senator HEINRICH. Moving on from that little bit of theater, Mr. Shah, let's start with why we need an LPO. Why doesn't the private sector do this? And what is the value of the Loan Programs Office?

Mr. SHAH. Senator, thank you for your question. The Loan Programs Office was originally established in the 2005 Energy Act because what we realized was that the Department of Energy was extraordinary and still is extraordinary at invention, but that we have not been as extraordinary at getting those technologies commercialized here and tied to the American worker. Part of the rea-

son for that is because our commercial banking system really does not want to take any perceived or actual risk in scaling up technology. And so the Loan Programs Office sits to be able to evaluate these technologies and to help commercialize them here. Our remit is only on American soil. So we can only fund projects that are scaling up technology here, and we have been active across the board, as the Chairman suggested, in nuclear power, advanced fossil projects, hydrogen, renewables, and many other sectors.

Senator HEINRICH. So for either of you—for years, we saw American manufacturing and capital flow out of the United States, particularly to China, but to many different parts of the world—Southeast Asia. And today, we are seeing, to some degree, that pattern reversing. That is a policy win. How do we protect the American taxpayer and our American intellectual property while that occurs?

Mr. CRANE. Well, Senator, thank you for the question and the focus on manufacturing and it's still fairly early days, but you are right, even the Wall Street Journal has talked about the manufacturing renaissance in the United States, and that's before the Department of Energy money is being deployed. So that—

Senator HEINRICH. Let's start there. What's the scale of that? Since the Inflation Reduction Act was passed, how many factory announcements have we seen? How many—how much private capital?

Mr. CRANE. I thought, you know, we can get you a more accurate number, but the number is \$100 billion or more.

Jigar, do you have—

Senator HEINRICH. And growing by the day.

Mr. CRANE. Yes, exactly. And that is also an indirect impact of the Inflation Reduction Act, which has led to that manufacturing in anticipation. But you ask how do we protect, and this gets back to the vetting center and my colleague, the Inspector General's comments. And I can just say, being more involved with what we call the equity side to the house, the financial assistance, the vetting center process has worked for us. We are going through that. Most of the programs we have are more sure technology. So it's more about Chinese ownership than it is about proprietary technology, although we have that in long-duration energy storage. And we work with the vetting center and they go through all our projects. They access the intelligence and counterintelligence end.

And so far, if you look at, you know, the recent selections that we have announced, you know, I think the process is working. There is always room for improvement.

Senator HEINRICH. Sure.

Mr. CRANE. We look forward to working with the Inspector General, but—

Senator HEINRICH. One way to measure—

Mr. CRANE. Go ahead.

Senator HEINRICH [continuing]. Whether things are working, obviously, is return on investment. So Mr. Shah, what is the track record of LPO generally and then more recently, if the data allows, in terms of return on investment?

Mr. SHAH. Yes, thank you so much for that question. The Loan Programs Office measures its impact in a couple of ways, right? We are not here to make a profit, right? We are here to commercialize

American technology. But the U.S. Congress has allocated to us a credit subsidy, which is money that we can use for a loan loss reserve. We have allocated roughly \$5 for loan loss reserve for a realized loss of roughly one dollar, right? And so we have allocated a lot more for losses. And as the Chairman suggested, the interest income that we have earned has exceeded by four times any losses. And so there is a couple ways of looking at that.

But the more important way of looking at it, in my opinion, is that we provided a loan guarantee to the first five 100-megawatt solar projects in the United States. We catalyzed over a trillion dollars of investment into solar because of the early support we provided when no bank would do that deal. The same thing is true with our loan to Tesla on the automotive side. I think that, you know, America's dominance in electric vehicle technology really comes from our early bet on Tesla. I do believe that the early investments we are making in this particular round will also have that level of success over time, and there will still be some losses, right?

Senator HEINRICH. Right.

Mr. SHAH. I mean, I think that the Congress—

Senator HEINRICH. And we should understand that.

Mr. SHAH. Absolutely.

The CHAIRMAN. Mr. Shah, you might want to clarify, because I think the question was asked by Senator Barrasso. The companies that you had previously been involved with that have an exclusive to where a person has to have—there is a fee being paid to come to those and you being to that, or if it was a public event. So a public event is a public event. People come. There are no requirements. There are no fees with that. Do you want to explain that at all, because I know that was quite contentious at the end there, how you feel about that?

Mr. SHAH. Thank you, Chairman. You know, I attend a lot of events. And you know, I am happy to distance myself from any further dinners from the Cleantech Leaders Roundtable.

The CHAIRMAN. I think all we are saying is, like with the Cleantech Leaders, if people have to pay to have access, that is what they are talking about. If they are not paying to access, as a public, I think you should be able to do whatever you think is a benefit.

Mr. SHAH. Chairman, the point I want to make here is that I am trying to figure out what access they are paying for, since I don't make any decisions on which loans we actually underwrite or approve. Having access to me is like, you know, I am more accessible than a ham sandwich, right? I go to like, you know, conferences like RE+. I go to conferences like CERAWeek. I go to lots of places, wherever American innovators and entrepreneurs need to meet me so that they can be convinced that this country wants them to on-shore and re-shore their technology here in this country, I am willing to talk to them. But what I am concerned about is the insinuation that the oversight that the Senate and the Congress has done, as well as the Inspector General, has not been fully implemented. In fact, it has.

And so there is no political influence on these loans. These loans are being overseen by career federal staff.

The CHAIRMAN. Thank you. I just wanted to make sure to give you an opportunity on that.

Now we are going to go to Senator Cassidy.

Senator CASSIDY. Hello, gentlemen, thank you all.

Mr. CRANE, there was a recent awarding of—and ladies, I'm sorry. There was a recent awarding of the HALO Hubs, and Louisiana was an applicant but did not receive. The Secretary was kind enough to call me and tell me that, but that's just the breaks, as I first took it, but since, I have become concerned about the process. Since we are talking about the integrity of the process, that's what I would like to explore. I am told that of the merit reviewers of the Louisiana application, several of them did not provide any comments or ask any questions regarding the application. Frankly, that was like, "excellent," "bad," "needs to improve," like nothing. So it's unclear to me that they actually reviewed it. In fact, there is no evidence that they actually reviewed it. What I am worried about is that the fix was in before we even started.

So next, on August the third of this year, HALO Hub leadership in the State of Louisiana had a phone call at DOE to discuss the status of the program. This occurred as other hydrogen hub applicants were being asked to interview with DOE in relation to their applications. The HALO Hub in Louisiana, Arkansas, and Oklahoma had not been contacted for an interview. But DOE said two things, specifically—that the interviews were to answer questions about gaps in the applications, and the interviews did not represent a down-selection process. Is all that correct?

Mr. CRANE. Yes, the interviews did not—

Senator CASSIDY. Okay. So how many—

Mr. CRANE. But what was the question before? Was it a down select? It was a two-part question. What was the—

Senator CASSIDY. I was just setting context.

So how many hydrogen hubs that were not interviewed were ultimately selected as an awardee?

Mr. CRANE. None of the hydrogen hubs that were not interviewed were—

Senator CASSIDY. But the interviews were specifically said not to be part of a down-selection process, but as it turns out, if you were not interviewed, you were not ultimately selected.

Mr. CRANE. That's the way it turned out, but at the time of the phone call, the people doing the interviews did not know whether a hub would be selected that was not interviewed.

Senator CASSIDY. I accept that perhaps, but the fact that multiple reviewers looking at the HALO Hub from Louisiana, Arkansas, and Oklahoma didn't make a comment or didn't ask a question? When the Secretary called me, she mentioned she had been told, when I asked why wasn't Louisiana selected, and our three-state consortium, it said it was because Shell had pulled out of the HALO Hub and that communities were not supportive. It turns out, Shell did not pull out of the HALO Hub and that Louisiana was never notified that there were communities not supportive. Do you have any sense of why she was told those were the reasons that we were not selected?

Mr. CRANE. Well, Senator, first of all, I would say that, to me, the main reason is that the competition for these hubs was intense. We got—

Senator CASSIDY. Well, let me go back to that.

Mr. CRANE. It was a bit—

Senator CASSIDY. What I am trying to understand is the criteria by this.

Mr. CRANE. Yes.

Senator CASSIDY. Because frankly, I'm thinking the fix was in.

Mr. CRANE. Senator, I would respectfully suggest that no fix went in—

Senator CASSIDY. Let me go to the next point.

Mr. CRANE. Okay.

Senator CASSIDY. We were also told that there was an issue that with the HALO Hub that there was no—that the existing hydrogen pipeline in Louisiana was not open access. How many states which were rewarded these hubs, how many of them currently have a hydrogen pipeline?

Mr. CRANE. I don't think there is any state.

Senator CASSIDY. Texas, that's it.

Mr. CRANE. I think the only hydrogen pipeline is the non-open-access one between Louisiana and Texas.

Senator CASSIDY. So I guess what I am concerned about is, if we are being told that it's because there is not an open-access pipeline, but like, of the other 15 states, besides Texas, none of them had a hydrogen pipeline at all, that Shell had not pulled out, and we were never told that the communities objected, and that several reviewers did not comment or say anything about the application, implying they never looked at it. My gosh, why would I have a different impression than that the fix was in?

Mr. CRANE. Senator, I accept your concern at this point. The part that I would particularly say is almost certainly inaccurate is the part about the independent merit reviewers, because all 28 applications were forensically reviewed by—

Senator CASSIDY. But there were no comments or questions written by them. This is according to the State of Louisiana, which has reviewed this.

Mr. CRANE. Well, I mean, the questions of clarifications—there was not a uniform setting of questions or clarifications to any of the 28. I mean, you know—

Senator CASSIDY. So, so far, I haven't really found a reason why the reviewer would find fault. The other thing that has been clear, although this was not part of the legislation that we passed—after announcing the hub competition, the Department of Energy announced plans to use \$1 billion of the hub money to run a centralized DOE plant—so called demand-side program—to stimulate hydrogen demand. Now, in the Louisiana-Arkansas-Oklahoma application, which was unsuccessful, not clear why because every reason we have been given so far does not seem valid, and several of the reviewers did not comment upon. The applicants had committed to taking 3,000 metric tons of production of hydrogen a day and demand would match this production by 2030. So that which DOE said they had to model and create was part of the application and was a fait accompli, if you will.

So again, when I look at why would this application not be selected, I can't help but notice that 11 of the 15 or 16 states are kind of represented by Democratic senators, including states that don't have a history of this sort of production of hydrogen and other components, such as Louisiana does, that don't have an existing infrastructure such as we. And yet, somehow, they managed to get a billion-dollar project. Tell me why I should have faith in this process.

Mr. CRANE. I could go through the process to show that, you know, the independent merit review, the federal panels, the selection officers, are all career civil servants and they evaluated many, many criteria. You mentioned some of the criteria which, I think, were to the advantage of the Louisiana hub. Also, because the bill, it was effectively an intra-regional competition. So the Gulf Coast had multiple very, very strong competitive—

Senator CASSIDY. But there was only one that ended up getting it and that was the one in Texas. And yet, you look at other places without our ecosystem, without our infrastructure, they did get it. That's why I'm kind of like, whoa, the place with all the infrastructure got one and it is otherwise scattered around a lot of states, disproportionately represented by Democrats, and as Deion Sanders would say, Mr. Crane, look at me. Yeah, they are career, but look at me. They don't answer—

Mr. CRANE. I'm looking at you, Senator.

Senator CASSIDY. They don't answer to political leadership? Of course they do. I am very concerned about this.

Let me ask in closing, because you have been indulgent letting me go over.

Would the Department of Energy be willing to share, completely, the deliberative process and the documents thereof with my office so that we can review, as part of my function with this oversight committee?

Mr. CRANE. We would be happy to set a meeting with your office to go through, in considerable detail, the selection process—

Senator CASSIDY. And to share with us those documents so we can make our own assessment as well?

Mr. CRANE. I would have to get back to you on that, Senator, because—

Senator CASSIDY. Otherwise, I have to file a FOIA, which seems inappropriate for a Congressional oversight committee.

Mr. CRANE. I thought that FOIA, I thought there was commercially sensitive information—I am not an expert on FOIA—but we are, I think we would be happy to work with your office to set up a more detailed briefing, and if we start there and if you are unsatisfied, we could take it from there.

Senator CASSIDY. I appreciate that. I yield. Thank you for your indulgence.

The CHAIRMAN. Thank you, Senator.

Senator HIRONO.

Senator HIRONO. Thank you, Mr. Chairman.

Secretary Crane, we have heard Ms. Donaldson recommending that expanding funding for the DOE's Office of Inspector General by rescinding some of the funds given by Congress for carrying out the Infrastructure Investment Act and the Inflation Reduction Act, including funding for programs under your oversight, would be a

good thing. Does DOE have the legal authority to transfer funds to the Office of the Inspector General?

Mr. CRANE. Senator Hirono, I am not an expert in that. I do know, as you are saying, that the Department, and I certainly support this, that the Inspector General's Office needs more funding. I think we have asked for 92 percent more funding for the next fiscal year for the Inspector General's Office, which, of course, we all support. The idea of can you reassign money, I am new to government, I have no idea if you are allowed to do that.

Senator HIRONO. Okay, well, you know what? Frankly, I believe that you in fact do not—

Mr. CRANE. Okay.

Senator HIRONO [continuing]. Have that authority. You should check, okay? Because while you agree that there should be more funds for the Inspector General under the programs that I mentioned, under the acts that I mentioned, I don't think you have that authority. So maybe we need to change the law or something so that you can provide more funding. We should think about that.

So one of the points, again, made by Ms. Donaldson, is that the vetting process—and Secretary Crane, you mentioned that the vetting center process has worked. Is this the three-person center that Ms. Donaldson referred to?

Mr. CRANE. I don't think three persons is the current staffing of the—

Senator HIRONO. What is the current staffing?

Mr. CRANE. I am not, you know, I am not sure that that is, I mean, given the sensitive nature of what the vetting center does, I think it's more than double that in terms of the immediate employees, but they also leverage these other resources, like the intelligence and counterintelligence office. Senator Hirono, what I would say is, at least in terms of the financial assistance programs, the vetting center takes as much time as they need to review all that they need to review. So if you look at the \$10 billion of awards that we announced within the last week on transmission hydrogen, if it had not been for the vetting center process, we would have been announcing those awards at the beginning of September.

So they take their time. It's only when they are done and they are comfortable that we move forward with selection.

Senator HIRONO. Well, they have a big job to do, I take it, because it is a vetting center that makes all kinds of determinations relating to some \$97 billion that the DOE got under these two acts that I mentioned. So even a doubling, that is six people. You can see that we have a concern about the adequacy of the resources that the vetting center has, and I think that it would behoove you to take a look at whether or not they are adequately sourced.

Mr. CRANE. Senator, it's a very good point. They are staffing up. And just, the Inspector General's concerns, all of our concerns about the \$92 billion, we are all aligned on that. What I am just here to assure you is, none of the awards that we have announced in the last couple months have gone out without being thoroughly vetted by—

Senator HIRONO. I think it's very clear that we have concerns about making sure that the funds that were appropriated—historic funds—and I am not saying that we shouldn't have done it. In fact,

we are really behind the eight ball in terms of climate change and the impact. So these bills, these acts were a good thing. We just want to make sure that these funds are going where they should.

So turning to wildfires, Secretary Crane, communities in Maui are still recovering from the August wildfires. And one thing is certain, wildfire is becoming an increasing threat in communities all across Hawaii and in the West, particularly. Various utilities, including in California and Oregon, have taken steps in recent years to improve their equipment to better monitor for and be resilient during wildfire events. And these steps have come at significant cost. For communities with a relatively small population and utility rate base, like those in Hawaii and the rural West, what role do you see the Federal Government playing in helping utilities become more prepared for increasing wildfire risk?

Mr. CRANE. Senator, it's so important to every American that is exposed to that. And Hawaii did win one of the wildfire resilience awards for Maui, that was announced after the terrible fires there. The transmission awards that were just announced yesterday included four other awards across the western states for wildfire mitigation. And certainly, one of the good things about the transmission program is, there is a second tranche of funds that are going to be put to solicitation within the next couple months. And certainly, we are very happy with the wildfire mitigation we are doing in the first round. We'd love to see more of it in the second round. So—

Senator HIRONO. So basically, the role of the Federal Government is to provide resources—money to enable smaller communities in rural areas, communities such as in our state, to do the kind of mitigation that they need—that you are there as a source of funds.

Mr. CRANE. Yes, Senator, we are here to help.

Senator HIRONO. Thank you. We will need more of it.

Thank you.

The CHAIRMAN. Thank you.

Senator Hawley.

Senator HAWLEY. Thank you, Mr. Chairman. Thanks to all the witnesses for being here.

Mr. Shah, can I just follow up. I didn't understand your answer to the Ranking Member or to the Chairman. Did you say—so you do attend dinners with industry leaders where they pay to see you speak? Was that a yes or a no? I didn't hear.

Mr. SHAH. No, I attend many, many events, some of which I am invited to speak at—

Senator HAWLEY. And they don't pay?

Mr. SHAH. And many don't pay and some are, like paid conferences and others, but one of the things—

Senator HAWLEY. Wait, I'm sorry, wait, wait. That was a yes and a no. So let's just go back. Do you attend events where people pay to see you speak?

Mr. SHAH. I have attended where people pay to attend the event.

Senator HAWLEY. Do you think that's a good idea?

Mr. SHAH. I think it's important for us to meet potential applicants, American innovators and entrepreneurs, who want to scale up their technology.

Senator HAWLEY. Applicants for loan programs?

Mr. SHAH. Applicants for DOE funding.

Senator HAWLEY. Wait a minute. Wait a minute—you think it's a good idea to go to events where people are trying to get federal money and they are paying to see you?

Mr. SHAH. They are not paying to see me.

Senator HAWLEY. I thought you just said you spoke at events where people paid.

Mr. SHAH. Not to see me. I mean, I'm not that important.

[Laughter.]

Senator HAWLEY. Wow. You learn new things every day. You are—what is your title? You are the Director of what?

Mr. SHAH. Of the Loan Programs Office.

Senator HAWLEY. You are the Director of the loan programs for the Federal Government, Department of Energy. People who want to get loans from the government are paying to see you, and you think that that's fine?

That's not a rhetorical question.

Mr. SHAH. I think I have answered that I go to many conferences and events. I have had hundreds of stakeholder events. The goal is to get people—

Senator HAWLEY. You are going to events where people are paying to see you, who want money from the government. You are the Director of the loan program. Do you think that that's okay? You don't see any conflict of interest with that?

Mr. SHAH. I think, given the extraordinary amount of improvements that we have made in our office, based on our work with the Inspector General and the Herb Allison report, et cetera, there is—I do not make a decision on whose applications are accepted within the loan program.

Senator HAWLEY. But you don't think there is an appearance of a conflict of interest that people are paying to get access to you?

Mr. SHAH. I think it would be a conflict of interest if people are paying to get access to me, but I don't believe—

Senator HAWLEY. Isn't that what they are doing when you speak at events people pay to get into? I mean, correct me if I'm wrong, I mean, if they are not paying, that is fine, but I thought you just said a second ago they are paying.

Mr. SHAH. We do a lot of public events, and we are very transparent as part of this Administration. Every time I get a question which is hard to answer, we help update our blog post and make sure that everyone knows what we are doing, but the goal of the Loan Programs Office is to get as many people as possible to think that they can actually commercialize their technology—

Senator HAWLEY. Well, what I think they think is that they can get access to you by paying to go to these dinners. I mean, listen, it may not be an ethics violation. It should be, but maybe it's not. I just suggest to you, I don't think it's a good look. I don't think it's a good idea to go to paid dinners where people are paying money to get access to you because, in your own words, they want loans. They want loans, federal dollars, taxpayer money. They are paying money to go get access to you. I just, maybe that's really common. In fact, knowing this government, it probably is really

common. But if it is, it's a bad idea. I just submit to you, I am kind of amazed by this.

Ms. Donaldson, can I just ask you about another ethics issue at the Department of Energy? I'm so glad you are here, by the way. Thank you for being here and thank you for doing this job. The Wall Street Journal published back in February a report. I am just going to quote the headline. Here it is: "Hundreds of Energy Department Officials Hold Stocks Related to Agency's Work Despite Warnings." Have you been tracking this? Have you seen these reports?

Ms. DONALDSON. I have, Senator.

Senator HAWLEY. So that includes, sadly, the Secretary of Energy, who testified right there, to this Committee, in response to questions from me that she didn't own any individual stocks. I asked her three times in April—do you own individual stocks? Three times. She said, no, absolutely not, absolutely not, absolutely not. Two months later she wrote the Chairman and said, actually, she did. And she didn't divest of them until May and then she did not tell us until a month later. That's a big problem. And the fact that she misled this Committee and did not tell us. The fact that we have all of these Energy Department officials holding stocks related to the agency's work. I mean, what is going on at DOE? Do you have authority to look into this, Ms. Donaldson?

Ms. DONALDSON. There is a mechanism set up in the law, which—

The CHAIRMAN. Please use your microphone. Ms. Donaldson, please, just speak into it if you would, then we can all hear you.

Senator HAWLEY. Maybe just, yes, pull it a little closer.

Ms. DONALDSON. So you can, in fact, hold stock and be an employee of the government. You cannot participate in any decisions that might impact the value of that stock. So there are different rules that apply here and those can be driven by Congress or they can be driven by regulation or policy. In that particular situation, when you spoke about—your questions about other DOE employees—

Senator HAWLEY. Right.

Ms. DONALDSON [continuing]. They get notices reminding them, basically, so if they own stock in Ford, they will get a notice saying, don't forget, nothing having to do with Ford.

Senator HAWLEY. Yes.

Ms. DONALDSON. So those notices don't carry with them any kind of penalty. It is part of the process set up to make sure they keep track of their own—what you would view to be a conflict or potential conflict.

Senator HAWLEY. Okay. Well, my time is expired. Thank you for your work, Ms. Donaldson. I am going to send you a letter about this and hope that we might ask you to look into the—and I know the Ranking Member has already asked you to look into Secretary Granholm's testimony before this Committee. But I am firmly of the view that we need to change the law here. Senior executive branch officials should not be able to own individual stock, nor should Members of Congress. We shouldn't be stock trading, and nor should anybody who is sitting at this table.

And so, I just am distressed by—it just piles up. And I will just say, this isn't a partisan issue. It happened in the last Administration. It is members of both parties of Congress. We shouldn't be doing it. I have got bipartisan legislation that would end this, and I think we need to end this practice once and for all. Thank you for being here.

The CHAIRMAN. Thank you, Senator. And I will say that I think I am very supportive of that legislation.

Let me say this to you all to clarify. Of 535 Members of Congress, I think that the majority, if not all of us, have spoken at conferences where people had to pay a registration fee to be there. They didn't have—I understand appearance-wise, but you know, you have get your point across. I think the thing that we were concerned about, sir, Mr. Shah, is the one that you had definite ties to and if they had come back in. But still yet, we all were going to conferences. I give you CERAWeek. CERAWeek, that is a big, one—\$1,000, \$1,500, Democrats, Republicans, we all go and speak there because we think it's an access to that. And so, with that being said, I know you might feel you are unfairly targeted here, but—

Senator BARRASSO. But Mr. Chairman, I think there is a difference between going to a meeting and speaking where people pay a registration fee, but the group that we are talking about is a group that he founded—that he founded. And you have to be a member of the group to get special access to ten different opportunities to go with him, special access after you are a member, and they brag about it. They brag about it online. Hundreds of billions of dollars. They love him. He's the co-founder of the group. Sign up. Join the group and you get special access. It's just wrong, Mr. Chairman.

The CHAIRMAN. Got you.

Anybody else want to say anything about that?

Senator HEINRICH. I don't think it's any different than going to CERAWeek. And we have all gone to conferences where people have paid to be there. I think what we have seen here is, after years and years of people complaining that government is unresponsive to private industry, we finally have an Administration who will meet anyone with any technology, whether it's fossil or renewable or nuclear, and actually work with them in a way that is friendly to the private sector. And that is not something that I think we should be discouraging, we should expect more of it.

Senator BARRASSO. Mr. Chairman.

The CHAIRMAN. Senator Barrasso.

Senator BARRASSO. I want to submit for the record an article entitled "Biden's Energy Loan Czar Founded a Trade Association. Now It's Selling Access to Him—Jigar Shah's Cleantech Leaders Roundtable regularly hosts events for companies looking for federal loans," it says, "exclusive" and "invitation only," and included discussion panels with DOE officials on topics such as "Show Me the Money."

Mr. Chairman, this is absolutely wrong and it needs to stop.

The CHAIRMAN. Do you wish to submit that for the record?

Senator BARRASSO. I do.

The CHAIRMAN. Without objection.

[The article referred to follows:]

The Washington Free Beacon, October 6, 2023

Biden's Energy Loan Czar Founded a Trade Association. Now It's Selling Access to Him.

Jigar Shah's Cleantech Leaders Roundtable regularly hosts events for companies looking for federal loans



Biden energy official Jigar Shah (energy.gov)

[Alana Goodman](#)

October 6, 2023

A private trade association founded by the Biden administration's energy loan czar Jigar Shah has become a gatekeeper for companies seeking billions of dollars in financing from Shah's office.

The Cleantech Leaders Roundtable has seen a surge in its influence and revenue since its former president, Shah, was tapped to lead the powerful \$400 billion Department of Energy Loan Programs Office (LPO) in 2021.

The group, which didn't have a website until three years ago, now regularly hosts sold-out receptions featuring Shah for its paying members across the country. Last week, the DOE Loans Program Office and Cleantech Leaders co-hosted an invitation-only conference in Washington, D.C., for companies looking for loans—and Cleantech Leaders was in charge of the invite list and ticket sales.

During this time, companies connected to the trade association have raked in cash from Shah's office. Last week, the Loan Programs Office approved a \$3 billion loan to a solar company led by Cleantech Leaders's board director. The group's corporate sponsors have also pulled in funding.

The cozy relationship between Shah and Cleantech Leaders is raising questions about whether the organization's members are getting favorable treatment in the loan process.

"It appears as if the Department of Energy has allowed a dark money climate group to be the gatekeepers of taxpayer dollars," said Caitlin Sutherland, director of the Americans for Public Trust, an ethics watchdog group. "Friends, coworkers, and corporate allies should not be given preferential financial treatment when seeking access to government programs."

A DOE spokeswoman said Cleantech Leaders "invited the Department of Energy's Loan Programs Office to cohost Deploy23," the conference last week, but called it a "nonfinancial partnership and not a government-led event."

The DOE said Cleantech Leaders was in charge of the guest list and sponsors for the event. The official declined to comment on how much tickets cost, but said the conference was "made possible through ticket sales and event sponsorships."

But the group's tight control of the invitation list for a government co-hosted conference irked some energy industry insiders. One said it looked like a "pay-to-play scheme" and called it a "slap in the face to all the companies following the rules."

Cleantech Leaders did not respond to a request for comment.

Shah, a tech entrepreneur who is well-connected in the green energy industry, founded Cleantech Leaders Roundtable in 2017 as a networking hub for executives. Shah served as president of the group until the Biden administration appointed him to lead the Loan Programs Office in early 2021.

A few months before Shah's departure from Cleantech Leaders, he showed signs of wanting to expand the organization, which had been operating without a full-time staff. Days before the 2020 presidential election, the group registered a website. Shah also recruited Andrea Luecke, a climate activist, to serve as the group's first full-time executive director when he left.

After joining the administration, Shah stayed closely involved with Cleantech Leaders. Over the past two years, he has been a featured guest speaker for at least 10 of the organization's closed-door events and receptions, which cost up to \$250-a-person to attend.

Cleantech Leaders's revenue more than tripled in the year after Shah left, according to its tax disclosure records. For an annual membership fee—up to \$7,500-a-year for corporate executives—the group offers members "insider access to an exclusive private community of high-level cleantech/climatech peers."

Agency appointees often have prior relationships with industry groups and companies. But a former Department of Energy official told the *Washington Free Beacon* that Shah's regular participation in Cleantech Leaders Roundtable events seemed "excessive."

"That could lead someone to believe that this [group] is the way to get in front of Shah, to get in front of a senior official who oversees billions of dollars in government investments," said the former official.

Under Shah's leadership, the LPO has become a powerhouse within the Department of Energy. The office, which was best known for a 2011 scandal involving a \$500 million loan to the failed green energy company Solyndra, operated on a small budget for years.

Shah significantly expanded the staff, and the office now controls a \$400 billion loan budget authorized by the Inflation Reduction Act and the Bipartisan Infrastructure Act—a fact that has been advertised by Cleantech Leaders.

"Hundreds of Billions \$\$\$\$\$," wrote Cleantech Leaders's executive director in a LinkedIn post about Loan Programs Office funding last year. "We love Jigar Shah for that and also for co-founding the Cleantech Leaders Roundtable."

Although Cleantech Leaders doesn't publish its membership roster, its leadership appears to have benefited from that gold rush. Shah's office recently approved a \$3 billion loan guarantee to Sunnova, a solar company where Cleantech Leaders's board chair Anne Slaughter Andrew also sits on the board.

Cleantech Leaders's growing influence was on full display last week, when its sister arm, the Cleantech Leaders Climate Forum, co-hosted a conference with the Loan Programs Office in Washington, D.C., for energy executives seeking funding from the agency. The paid ticketed event, which was advertised as "exclusive" and "invitation only," included discussion panels with DOE officials on topics such as "Show Me the Money: DOE's BIL/IRA Funding Opportunities Rundown."

The DOE told the *Free Beacon* that it co-hosted the event, but the guest list and ticket sales for the conference were controlled by the Cleantech Leaders Climate

Forum. That group describes itself as the 501(c)(3) "sister" arm of the Cleantech Leaders Roundtable and shares the same leadership. The Cleantech Leaders Climate Forum was first incorporated in July, less than three months before the conference.

Several of the conference's financial sponsors received or are seeking major loans from Shah's department. KorePower secured an \$850 million conditional commitment from the LPO in June, and Novonix recently said it is in advanced talks for financing from the office.

A DOE spokeswoman told the *Free Beacon* that Cleantech Leaders was in charge of selecting the sponsors. But another former official questioned the optics of having corporate sponsorships at a government co-hosted conference.

"I do question why [Loan Programs Office] would need sponsors," said the former official. "It doesn't really meet the political smell test of being appropriate to have these sponsors."

The CHAIRMAN. Senator Hickenlooper.

Senator HICKENLOOPER. I'm dying to weigh in on this discussion, you know?

[Laughter.]

Senator HICKENLOOPER. Back when I was a geologist—

The CHAIRMAN. Here we go.

Senator HICKENLOOPER [continuing]. We would go to CERAWeek. We would go to the American Association for Petroleum Geologists, the Geological Society of America. They would always have these special dinners where you would have to pay to go to the dinner and you would be there and Republicans would pay, Democrats would pay, and they would talk to—or just people like me. Back in those days, I was not much involved in politics, but you wanted to hear from the highest sources you could what the landscape looked like. And I'm a big believer in pretty much every opportunity to get more information out to more people what we do better as a country.

Mr. Crane, let me start with you. Obviously, electrification is key to this great transition, as we call it. We are going to need a reliable and robust grid if we are going to take full advantage of the renewable resources that we are bringing online. Oftentimes, where we have renewable resources, we don't have the needed transmission to get those resources to where the demand is. We recently introduced our BIG WIRES Act, that will hopefully make the grid more reliable. It will connect that low-cost power to where the greatest demand is, whether it's from electric vehicles or whatever. Has DOE taken a close look, and maybe you could describe it a little bit, in terms of interregional transmission connectivity?

Mr. CRANE. Senator Hickenlooper, thank you for your question. Thank you for your leadership in this area. From Secretary Granholm on down, the focus on strengthening and smartening up the transmission system is of the highest priority within the Department of Energy. The particular challenge of interregional transmission is first and foremost on our mind. It is a big part of what the Transmission Office is focused on. We are excited about some awards that are going to be announced in the next few weeks as part of the Transmission Facilitation Program, which was part of the Bipartisan Infrastructure Law. And we look forward to your legislation, and anything we can do to strengthen the transmission system is good news for us.

Senator HICKENLOOPER. And this basically is a catalyst, and accelerates the investments we are making in other aspects, right, in the generation?

Mr. CRANE. Precisely.

Senator HICKENLOOPER. Great, I appreciate that. And you know, the other thing that, just finishing that last thought, we all—Republican and Democratic Senators all come to you all for these grants that are going out at breakneck speed. I think you guys are doing a remarkable job. The Chair received a hydrogen hub grant of significant size. Colorado did not. I would argue that we are more than qualified. I can go down all the lists, but that is—the key here is to make sure that we have full access, which we all did. We provide the information. You have professionals helping make these best decisions we could possibly make. Who gets a loan? Who

gets a grant? I think that is the nuts and bolts of this is that these are complex issues where we are doing the best we can. And the best requires that we have access, as much as possible, to the people that are going to utilize these grants or these loans.

Mr. Shah, let me ask you a question. Your job, your office is responsible for seeking out and boosting the most promising innovations that will help us on this great transition in energy. Critical minerals—I always call them essential minerals, but that's back—I am dating myself—when I got on my master's in earth and environmental science. When we introduced BIG WIRES, part of that really shone a bright light on—you know, my geology background said that we had to dig deeper—pun intended—into critical minerals, or essential minerals. How is the DOE working to build our domestic capabilities on critical minerals, particularly when it comes to processing and advanced manufacturing?

Mr. SHAH. Thank you, Senator, for that great question.

The Department of Energy has many different offices working on critical minerals. The Advanced Manufacturing Office, the Manufacturing Supply Chain Office, and then the Loan Programs Office was allowed to invest into critical minerals through the Advanced Technology Vehicle Manufacturing Program for minerals that are related to EV batteries, and then out of Title 17 for other critical minerals. We have worked in collaboration with our partners at DOE, but also at DOD, where they have a Defense Production Act mandate to do earlier-stage investigation. So, I think what we found is, is that the ecosystem around critical minerals really has to be built up. And so, for those folks who are earlier stage, they are going to the Department of Defense. We really focus on the folks who are at the end of the process that are ready to start processing critical minerals.

And so, with that, we have issued a couple of conditional commitments. One for a graphite processing facility in Louisiana, where we are taking some of the highest quality natural graphite away from China and redirecting it here to the United States, as well as finding ways to get lithium out of the ground in Nevada. We have also provided two loans to folks who are using next-generation technologies on recycling existing batteries and old batteries that are spent. One was Redwood Materials in Nevada and the other one is Li-Cycle in Rochester, New York. We have several billion dollars, about \$7 billion of additional loan applications that have come in, and we work very closely with them, including referring them to other offices if they are too early for us.

Senator HICKENLOOPER. Great.

Well, thank you all for your public service, and I realize these are tumultuous times around the field of energy, and I have great respect for your willingness to keep working at this despite all the tumultuous events.

Mr. CRANE. Senator Hickenlooper, would you mind—your previous comment where you didn't ask a question was about Colorado's application in the hydrogen hub area and it's—I should have made a point to Senator Cassidy, which I am now making to you, which is, our goal with these regional hydrogen hubs is for them to expand organically. And there were lots of worthy projects. A winning project in Texas, which we would like to see expand into

Louisiana. A winning project, essentially, in North Dakota, that we would like to see expand into Colorado. I have already given that message directly to your friend and mine, Mr. Frenzel of Xcel, that this is the goal, is to create a national hydrogen economy as quickly as we can.

Senator HICKENLOOPER. Right, a full-blown network. I understand. And I was really just trying to needle the Chair a little bit about his hydrogen hub that he is so proud of.

The CHAIRMAN. We are extremely proud, sir.

[Laughter.]

Senator HICKENLOOPER. Thank you. Appreciate it.

The CHAIRMAN. Senator Murkowski.

Senator MURKOWSKI. Thank you, Mr. Chairman, and we are kind of happy that we qualified for the GRIP grant coming out of DOE this week. That was good news for Alaska. Not quite the hydrogen hub, we are still in the envy category there, and we are continuing to work on that. We did get a communication that we were being discouraged on that, but we will not be discouraged because we have extraordinary opportunity, as I think most of you know.

This first question, Mr. Shah, should be super-easy, and it follows on Senator Hickenlooper talking about critical minerals. You mentioned the graphite project there in Louisiana. You have heard me, and the Secretary has heard me comment that I think it's better if we can get the domestic resource here. That is why we call it domestic resource. Let's get it here. Let's not get it in Mozambique. I would just hope that you can commit to this Committee that the LPO will prioritize loan applicants that are developing domestic sources and U.S.-based supply chains for our critical minerals. That should be an easy one, I hope.

Mr. SHAH. We absolutely believe that we should be onshoring and reshoring our entire critical mineral supply chain and I completely agree with you, Senator.

Senator MURKOWSKI. Good, good.

Let me talk about a couple of our big projects, neither of which are new to either one of you. I mentioned GRIP and our grid modernization. That is really exciting, I think, for our potential moving forward. Another one that we have been working on for decades and decades is how we can monetize and move our natural gas from the North Slope. It's big, and you know it's big. But it also has extraordinary potential, not only for Alaska's energy security, but the entire West Coast and our partners and allies in Asia, who are very, very interested in this. And during the negotiations of the Infrastructure Law, we asked the Department, what is the language that we need to allow the gas line to qualify for loan guarantee from the LPO. And we got the necessary language. We reviewed it. We all agreed that it worked. We included it into the Bipartisan Infrastructure bill. It was signed into law. And I know we all have different lawyers that can come up with different legal arguments, but we are looking at the response now from DOE and kind of saying it feels like we got the rug pulled out from underneath us with regards to where the Department is coming from in the authorities there.

So the question this morning, and to either one of you, is whether or not you are aware of any authorities that either you or the

Secretary has to utilize already-appropriated dollars for the purposes that were laid out in this Infrastructure Law. And I am hoping that we are going to be able to resolve this to make sure that we are meeting the intent under the laws there, so any comments that you may have on this—we just met the Governor yesterday on this and are trying to get some clarification from the Department.

Mr. SHAH. Thank you, Senator.

As you know, I have regularly met with the team that is working on developing that project, and I think we also continue to provide technical assistance to your staff and the rest of the delegation. You know, the goal here is to have American innovators and entrepreneurs be able to build their projects here in the United States. And so I think we are fully aligned with your intent here around making sure these big projects come to fruition.

Senator MURKOWSKI. Well, you can understand the frustration, though, when we worked with the Department to get the assistance on the language. We all thought that we were pretty clear here. And now the law is in place and we have differing interpretations. I am hopeful that we are going to see, in this next budget, that the Secretary includes whatever resources are necessary to establish this program in the office, if you believe it goes otherwise, but we continue to be pushing on this. And again, we feel pretty strongly that the Secretary has the authorities to move forward with this.

Let me move forward to another big project. And again, this is one where you have great familiarity. This is one of my favorite geothermal projects in Alaska, trying to develop the Makushin Project outside of Unalaska in the Aleutian chain. The Chairman is very familiar with it as well. But it's exciting because what this would do is decarbonize one of the busiest fishing ports by volume in the world, not just in the United States, but in the world. And Makushin has been doing their due diligence. They've been working with the Q Tribe there in Unalaska for years. Trident Seafoods, you know, significant seafood producers looking to decarbonize their own processes. They have developed plans to move their processing facility to Unalaska to capitalize on this renewable power from Makushin.

So together, it's extraordinary what can happen. It is transformative what can happen. And it's kind of one of these chicken and egg type things right now. And we have significant large-scale infrastructure projects that are contingent on completion of some of these energy innovations. So what we are trying to do, as you all know, is reduce emissions. We are all in agreement here. This works for everybody. And so we need to be able to be working together to get to "yes" rather than continuing to find ways that if you have not met this chronological gate here, we can't move forward. There is so much riding on this, and I need to emphasize and re-emphasize the significance of what this can mean, not just for this state, but for the global seafood industry. But again, we are trying to stand on our own here and we just need a little bit of help.

So if either one of you have any great updates that you can share with me, that would be very welcome.

Mr. SHAH. Senator, as you know, I am not allowed to share any details under the Trade Secrets Act from folks who have applied

to the Loan Programs Office, but what I will say is that we have had a great partnership with your office and the State of Alaska. As you know, your state energy financing institution provision in the bill has been fully implemented. We have onboarded AIDEA as—

Senator MURKOWSKI. And they are very excited about that.

Mr. SHAH. As well as we are looking at several other institutions in Alaska to do that. We have also hired, I think you know, Joe Jacobson, in Alaska, to really focus on making sure we are providing the customer service that we need to all the extraordinary projects that we are seeing out of your state.

Senator MURKOWSKI. Mr. Chairman, I have a whole bunch of other questions I will submit for the record, but I look forward to follow-up with both you, Mr. Crane and Mr. Shah, and to our IG, thank you for your work, appreciate it.

The CHAIRMAN. Thank you.

Senator Padilla.

Senator PADILLA. Thank you, Mr. Chair.

You know, earlier in her comments, Senator Murkowski mentioned the GRIP program, and I know Senator Hirono asked questions that I want to build on, but I want to remind us all that part of the Bipartisan Infrastructure Law allows for the Grid Deployment Office to administer the \$10.5 billion Grid Resiliency Innovation Partnership Program to enhance grid flexibility and resiliency. Now, resiliency of the grid to extreme weather events has been a major priority of mine, with California being sort of an exhibit A on the real-time impacts of the climate crisis. So I was thrilled to hear yesterday's announcement of \$3.46 billion under the GRIP program for 58 projects across 44 states, including multiple projects in California.

Now, as with any award, there is good news for those who received an award and questions by those who had applied but were unsuccessful, at least in this particular round. A question for Mr. Crane—how are we ensuring that there is a wide array of selected applicants, particularly the types of entities owning and operating the infrastructure they are trying to enhance?

Mr. CRANE. Thank you, Senator, for the question. Welcome to the Committee and congratulations on the awards that California received yesterday. I actually got to visit with the Mayor of Los Angeles. She came through our office yesterday. And so we were very excited about that. I don't know—the expression “the proof is in the pudding”—I think the 58 awards for the grid were in 40 states. And the good news, you mentioned the \$10.5 billion. Only \$3.5 billion is going out. So there will be a second round of awards. And as I mentioned a little earlier, we are very keen to see more wildfire mitigation. And one of the things we are doing on all the follow-on FOAs is doing a gap analysis, so that as we put out the second FOA, we can sort of guide applicants from across the country to what we felt was left undone by the first.

And so, we have webinars, you know, we put it right into the FOA language, and we are happy to have direct conversations, if you would like.

Senator PADILLA. Wonderful.

And just confirm for me that that would include not just new applicants, but applicants that were unsuccessful this round getting some sort of feedback and guidance on how to have a higher quality application, maybe, next go-round, and be more competitive.

Mr. CRANE. We definitely are willing to give feedback to applicants as much as we can, you know, it's just some of these processes are ten times oversubscribed. So sometimes it can—we know there is a lot of frustration there. We are trying to work through that, Senator, but we will do our best to provide any direct feedback on individual unsuccessful applications that we can.

Senator PADILLA. Okay.

Now, another element of the Bipartisan Infrastructure Law was the creation of the Joint Office of Energy and Transportation in our efforts to help deploy zero-emission vehicles and expand related infrastructure. It seems that to date the joint office is focused almost exclusively on light-duty vehicles, despite the fact that it is heavy-duty vehicles that disproportionately contribute to the adverse air quality in communities where there are concentrations of goods-movement facilities and infrastructure. So one of the reasons I am glad to be part of this Committee now is to help raise this issue, and anybody who has monitored hearings in the Environment and Public Works Committee, where I am a member, knows that I have repeatedly asked about the impacts to California's air quality, particularly to those areas with significant goods-movement infrastructure and the need to transition to zero-emission heavy-duty vehicles and build out that corresponding infrastructure.

So Mr. Crane, once again, how could the Joint Office expand its focus to also prioritize zero-emission medium- and heavy-duty infrastructure as part of its core mission?

Mr. CRANE. Thank you, Senator, and thank you for your focus on this area. I spoke to Gabe, who runs the Joint Office, specifically about this point a few months ago and he confirmed what you said, that most of their programs were on light-duty vehicles. We think now that we have the selections out there, particularly on hydrogen, and of course, as you know, there is a question of where do battery vehicles stop and hydrogen begins? We have the California hub, for which a key part of its success was the possibility of creating hydrogen-powered vehicles to do drayage out of the Port of Los Angeles and Long Beach. There is also the Pacific Northwest hub. We would love to see the western states become—for Class 7, Class 8 vehicles—a hydrogen-powered corridor, you know, both for decarbonizing and for local air quality purposes.

So we would love to work with you and Senator Cortez Masto to do that in your region.

Senator PADILLA. Thank you.

And I, too, will be submitting some additional questions for the record after today's hearing, but just to end on this note, I look forward to working with you to ensure that eligible utilities, particularly those serving areas around high-priority ports, industrial zones, and freight corridors are submitting the high-quality, high-need applications. And we also want to look at leveraging funding across programs and across agencies to get to maximum benefit.

So thank you, Mr. Chair.

The CHAIRMAN. Thank you, Senator.

Senator Cortez Masto.

Senator CORTEZ MASTO. Thank you, Mr. Chair.

So let me follow up because I, too, obviously, in the State of Nevada, as you well know, Under Secretary, we talked about this. We applied for the Southwest Hydrogen Innovation Network, and I get it, there is only so much money to go around at any one point in time. I hear from all my colleagues. Some of us are disappointed. Some of us are happy. I guess that is a good thing because you are not pleasing everyone, right, at the same time you are hearing from everyone. But the goal here, I think, for many of us, and I am open to this and I appreciate your comments about some sort of a broader coalition in the regions when it comes to some of the renewable energy, particularly around the hydrogen innovation, as you well know. We have Air Liquide in Nevada. We have partnered in Nevada with Arizona. I think there is an opportunity for us to explore this even further. So thank you for your comments.

I am going to jump to something off of hydrogen right now, which is the battery grant programs. Nevada is leading the nation in battery manufacturing and recycling. We have the capacity to support the entire supply chain in my home state. For example, Nevada has enough lithium to supply the world for 85 years—85 years, and in the last years alone, we have seen the clean transportation battery industry create 7,400 new jobs in Nevada and deliver \$13 billion of investment. That is why I call Nevada—it's an innovation state. I am very proud of it. I have worked to lead the efforts to capitalize on this clean energy revolution through the Bipartisan Infrastructure Law. And now, companies in my state, like American Battery Technology, Redwood Materials, and others are receiving vital investments from the Department of Energy. And so, thank you.

Under Secretary Crane, let me just say, would you agree that these facts and the recent DOE investments in Nevada show the vital role that we can play in addressing our country's supply chain needs?

Mr. CRANE. Yes, I would agree that Nevada is a critical part of the critical mineral supply for batteries, which, of course, are essential to the electric vehicle revolution. And as you know, you have the two awards from the first battery solicitation. There is a second battery solicitation—or supply chain solicitation that will be out shortly and we are looking to even do more across the battery supply chain.

Senator CORTEZ MASTO. And we will be paying close attention.

Would you also agree that ensuring these investments are happening throughout the country, and not just in some of the traditional manufacturing regions of the U.S., actually strengthens our economy and our national security?

Mr. CRANE. Absolutely, and I believe when it's all said and done, we will have Bipartisan Infrastructure Law investments in every state.

Senator CORTEZ MASTO. Thank you.

I only have about two minutes left, and a number of questions for everyone, but I am going to focus, Mr. Shah, on the Tribal Energy Loan Guarantee. As you are aware, I worked with my colleagues last Congress to provide a crucial fix to the Tribal Energy

Loan Guarantee Program. Specifically, the Inflation Reduction Act allows for the Department to issue loans to tribes and tribal organizations through the Federal Financing Bank. Now, you touched on this in your written testimony. One, can you build on that and outline the ways that the IRA fix provided those necessary resources and structure to assist tribes and get energy projects up and running? And then, two, has DOE LPO seen an increase in interested applicants since the enactment?

Mr. SHAH. Thank you for your question, Senator.

It is absolutely true that when I came into office the Tribal Energy Financing Program was not well-structured and the feedback that we got from the tribes was that it was not really meeting its needs. We have spent a lot of time with the tribes to make sure that we could reposition the program in a way that would actually meet their needs. For instance, we had very high fees to access the program. We had a lot of complications in the way in which it was structured. Those have largely been simplified. And then, as you suggested, the access to the Federal Financing Bank was really the key, right? Before that was passed, a tribe would have to work through a local bank, many of whom, you know, wanted them to waive their sovereign rights, et cetera. And we could provide only a guarantee. Today, we have the ability to work with the tribes in the way in which they wished to be worked with. And it has resulted in many applications coming in.

So we have over a billion dollars of applications today that we are evaluating. We hope that the first one will be out the door here soon, but it requires a couple of additional due diligence points to be completed. But we are very excited about making sure that the tribes actually have that ability to realize all of the energy projects that they really want to participate in.

Senator CORTEZ MASTO. Thank you.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

I have one, just one question for the second round, real quick, and Mr. Crane it is to you.

In order for the hydrogen hub in West Virginia—we will use that because it is a big transitional area with a lot of fossil and we are looking at how can we mitigate a lot of that to the point where we do not threaten the fossil that we need today by being able to produce the energy that we are going to need in the future. So with that, the Administration needs to provide investment certainty to hydrogen producers. The producers of hydrogen have been working with Argonne National Lab, I think you know, for nearly a year, to ensure the GREET model. I don't know if you have ever heard of the GREET model, but the GREET model is Greenhouse gases, Regulated Emissions, and Energy use in Technologies. That is the GREET model.

So Argonne National Lab has been doing that model, and it follows the science, not the politics, but the science for different types of feedstocks used to produce hydrogen, including coal-mined methane, which is very harmful, as far as the emission and vetting. So any way we can get that out of the atmosphere soon would be great. However, I have been informed that the Department of En-

ergy has delayed the release of the updated GREET model to certify clean hydrogen.

So Mr. Crane, I guess what we are asking is, can you assure that they will stay with the science of the Argonne Lab for the GREET model, and it will follow that science to not discriminate against different feedstocks based on the Administration's, maybe political preferences, and when do you think the Argonne National Laboratory will have the GREET model for the hydrogen credit released?

Mr. CRANE. Well, Senator, thank you for the question. Thank you, actually, for raising my own awareness about the importance of the GREET model, which, as you know, as you just alluded to, has historically been used for national lab purposes and now is part of informing tax policy in the United States. And the direct answer to your question is, I will assure you that the GREET model won't be modified for any political purposes.

The CHAIRMAN. That's good.

Mr. CRANE. It won't be prejudiced against for pathways, but coal-bed methane, as you mentioned, also renewable natural gas, is a very important part of that effort, and we, thanks to your question, we have an internal review process going on next week just to find out where the state of play is across the agency, so—

The CHAIRMAN. Great. I misled you. I have one more.

[Laughter.]

The CHAIRMAN. This is to Mr. Shah and Mr. Crane.

Do you all agree that the grants and loans under your office are capped by the IRA and the Bipartisan Infrastructure Law? Are they capped?

Mr. SHAH. Yes, I mean, the way that the—

The CHAIRMAN. You know what you have to work with, right? You are capped out at that.

Mr. SHAH. Yes, we have a specific amount of loan authority and a specific amount of credit subsidy.

The CHAIRMAN. Okay.

Mr. CRANE. And on the financial assistance side, absolutely, and if we ever looked like we were committing more money than you had given us, OMB would be on us like a ton of bricks.

The CHAIRMAN. Well, I know some of the testimony today sounded like we are just throwing caution to the wind, just kind of throwing the money out there.

Mr. CRANE. No.

The CHAIRMAN. And also, inflation. Inflation, I will say, came down from nine percent to three percent a year after Inflation Reduction Act took effect. So I have my challenges with the Administration. I think you all know it. But on the whole, we are producing more energy than ever. That is a fact. And we are producing more wind and solar. And we are investing—we are producing the energy we need today and we are investing in the energy we want tomorrow. But we are not going to get rid of what you need today until we have the ability to replace it with basic dispatchable power that gives us 24/7. That is what we are working toward. And we have to get permitting advanced and we are working very diligently on that and hopefully we will have something to offer to the Committee very shortly.

Senator. Okay.

Senator CORTEZ MASTO. I do want to add to the conversation. I appreciate, Mr. Chairman, your comments, and this idea that, at the end of the day for our renewable energy portfolio, it is very diverse, but one thing we keep forgetting, and I heard it right today, I think, for the first time, other than my advocacy for it, is from the Senator from Alaska, is geothermal—right? Along with the investment tax credits we did for solar, we also did really incentivize geothermal, which is a key energy producer for us that is clean.

So Under Secretary, can you talk a little bit about what DOE is doing with respect to promoting geothermal energy as well?

Mr. CRANE. Well, the other side of the DOE is doing a lot on geothermal on the R&D side within the Infrastructure Under Secretary. We do not have a specific bucket of money for geothermal the way we have for advanced nuclear or hydrogen. But we do have programs like what we call the ERA, the rural and remote, the billion dollars there where we would welcome geothermal proposals so that we could help advance, because we share, and the Secretary very much shares the idea that geothermal should be a building block of American energy security.

Senator CORTEZ MASTO. Thank you.

The CHAIRMAN. Senator Heinrich, do you have any—Senator Heinrich, you are okay?

Let me just thank all of you. I know it has been a little long, and we enjoyed it, but I think it has been very informational and I think you get a little flavor of how, first of all, we are all very, very committed to energy that our country needs and how we can lead the world. And I think we have a chance of doing that. We want to hold ourselves accountable, and Ms. Donaldson, we think you will do that and we want to make sure you have the resources to do that. We want to make sure that we are able to get the new technology that we need and also be able to fulfill our commitment to the climate that we all have a responsibility for, but also provide the energy the country needs. I think it's kind of an all win-win situation if we work together.

So with that, members are going to have until the close of business tomorrow to submit additional questions for the record.

And with that, I thank you. The meeting is adjourned.

[Whereupon, at 11:58 a.m., the Committee was adjourned.]

APPENDIX MATERIAL SUBMITTED

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QUESTIONS FROM RANKING MEMBER JOHN BARRASSO

- Q1. DOE abandoned its negotiations with Microvast, a battery company with considerable ties to the Chinese Communist Party, only after intense scrutiny from this and other Congressional committees. DOE has refused to provide a firm answer about why it changed its mind.

Did DOE change its mind on Microvast because of its connections to China? And if so, what took so long, since Microvast's connections to the CCP were obvious from the start? Will you pledge that DOE will not give grants or loans to China-linked companies in the future?

- A1. As you know, the Department of Energy previously provided Committee staff a briefing on the decision and process relating to Microvast on September 29, 2023, where we addressed these questions. The vetting process for applicants for Funding Opportunity Announcements (FOAs) generally begins during the FOA application review stage, where we identify companies that meet certain technical criteria. A subset of those companies are ultimately selected for negotiation of awards. DOE has recently enhanced and modified the vetting process, including establishment of the Research, Technology, and Economic Security (RTES) office.

The Office of Manufacturing and Energy Supply Chains (MESCC) aims to support scale-up and deployment of the nation's manufacturing capacity through programs that are focused on establishing critical domestic supply chains and increasing circularity while leveraging private sector investment. As the Department continues our implementation of the IIJA and IRA, we commit to be responsible stewards of taxpayer dollars and continue taking the proactive steps necessary to prevent fraud, waste, and abuse in our programs while we work to bring about a clean and secure energy future that is made in America.

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DOE takes the risk of undue foreign influence seriously in our efforts to support energy security and American manufacturing. Accordingly, we have implemented a comprehensive and rigorous approach to research, technology, and economic security for DOE awards and loans. Concurrent with the merit review process, DOE conducts a RTES review of applications prior to selection. DOE enhanced its existing vetting processes to ensure that risks of undue foreign influence are considered early in the competitive process and throughout the life of a DOE-supported project. The RTES review is a risk-based approach that relies on both open-source and classified sources, as appropriate.

DOE has developed and continues to improve RTES measures to mitigate risk undue foreign influence poses to our scientific and technological development ecosystem, U.S. supply chains, and intellectual property. Some of the potential RTES risks facing MESC programs include applicant and project team members' ownership and investor structure, board member seats, and intellectual property positions. DOE also considers whether the senior/key personnel may have foreign affiliations or are receiving support that may present RTES concerns, including participation in foreign talent programs sponsored by countries of risk and affiliations with military or other governmental entities.

The Department enhanced its RTES vetting process, which supports programs in due diligence reviews and risk mitigation to ensure our national security, economic competitiveness, and technological leadership imperatives are duly incorporated in our financial assistance and loan activities. This enhanced process integrates RTES reviews at three major points: 1) before the solicitation is released (to ensure the appropriate RTES provisions are included); 2) review of applications before selection; and 3) during the project implementation. In furtherance of such efforts, DOE programs coordinate directly with RTES and consult with legal counsel to develop award terms and conditions that minimize risk and obligations placed on the government, in support of the Contracting

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Officer's negotiations with selectees.

- Q2. The Department of Energy is rushing to get loan and grant money out the door. This will create a demand for critical minerals that will make us more dependent on foreign supplies, including those in China. China knows this. An executive for GEM, a Chinese battery materials producer said last week in the Wall Street Journal, "The U.S. can't completely shut out Chinese suppliers from its market [...], as much of the upstream supply chain is concentrated in China."

Can you commit to the Committee that the administration will not use the provisions of the IRA to fund companies that use PRC-sourced materials or are part of Chinese-back joint ventures?

- A2. The Department of Energy is committed to securing for the United States the maximum technology advantage and resilient, diverse, and secure supply chains to ensure economic prosperity and national security. DOE is committed to ensuring entities with concerning ties to countries of concern do not participate in DOE-supported projects in highly sensitive areas that have national security and economic competitiveness implications. DOE's RTES due diligence review process requires that entities provide full transparency regarding their foreign connections (e.g., foreign ownership and control, foreign investors, current or pending technology licensing or intellectual property sales to a country of risk, and changes to board of directors) prior to selection and during the life of a project. In reviewing those connections, DOE will make a risk-based decisions that minimize potential intellectual property loss, supply chain dependencies, and threats to national security.

DOE is taking action on many fronts to bolster domestic supply chain security, including supporting projects that have the potential to build secure supply chains in partnership with our allies and to reduce our reliance on countries of concern. The steps also ensure that the Government's supply chain policy supports small businesses, prevents monopolization, considers climate and other environmental impacts, encourages

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economic growth in communities of color and economically distressed areas, and ensures geographic dispersal of economic activity across all regions of the United States.

In support of President Biden's Executive Order on Securing America's Supply Chain, DOE produced the first-ever comprehensive U.S. strategy to bolster clean energy supply chains. DOE continuously builds on this work to ensure that we are using every tool in our toolbox to boost domestic production of the critical minerals needed for the clean energy transition while ensuring that our actions do not come at the expense of human health or workplace safety; consultation or community engagement; or the air, water, and other crucial resources upon which we all depend.

Bringing manufacturing back to the U.S. will necessarily involve interaction with foreign entities, but doing so smartly and with eyes-wide-open will ultimately benefit the U.S. economy by developing domestic expertise and building resilient supply chains. As a general matter, DOE has a system in place for evaluating the research, technology and economic security (RTES) implications of our funding awards. As part of the review process, DOE ensures appropriate safeguards and risk mitigation measures are built into each award agreement. In some instances, DOE has required awardees implement material supply plans, which set out an awardee's strategy to reduce reliance on countries of concern and develop new supply chains that rely on suppliers based in the U.S. and allied nations.

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QUESTIONS FROM SENATOR MAZIE K. HIRONO

- Q1. Does the Secretary of Energy have the legal authority to transfer funds the Department of Energy (DOE) has been appropriated for the various clean energy programs authorized and/or appropriated under the Inflation Reduction Act (IRA) or the Infrastructure Investment and Jobs Act (IIJA) in order to increase the funding available to the Office of the Inspector General (OIG) to carry out the duties of the Office? What level of funding does the DOE support as being appropriate for the OIG to carry out its duties given the increase in the number of projects that the DOE will be funding under the IRA and IIJA?
- A1. We agree that stewardship of the taxpayer dollar is essential as we deploy these programs effectively and efficiently. That's why, as part of the FY25 budget process, the Department has requested \$149 million, an increase of 73% above FY24 enacted levels, for the Office of the Inspector General. Further, in the FY24 Appropriations Bill Congress repurposed BIL and IRA funding for the Office of the Inspector General from certain unobligated BIL and IRA provisions to two-tenths of one percent of the funds.

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QUESTIONS FROM SENATOR JAMES E. RISCH

- Q1. Last week, the Department selected seven regional Hydrogen Hubs. The Idaho National Lab is part of the MachH2 project that will demonstrate hydrogen production from a nuclear reactor. What is the expected schedule for the Hubs to receive award funding now that selections have been made?
- A1. The Office of Clean Energy Demonstrations (OCED) is in award negotiations with the Selected H2Hubs. These negotiations focus on Phase One of the project, generally covering detailed planning and analysis activities to ensure that the project is technologically, socially, and financially viable. After Phase One has been negotiated, the negotiated funding for that Phase will be awarded. The same process will follow for future Phases of the project. You can learn more about OCED's phased project management approach at <https://www.energy.gov/oced/project-management-oversight-excellence>. The length of negotiations will depend on the project, however, OCED is committed to moving as quickly as the selectees can provide the necessary information to get these projects under award.
- Q2. The success of the Hydrogen Hubs hinges on the ability of the hydrogen to be affordable. Industry is awaiting Treasury's guidance on what generating resources qualify for these incentives. Existing resources are important not only for providing clean, affordable hydrogen, but also to ensure various technologies are on a level playing field in these demonstrations. Has the Department provided comments to Treasury about the potential impacts of applying "additionally" principles in its guidance? What impact would this have on the Hydrogen Hubs and demonstrating different methods of hydrogen production were it to go forward?
- A2. DOE does not comment on specifics of interagency pre-decisional discussions. DOE remains committed both to the success of the selected Hydrogen Hubs and the development and commercial viability of clean hydrogen more generally. We also continue to work closely with Treasury and IRS as they review stakeholder comments

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and prepare further guidance on the 45V tax credit, which will be a key driver of the clean hydrogen economy.

- Q3. The Infrastructure Law provided \$6B for the Civil Nuclear Credit Program to help preserve and support the continued operation of certain U.S. nuclear reactors. Some awards have been made, but do you expect other nuclear plants will apply and qualify for funding from this program? If so, how many and how much additional funding would those projects require? Would you support repurposing any remaining funding for other important nuclear energy priorities, such as LEU/HALEU.
- A3. The Bipartisan Infrastructure Law (BIL) provided \$6 billion in funding to establish DOE's Civil Nuclear Credit Program (CNC) at \$1.2 billion per year over fiscal years 2022 to 2026. DOE has announced two award cycles of funding to date. DOE's Grid Deployment Office (GDO) has announced a conditional award of up to \$1.1 billion to Pacific Gas & Electric Company (PG&E) for the Diablo Canyon Power Plant, Units 1 and 2.

As you are aware, the Inflation Reduction Act (IRA) provided additional funding to help preserve the existing fleet of nuclear plants through the creation of the Production Tax Credit (PTC). Specifically, the PTC would allow nuclear facilities that were placed in service before the IRA's enactment to receive up to \$15 per megawatt-hour of power sold in 2024 (increasing with inflation in subsequent years) to remain competitive with other sources of power generation. The PTC reduces to zero when a nuclear facility's gross receipts rise above \$43.75 per megawatt-hour (again increasing with inflation in subsequent years). In contrast, the CNC is designed to support specific reactors that are imminently at risk of shutting down and ensure their continued availability to provide clean affordable power.

DOE believes that the PTC and CNC can complement each other. The PTC was created to help the existing nuclear generation fleet broadly. The CNC, however, is designed to target specific reactors that compete in competitive markets. For those reactors at risk of

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closing, the CNC provides a bridge to perform any capital improvements and other maintenance to get them back to being profitable.

Since the time of this hearing, the Consolidated Appropriations Act of 2024, enacted in March 2024, adjusted funding for nuclear fleet support programs across DOE, including rescinding up to \$3.7 billion from the CNC. As a result, the CNC will not initiate an award cycle in 2024. The CNC continues to conduct analysis using publicly available information to determine potential demand for the program. However, CNC does not have direct insight into specific reactor financial conditions that may require them to apply for CNC support. GDO anticipates that additional funding opportunities will be announced in future years. GDO projects that throughout the lifecycle of the CNC, CNC could become oversubscribed at this current funding level.

DOE supports a variety of programs for the nuclear industry to achieve multiple priorities, including preserving the existing fleet, encouraging additional development, and supporting a domestic supply chain.

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QUESTIONS FROM SENATOR CATHERINE CORTEZ MASTO

- Q1. What are the lessons learned from the first round of the \$6 Billion in funding distributed from the battery manufacturing and recycling program in the Infrastructure Investment and Jobs Act (IIJA)? How are you going to ensure that DOE is making the most effective investments towards a more domestically reliant battery supply chain in the U.S.?
- A1. On August 31, 2023, DOE released a Notice of Intent to issue Funding Opportunity Announcement (FOA) No. DE-FOA-0003099 entitled "Bipartisan Infrastructure Law 40207(b) Battery Materials Processing and 40207(c) Battery Manufacturing Grants Round II". The activities to be funded under this FOA support BIL Sections 40207 (b) & (c) and the broader government-wide approach to upgrading and modernizing infrastructure, including by strengthening critical domestic manufacturing and supply chains to maximize the benefits of the clean energy transition as the nation works to curb the climate crisis and advance environmental justice. It is anticipated that the FOA would increase domestic battery manufacturing and create good-paying clean energy jobs. The overall FOA scope includes commercial facilities for battery-grade precursor materials, constituent materials, battery components, and cell manufacturing and recycling. Applicants should consider and identify potential downstream domestic customers of their material or product. This FOA will incorporate lessons learned including selecting targeted topic areas to address critical battery supply chain, material processing, and manufacturing needs as well as application process steps including a comprehensive and rigorous approach to research, technology, and economic security (RTES).

DOE has developed and continues to improve RTES measures to mitigate risk malign foreign governments pose to our scientific and technological development ecosystem, U.S. supply chains, and intellectual property. Some of the potential RTES risks facing MESC programs include applicant and project team members' ownership and investor structure, board member seats, and intellectual property positions. DOE also considers

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whether the senior/key personnel may have foreign affiliations or are receiving support that present RTES concerns, including participation in foreign talent programs sponsored by countries of risk and affiliations with military or other governmental entities. The Department enhanced its RTES vetting process, which supports programs in due diligence reviews and risk mitigation to ensure our national security, economic competitiveness, and technological leadership imperatives are duly incorporated in our financial assistance and loan activities. This enhanced process integrates RTES reviews at three major points: 1) before the solicitation is released (to ensure the appropriate RTES provisions are included); 2) review of applications before selection; and 3) during the project implementation. DOE programs coordinate directly with RTES and consult with legal counsel to develop award terms and conditions that minimize risk and obligations placed on the government, in support of the Contracting Officer's negotiations with selectees.

BIL Sections 40207 (b) and (c) seek to modernize domestic battery manufacturing and supply chains to effectively support the clean energy transition. DOE will use this competitive funding opportunity to select the most effective projects that will support this goal, and broader government-wide modernization goals in a variety of ways, including, but not limited to:

- Retaining and creating good-paying union jobs in the manufacturing workforce.
- Ensuring that the United States has a viable battery materials processing industry to supply the North American battery supply chain.
- Expanding the capabilities of the United States in advanced battery manufacturing.

- Enhancing national security by reducing the reliance of the United States on critical minerals, battery materials, components, and technologies from foreign entities of concern.
- Enhancing the domestic processing capacity of minerals necessary for battery materials and advanced batteries.

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- Support the goal that 40% of the overall benefits of certain federal investments flow to underserved and overburdened communities (in accordance with the Justice40 Initiative).
 - Provide workforce opportunities to low- and moderate-income communities.
- Q2. DOE is expected to include a specific interpretation of the “foreign entities of concern” (or FEOC) for the battery program funding notice expected soon. Can you confirm that this determination is being coordinated across the Administration so that entities can rely on it for both funding opportunities and tax incentives?
- A2. Yes, this determination is being coordinated across the Administration and amongst the various program offices within the DOE.
- Q3: Given DOE has different financing opportunities at its disposal to assist applicants in different ways, who do you envision is the ideal candidate for the battery grant program versus an LPO loan? In other words, where would a fully developed company go to for support, as opposed to an emerging entity, or someone coming right out of research and development (R&D)?
- A3: As the global economy shifts towards clean energy and technology continues to advance, securing access to essential materials, components, and clean energy technology equipment is increasingly important. DOE is investing in manufacturing across the research-to-deployment spectrum to secure the Nation's supply chains. To meet the needs and challenges of the 21st century U.S. energy sector, including implementing \$62 billion from the BIL, DOE realigned to create the Office of the Under Secretary for Infrastructure. This office complements RD&D efforts from the Under Secretary for Science and Innovation with strategically aligned deployment efforts. The Under Secretary for Infrastructure focuses on national goals such as providing affordable and reliable energy, creating high quality jobs, revitalizing U.S. manufacturing, and addressing the climate crisis. This realignment facilitates domestic manufacturing and accelerates equitable deployment and scalability. It aims to transform American innovation into market products to meet growing demand.

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Financing opportunities exist within different offices under the Under Secretary for Infrastructure, or across the DOE enterprise, depending on the stage of a project. For example, for a company ready for project finance debt, LPO offerings can accelerate deployment at scale. If a company has proven technology and needs capital support, through equity, to de-risk manufacturing and commercial production, they may consider applying to grant programs in the Manufacturing and Energy Supply Chain (MESC) office, such as the battery awards. Conversely, an emerging entity can work through the Office of Science and Advanced Research Projects Agency- Energy (ARPA-E) for support with early-stage R&D. The current structure of DOE offices is designed to accelerate innovation at vital stages of a technology's evolution. This ensures that game-changing ideas can progress from their inception in the lab to being manufactured on America's factory floors. Each DOE office plays a unique role in helping novel technologies overcome complex barriers and move from fundamental science and research and development to demonstrations, deployment, and full-scale commercialization.

To address the specifics of your question, a manufacturing company engaged in the battery value chain whose technology is sufficiently advanced for full scale deployment, has the option of applying to MESC programs for financial assistance. The decision of whether to accept support from MESC or LPO is up to the applicant. Note that while the applicant has the choice of applying for both, but can only receive one.

- Q4: Can you speak to how the Infrastructure team and Loan Program Office are specifically working together to best support these interested applicants since many companies would like an efficient way to work with the Department, even if your authorities and capabilities are quite different?
- A4: DOE centralized within the Office of the Under Secretary for Infrastructure both existing offices focused on major demonstration and deployment and new offices. Several

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existing offices moved to the new Under Secretary, including the Loan Programs Office (LPO), Office of Indian Energy, Office of Clean Energy Demonstration (OCED), Office of Cybersecurity, Energy Security, and Emergency Response (CESER), and the Federal Energy Management Program. Additionally, three new offices were launched to support clean energy technology commercialization and infrastructure deployment within the Under Secretary for Infrastructure: the Grid Deployment Office, the State and Community Energy Program, and the Office of Manufacturing and Energy Supply Chains (MESC).

The Loan Programs Office, in response to Congressional direction, has a robust Outreach and Business Development (OBD) division, staffed with federal employees with deep private sector expertise. This team conducts extensive outreach to communicate the value of LPO program offerings and take in feedback on what may be preventing meritorious applicants from approaching us. In addition, OBD actively and directly engages thousands of companies and investors across the private sector. We have an opportunity to help companies and other stakeholders find their way to government programs to accelerate their energy initiatives - even if not eligible for LPO financing. LPO's "Front Door" effort is aimed at helping the LPO team quickly and easily field inbound inquiries and make connections to relevant government resources. The team employs two tools to facilitate these connections: an external-facing universal reply email and an internal quick-reference guide of links and contacts to provide custom advice or connections. In addition, the OBD team meets regularly with the Undersecretary of Infrastructure to monitor progress on these activities, and regularly hosts training sessions to educate OBD team members and enhance networking skills.

Another example of efficient coordination can be seen in the Department-wide Pathways to Commercial Liftoff effort, an initiative to drive public and private sector engagement critical to the development of effective clean energy industrial strategy. The effort,

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coordinated through DOE's Office of Technology Transitions and with contributions from a number of other DOE program offices, is a series of reports that provide a valuable, engagement-driven resource on how and when certain technologies—including industrial decarbonization technologies, virtual power plants, clean hydrogen, advanced nuclear, and long duration energy storage—can reach full scale deployment. The Liftoff reports provide insights that help steer public sector and private sector investments at this critical time.

Additionally, OCED provides information about LPO financing opportunities to their non-selected applicants. If interested, non-selected applicants to OCED can schedule a no-cost consultation with a member of LPO's Outreach and Business Development team to discuss potential projects and program evaluation criteria for potential LPO financing. This allows non-selected applicants with existing project ideas to be seamlessly connected to additional funding opportunities at the Department. We intend to replicate this process with MESC and GDO programs.

- Q5. Through the Hydrogen Hub process, did you contemplate and consider a coordinated approach across multiple applications for broader funding – especially if the applications sought to achieve similar purposes? For example, the SHINe (AZ/NV) application featured similar transit bus and heavy-duty applications of hydrogen that the California selection is working on.
- A5. Knowing of the similar nature of proposals during the Concept Paper phase, the Department provided guidance that those submitting Concept Papers could merge proposals for the Full Application phase, in the hopes that proposals in similar regions would work together to build larger and stronger Hub applications. [Some hubs did do this for their final applications.] The DOE also launched H2 Matchmaker, a voluntary online tool created to aid in fostering partnership among key stakeholder by allowing potential partners to identify each other and to foster partnership by increasing awareness and aligning potential needs in specific regions of the U.S.

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- Q6. As you continue to coordinate with and fund your Hydrogen Hub selections, are you in anyway envisioning a way to link those not selected for current hubs into broader coalitions in the regions DOE selected? Can you please lay out the ways I can work to connect my interested parties in with this effort?
- A6. Yes, the Department is interested in exploring ways to grow the clean hydrogen economy and work with non-selected Hubs or Hub components. For example, the Department is offering to connect interested project components with the Loan Programs Office for discussion of financing opportunities. DOE is also able to make connections between non-selected Hub applicants and nearby selected Hubs to facilitate any coordination that may be of interest or possible. The Department is hopeful that as the H2Hubs are built, the regional ecosystems will grow organically and many of the similar proposals in nearby regions will be able to connect into the selected Hubs.
- Q7. Can you please speak to some of the additional financial tools that are available to Hydrogen Hub applicants who weren't ultimately selected?
- A7. Specifically, LPO can finance clean hydrogen projects through several of its lending programs:
- Advanced Technology Vehicles Manufacturing Program: Financing for projects that involve U.S. manufacturing of advanced technology vehicles, qualifying components, and materials that improve fuel economy, including fuel cell-powered machines and indirect use via synthetic/hydrogen-derived fuels.
 - Title 17 Clean Energy Financing Program – Innovative Energy and Innovative Supply Chain Projects (Section 1703): Financing for clean energy projects, including for clean hydrogen projects that use innovative technologies or processes not yet widely deployed within the United States. These projects must show a meaningful reduction of lifecycle greenhouse gases emissions or air pollutants, either via the process itself or via the end use of the material.

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- Title 17 Clean Energy Financing Program – State Energy Financing Institution (SEFI) – Supported Projects (Section 1703): Financing for qualifying clean energy projects, including for clean hydrogen projects, that receive meaningful support from a State Energy Financing Institution. These projects do not have an innovation requirement.
 - Title 17 Clean Energy Financing Program – Energy Infrastructure Reinvestment Projects (Section 1706): Financing for projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or to enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. These projects could include eligible hydrogen fuel cell and energy storage technologies. These projects do not have an innovation requirement.
 - Tribal Energy Financing: Financing available to federally recognized Tribes and qualified Tribal energy development organizations for energy development projects, including hydrogen projects. These projects do not have an innovation requirement.
 - Carbon Dioxide Transportation Infrastructure Finance and Innovation: Financing for large-capacity, common-carrier carbon dioxide transport projects (e.g., pipelines, rail, shipping, and other transport methods) that can serve as supporting infrastructure for certain types of hydrogen production projects.
- Q8. What interagency efforts are ongoing to work to produce one, efficient list of critical minerals across the Administration? If this is not happening, how can DOE further ensure that the U.S. supports all forms of vital mining needs, even those that don’t qualify as “critical minerals” that help drive our economic and national security? What additional administrative steps or considerations at the Congressional level are necessary to further solidify a secure and resilient energy supply chain?
- A8. There is ongoing interagency collaboration to ensure that the three primary critical minerals lists (Department of Interior (DOI), Department of Energy (DOE), and Defense

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Logistics Agency (DLA)), inform one another. The Energy Act of 2020 provides the statutory authority for DOE to produce a critical materials list, and also required DOI to create and update on a three-year basis its own critical minerals list. DLA's critical materials list informs the national defense stockpile and has been in use since the passage of the Strategic and Critical Materials Stockpiling Act in 1938.

Additionally, there are also ongoing interagency efforts to ensure the DOE and other departments and agencies are supporting diverse, secure, and sustainable mineral supply chains, including vital mineral needs. DOE's Office of Manufacturing and Energy Supply Chains (MESC) supports projects within industries that serve as centers of gravity for increased mining activity, such as midstream processing and refining, and deploying advanced energy technologies that fundamentally rely on mineral inputs. MESC has also launched a Manufacturing Capital Connector Program to connect investors with projects essential to build out U.S. manufacturing supply chains. MESC also coordinates strategic battery efforts and investments across the interagency through the Federal Consortium for Advanced Batteries (FCAB), which includes the Department of Defense, Commerce, and the State Department.

Additionally, DOE's Loan Programs Office (LPO) recently clarified and reiterated its ability to provide loans to mining projects under its Title 17 loan authority and DOE's Advanced Research Projects Agency for Energy (ARPA-E) is similarly supporting vital mining needs by partnering with academic institutions and national labs to discover new ways to make mining more efficient as ore grades decline and even to make mining carbon negative through its Mining Innovations for Negative Emissions Resources (MINER) program.

DOE welcomes the opportunity to further work with you and your staff to augment these efforts.

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- Q9. How is DOE leveraging all existing DOE programs to grow the development of a domestic critical mineral industry and supply chain? Will you commit to working with me and my colleagues to ensure that this program receives appropriated funds?
- A9. We will certainly commit to working closely with you and your congressional colleagues to ensure that we have the resources necessary to support and foster a domestic critical mineral industry and supply chain. As noted above, there are a number of cross agency and DOE initiatives including the Battery Manufacturing and Recycling Grant Program, that are investing in the domestic processing and refining of critical minerals. Importantly, DOE's Office of Manufacturing and Energy Supply Chains (MESC) is conducting deep analysis in partnership with the National Labs to give granular and actionable insight into where we may need to direct existing funding or target new funding to ensure there are no critical weaknesses in the domestic supply chain. We would be pleased to brief you and your staff on these efforts, including where additional resources may be needed.

In addition, DOE is supporting vital mining and also providing important research and analysis to support government-wide decision making on critical mineral supply chain needs. MESC's Modeling, Mapping, and Analysis Consortium is working with the National Labs to identify specific Supply Chain Readiness Levels to aid in policymakers' ability to quickly identify and solve chokepoints throughout key energy supply chains. The agency has also released two supply chain assessments in coordination with Argonne National Lab—one for the upstream and another for the downstream—outlining key supply-demand gaps for critical minerals and battery components.

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QUESTION FROM SENATOR JOSH HAWLEY

Q1: Do you own any individual stocks?

A1: Yes.

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QUESTIONS FROM RANKING MEMBER JOHN BARRASSO

- Q1: The Biden Administration has a revolving door ban for its political appointees. You are not allowed to participate in matters related to your former employer for two years after your appointment according to the ban. You participated in numerous events with Cleantech Leaders Roundtable within this two-year window.
- Did you violate the Biden Administration's two-year ban, or did you get a waiver?
- A1: Prior to onboarding at the Department of Energy, I informed my ethics advisor in the Office of the General Counsel that I held a volunteer, uncompensated officer and board position with Cleantech Leaders Roundtable (Cleantech) and that I would resign from this position. I resigned in February 2021. At that time, I described monthly dinners held by Cleantech and was cleared to attend said dinners in my own personal capacity and with my own personal finances. These monthly dinners are social in nature, and I have always made clear to event organizers and attendees that I am attending in my personal capacity, not as the Director of the Loans Program Office (LPO). For events where Cleantech asked me to speak or attend in my formal Government capacity we went through a full ethics review and approval before my participation.
- Q2: The Washington Post reported on the political connections that helped Solyndra and other companies get loans under the Obama-Biden Administration's green stimulus. I offered an amendment to the Bipartisan Infrastructure Law, which this committee unanimously adopted, requiring the Secretary of Energy to certify that political influence did not play any role in the selection of recipients of loans and loan guarantees.
- Has the Secretary been issuing these certifications? I asked for these certifications at the DOE budget hearing this past April. Why haven't they been shared with the committee? When can we expect to see them?
- A2: The Bipartisan Infrastructure Law (BIL) aligned statute with LPO's practice of ensuring political influence does not impact project selection. The appropriations under the Bipartisan Infrastructure Law to financial assistance programs are all made via

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competitive process with no involvement of political appointees in the selection process. With respect to LPO applications, in response to inquiries from the Committee, LPO provided copies of the Secretary's political influence certifications delivered in connection with the three projects that had received loans or loan guarantees under the Advanced Technology Vehicles Manufacturing Program and the Title 17 Loan Program, respectively, since the passage of the BIL. DOE will continue the practice of complying with the Secretary's obligation to certify no political influence in connection with all LPO projects, as required by statute.

Q3: Taxpayers work hard for their money. They do not want to see it wasted. You admitted recently that some of the loans you oversee have high "executional risks" and are "likely" to lose money. You also said in an interview last year that some are telling you that you and your office are not "taking enough risk."

How much of the hundreds of billions of dollars you have to spend do you expect to lose?

A3: The Loan Programs Office (LPO) takes seriously its responsibility to protect taxpayer resources. Since its first loan programs were authorized by Congress in the Energy Policy Act of 2005, LPO has been evolving, establishing a proactive risk management culture, and making improvements to the office that have increased both internal and interagency oversight, clarified its management responsibilities, institutionalized risk management practices and put in place portfolio-wide safeguards and monitoring of all LPO projects, among other enhancements.

Whether private sector or public sector, to loan money is to take risk that the borrower will be unable to repay. Taking project risk is crucial to LPO's mission to provide a bridge to bankability for innovative technologies and other projects essential to our energy future that are unable to access commercial debt markets. Congress has repeatedly provided LPO with a mandate to take on risk. Under the Federal Credit Reform Act of 1990, the government is required to account for the risk of a loan or loan guarantee by

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budgeting for the net present value of the expected cashflows to and from the government over the life of the loan, called the credit subsidy cost. Congress has appropriated budget authority to cover credit subsidy costs to account for the expected loss on loans and loan guarantees. As required by the Federal Credit Reform Act and Circular A-11, the credit subsidy cost for each loan or loan guarantee issued is reestimated annually to ensure the Federal budget accounts for changes in project risk over time.

Q4: The Wall Street Journal reported on June 29th, “PG&E has applied for a roughly 7-billion-dollar federal loan to fund its ambitious plans . . . [to bury] power lines and [upgrade] the grid.” The same news report says, “the California utility was invited to apply for funding from the Energy Department’s Loan Programs Office.”

Yes or no, did your office invite PG&E to apply for a loan? Do you think it is a good idea to give a twice-bankrupt company like PG&E a \$7 billion loan backed by the taxpayers?

A4: LPO cannot comment on the status of potential applications that may be in our applicant pipeline.

LPO encourages projects across eligible technology areas to apply. LPO does not pick and choose the technologies that come to the office and that are ultimately offered a conditional commitment or issued a loan. Eligible projects are vetted by LPO in a multi-step application process and must meet the specific requirements of the program an applicant is applying to. If an eligible project meets all application requirements, including a project’s reasonable prospect of repaying the obligation, LPO provides financing subject to available authority.

LPO takes seriously its responsibility to protect taxpayer resources. Before issuing a loan, LPO conducts rigorous due diligence that is comparable to what is considered best practice in the private sector. Due diligence includes eligibility determinations and technical, market, financial, credit, legal, and regulatory reviews, among other items.

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Additional details about LPO's multi-step application process can be found on LPO's website at <https://www.energy.gov/lpo/application-process>.

- Q5: Mr. Shah, you have reportedly been a guest speaker at least ten Cleantech-sponsored events. Please provide a list of all of the Cleantech events you attended. How many of these events were open to the public and how many were member-only invitations? How many people, organizations, or companies paid to attend each of the member-only events? How many people, organizations, or companies paid to attend each of the public events? Please provide a list of all the attendees that you interacted with at each of these events.
- A5: As an attendee in my personal capacity to these events, I was not privy to the full event logistical details, or the attendee lists for the events referenced in the Committee's question and it is not possible for me to recall accurately everyone I interacted with at these events as it is the nature of such dinner events to have numerous short and casual interactions with the other attendees.

As mentioned above, prior to onboarding at the Department of Energy, I informed my ethics advisor in the Office of the General Counsel that I had held this volunteer, uncompensated position with Cleantech. At that time, I described monthly dinners held by Cleantech and was cleared to attend said dinners in my own personal capacity and with my own personal finances. These monthly dinners were social in nature, and I have always made clear to event organizers and attendees that I was attending in my personal capacity, not as the Director of LPO. My attendance at these monthly dinners has never been comped or reimbursed by the host organization or the federal government. For events where Cleantech asked me to speak or attend in my formal Government capacity we went through a full ethics review and approval before my participation.

DOE firmly believes in a private-sector led, government-enabled approach to our energy transformation. Under this approach, private sector engagement and leadership is crucial

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to identifying challenges and opportunities capital allocators face in deploying key energy technologies at scale. As Congress instructed DOE, the private and public sector must work together to inform, implement, and effectively leverage resources in landmark legislation like the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), which together will help the United States make progress in this energy transformation.

When I took office as Director of the Loan Programs Office, part of my mandate was to revitalize the Office and help realize and communicate the potential of LPO. This means restoring trust in the institution by talking to the private sector. This mandate was issued by Congress, who, on a bipartisan basis in both the Energy Act of 2020¹ and the BIL², provided LPO with specific direction to conduct outreach to industry through in-person engagements like conferences and through online communications. As a result of this engagement, LPO's applicant pipeline has grown significantly.

As referenced in the October 19th hearing with the Committee, officials across branches and all levels of government have found value in attending conferences as a way to engage with and hear from a wide array of industry partners and stakeholders. For example, as Chairman Manchin mentioned at the hearing, the CERAWEEK conference brings together global thought leaders and federal policymakers, including from Congress, to advance new ideas, and discuss new industry insights and solutions relevant to the energy space. Engagements like these are widely attended by DOE staff, including LPO staff and leadership. These types of stakeholder engagements are necessary to foster the private-sector led, government-enabled approach to our energy transformation.

¹ Energy Act of 2020, § 9010(a)(4) (included as Division Z of the Consolidated Appropriations Act, 2021 (P.L. 116-260).)

² Infrastructure Investment and Jobs Act, § 40401(b)(3) (P.L. 117-58).

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QUESTIONS FROM SENATOR CATHERINE CORTEZ MASTO

- Q1: Building on our conversation during the hearing, can you please provide a summary of DOE's guidance for the minimum range of costs required for a Tribe to access the Tribal Energy Loan Guarantee Program (TELGP)? In addition to the Office of Indian Energy's work, what is the Loan Program Office (LPO) doing to assist Indian Country in packaging complex financing options for energy projects?
- A1: TELGP supports tribal investment in energy-related projects by providing loans and loan guarantees to federally recognized tribes, including Alaska Native villages or regional or village corporations, or a Tribal Energy Development Organization that is wholly or substantially owned by a federally recognized Indian Tribe or Alaska Native Corporation. The IRA increased the available loan authority from \$2 billion to \$20 billion and provided \$75 million to carry out the program.

LPO works in close collaboration with the Office of Indian Energy in conducting its outreach. Since the start of the Biden-Harris Administration, the TELGP team has held hundreds of outreach meetings with tribes and other eligible entities, including one-on-one meetings with tribal leaders, participation in national summits, listening sessions, relationship development discussions, and webinars to disseminate information on the availability, benefits, and application process to interested parties. In addition, recent legislation added direct lending authority and the ability to guarantee loans issued by the Federal Financing Bank. These changes and outreach have made the program more accessible to applicants and obviated the need to secure a partial guarantee from a commercial lender. As a result, the program now has more than 12 applicants requesting several billion dollars in financing across multiple energy sectors.

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The cost per applicant of accessing the Tribal Energy Financing program varies. As described in the solicitation³, borrowers are responsible for paying fees and expenses of independent consultants and outside counsel. These costs are incurred toward the end of the LPO application process, and only after eligibility determinations have been made. LPO endeavors to keep these costs under 1% of the total loan request. In addition, based on feedback from Tribes and Tribal developers, application, facility, and maintenance fees payable to DOE were eliminated.

- Q2: DOE is expected to include a specific interpretation of the “foreign entities of concern” (or FEOC) for the battery program funding notice expected soon. Can you confirm that this determination is being coordinated across the Administration so that entities can rely on it for both funding opportunities and tax incentives? Going forward, will you be applying this same scrutiny and vetting to the LPO programs as well?
- A2: Yes, this determination is being coordinated across the Administration and amongst the various program offices within the DOE.

LPO works with entities across DOE to onshore critical supply chains that strengthen our energy security and resilience and allow the United States to lead in the deployment of clean energy technologies at scale.

Before issuing a loan, LPO conducts due diligence of all borrowers with rigorous financial, technical, legal, and market analysis by the DOE's professional staff, including qualified engineers and financial and legal experts as well as third-party advisors. This rigorous evaluation and underwriting process includes vetting a potential borrower's inputs and assumptions about the proposed project, including but not limited to the project sponsors' financial and technical assumptions, the market for their technology, and project risks. These factors are also carefully evaluated outside of LPO by another of

³ <https://www.energy.gov/lpo/articles/tribal-energy-loan-guarantee-program-solicitation-current>

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DOE's research security resources like the Office of Research, Technology and Economic Security, which is responsible for implementing and continuing to evolve DOE's enhanced due diligence process for financial assistance and loan projects, building awareness internally within DOE on RTES issues, and engaging with external stakeholders. In addition, during its evaluation of a potential project, DOE can employ mitigation measures against the assessed risks of a potential project, as is routine in the evaluation and underwriting of any project loan. Some authorities may have different requirements than others, such as BIL 40207, which defines Foreign Entities of Concern and prioritizes grants under that section to those applicants who do not, inter alia, "use battery material supplied by or originating from a foreign entity of concern."

After a conditional commitment is offered, and prior to DOE issuing a loan, this rigorous evaluation continues. In negotiating a term sheet and financing documents with any borrower, LPO includes binding provisions that ensure the issues flagged in due diligence are appropriately addressed to the Department's satisfaction prior to financial close and through the life of the loan, including provisions relating to foreign ownership and control.

For all potential project sponsors and borrowers, LPO employs robust Know Your Customer policies, background checks, and other measures to ensure a clear understanding of the potential borrower. This goes beyond the aforementioned due diligence process on a project's financial, legal, and technical background to also include owners, sponsors, partners, and the project's management structure. LPO also evaluates proposed facility locations, supply chains, and treatment of intellectual property. LPO follows this rigorous process for all application.

Q3: Given DOE has different financing opportunities at its disposal to assist applicants in different ways, who do you envision is the ideal candidate for the battery grant program

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versus an LPO loan? In other words, where would a fully developed company go to for support, as opposed to an emerging entity, or someone coming right out of research and development (R&D)?

- A3: As the global economy shifts towards clean energy and technology continues to advance, securing access to essential materials, components, and clean energy technology equipment is increasingly important. DOE is investing in manufacturing across the research-to-deployment spectrum to secure the Nation's supply chains. To meet the needs and challenges of the 21st century U.S. energy sector, including implementing \$62 billion from the BIL, DOE realigned to create the Office of the Under Secretary for Infrastructure. This office complements RD&D efforts from the Under Secretary for Science and Innovation with strategically aligned deployment efforts. The Under Secretary for Infrastructure focuses on national goals such as providing affordable and reliable energy, creating high quality jobs, revitalizing U.S. manufacturing, and addressing the climate crisis. This realignment facilitates domestic manufacturing and accelerates equitable deployment and scalability. It aims to transform American innovation into market products to meet growing demand.

Financing opportunities exist within different offices under the Under Secretary for Infrastructure, or across the DOE enterprise, depending on the stage of a project. For example, for a company ready for project finance debt, LPO offerings can accelerate deployment at scale. If a company has proven technology and needs capital support, through equity, to de-risk manufacturing and commercial production, they may consider applying to grant programs in the Manufacturing and Energy Supply Chain (MESCC) office, such as the battery awards. Conversely, an emerging entity can work through the Office of Science and Advanced Research Projects Agency- Energy (ARPA-E) for support with early-stage R&D. The current structure of DOE offices is designed to accelerate innovation at vital stages of a technology's evolution. This ensures that game-changing ideas can progress from their inception in the lab to being manufactured on

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America's factory floors. Each DOE office plays a unique role in helping novel technologies overcome complex barriers and move from fundamental science and research and development to demonstrations, deployment, and full-scale commercialization.

To address the specifics of your question, a manufacturing company engaged in the battery value chain whose technology is sufficiently advanced for full scale deployment, has the option of applying to MESC programs for financial assistance. The decision of whether to accept support from MESC or LPO is up to the applicant. Note that while the applicant has the choice of applying for both, but can only receive one.

- Q4: Can you speak to how the Infrastructure team and Loan Program Office are specifically working together to best support these interested applicants since many companies would like an efficient way to work with the Department, even if your authorities and capabilities are quite different?
- A4: DOE centralized within the Office of the Under Secretary for Infrastructure both existing offices focused on major demonstration and deployment and new offices. Several existing offices moved to the new Under Secretary, including the Loan Programs Office (LPO), Office of Indian Energy, Office of Clean Energy Demonstration (OCED), Office of Cybersecurity, Energy Security, and Emergency Response (CESER), and the Federal Energy Management Program. Additionally, three new offices were launched to support clean energy technology commercialization and infrastructure deployment within the Under Secretary for Infrastructure: the Grid Deployment Office, the State and Community Energy Program, and the Office of Manufacturing and Energy Supply Chains (MESC).

The Loan Programs Office, in response to Congressional direction, has a robust Outreach and Business Development (OBD) division, staffed with federal employees with deep

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private sector expertise. This team conducts extensive outreach to communicate the value of LPO program offerings and take in feedback on what may be preventing meritorious applicants from approaching us. In addition, OBD actively and directly engages thousands of companies and investors across the private sector. We have an opportunity to help companies and other stakeholders find their way to government programs to accelerate their energy initiatives - even if not eligible for LPO financing. LPO's "Front Door" effort is aimed at helping the LPO team quickly and easily field inbound inquiries and make connections to relevant government resources. The team employs two tools to facilitate these connections: an external-facing universal reply email and an internal quick-reference guide of links and contacts to provide custom advice or connections. In addition, the OBD team meets regularly with the Undersecretary of Infrastructure to monitor progress on these activities, and regularly hosts training sessions to educate OBD team members and enhance networking skills.

Another example of efficient coordination can be seen in the Department-wide Pathways to Commercial Liftoff effort, an initiative to drive public and private sector engagement critical to the development of effective clean energy industrial strategy. The effort, coordinated through DOE's Office of Technology Transitions and with contributions from a number of other DOE program offices, is a series of reports that provide a valuable, engagement-driven resource on how and when certain technologies—including industrial decarbonization technologies, virtual power plants, clean hydrogen, advanced nuclear, and long duration energy storage—can reach full scale deployment. The Liftoff reports provide insights that help steer public sector and private sector investments at this critical time.

Additionally, OCED provides information about LPO financing opportunities to their non-selected applicants. If interested, non-selected applicants to OCED can schedule a

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no-cost consultation with a member of LPO's Outreach and Business Development team to discuss potential projects and program evaluation criteria for potential LPO financing. This allows non-selected applicants with existing project ideas to be seamlessly connected to additional funding opportunities at the Department. We intend to replicate this process with MESC and GDO programs.

- Q5: Your written testimony highlighted some of the recent investments that the Department has made to contribute to the Biden Administration's goals to onshore (and re-shore) critical minerals. Can you please elaborate on some these initiatives to build a more resilient domestic supply chain for manufacturing projects?
- A5: Onshoring and re-shoring critical materials activities will reduce the United States' reliance on foreign nations and insulate the supply chain from global bottlenecks. To address this need, DOE announced a comprehensive strategy⁴ to secure America's clean energy supply chain. A core focus within the strategy is increasing the availability of the critical materials that are essential components of clean energy technologies.

LPO can support qualifying projects that increase the domestically produced supply of critical minerals, which may include but are not limited to critical minerals processing, components manufacturing, and critical minerals recycling. LPO can finance critical materials projects through the following programs, Advanced Technology Vehicles Manufacturing, Title 17 Clean Energy Financing- Innovative Energy and Innovative Supply Chain, Title 17 Clean Energy Financing- Energy Infrastructure Reinvestment, and Tribal Energy Finance.

To highlight one example of LPO's work, in July 2022, the Department of Energy issued a \$102.1 million loan to Syrah Technologies LLC for the expansion of its Syrah Vidalia

⁴ <https://www.energy.gov/articles/doe-releases-first-ever-comprehensive-strategy-secure-americas-clean-energy-supply-chain>

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Facility—a processing facility that produces graphite-based active anode material (AAM), a critical material used in lithium-ion batteries for electric vehicles (EVs) and other clean energy technologies⁵. Located in Vidalia, LA, the facility would be the first of its kind in the country, bringing a key industry to the United States to support the growing EV sector.

The loan will help finance the construction of the Syrah Vidalia Facility, which is the only vertically integrated, large-scale AAM manufacturer outside of China, and the first of its kind in the United States. With this expanded production capacity, the Syrah Vidalia Facility is expected to produce enough graphite-based AAM to support approximately 2.5 million EVs by 2040.

In addition, LPO has offered conditional commitments to a lithium processing facility⁶ and two battery recycling facilities^{7, 8}, helping to increase domestic supply of critical minerals.

The Office of Manufacturing and Energy Supply Chains (MESC) is working alongside private capital to be a force multiplier to secure American supply chains domestically. MESC has finalized \$1.9 billion for 15 projects across 11 states that support new, retrofitted, and expanded commercial-scale domestic facilities to produce battery materials, processing, and battery recycling and manufacturing demonstrations. These projects are catalyzing over \$4 billion in private sector investment, the creation of over

⁵ [SYRAH VIDALIA | Department of Energy](#)

⁶ [LPO Announces Conditional Commitment to Ioneer Rhyolite Ridge to Advance Domestic Production of Lithium and Boron, Boost U.S. Battery Supply Chain | Department of Energy](#)

⁷ [LPO Offers Conditional Commitment to Redwood Materials to Produce Critical Electric Vehicle Battery Components From Recycled Materials | Department of Energy](#)

⁸ [LPO Announces a Conditional Commitment for Loan to Li-Cycle's U.S. Battery Resource Recovery Facility to Recover Critical Electric Vehicle Battery Materials | Department of Energy](#)

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10,000 jobs, significant investment in energy communities, training of over 700 students, and the ability to produce an additional 1.3 million electric vehicles each year. In 2024, MESC anticipates another \$3.5 billion of federal funding available for new awards under the Battery Materials Processing and Battery Manufacturing. Additionally, MESC is working to implement \$10 billion in funds for the **Qualifying Advanced Energy Project Credit (48C)** program in partnership with the Department of the Treasury and the Internal Revenue Service. These investments will also support energy manufacturing and recycling in addition to critical materials refining, processing, and recycling.

- Q6: Can you please speak to some of the additional financial tools available through LPO that are available to Hydrogen Hub applicants who weren't ultimately selected?
- A6: LPO is working to support U.S. clean hydrogen deployment to facilitate the energy transition in difficult-to-decarbonize sectors to achieve a net-zero economy. LPO can finance hydrogen projects that avoid, reduce, utilize, or sequester air pollutants or greenhouse gas emissions and meet other eligibility and programmatic requirements. LPO can finance projects across the clean hydrogen supply chain, which may include, but are not limited to:
- Production: Facilities such as clean electricity paired with electrolyzers to produce clean hydrogen.
 - Midstream infrastructure: Including compression or liquefaction facilities, storage (e.g., salt caverns), and distribution (e.g., pipelines, hydrogen trucking networks, transport of related CO₂ products in the case of reformation-based production).
 - End use:
 - Industrials and chemicals: Replacing carbon-intensive hydrogen in industrial settings with clean hydrogen (e.g., for ammonia, oil refining, steel, methanol).

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- Advanced transportation: Direct use in fuel cell-powered machines and indirect use via synthetic/hydrogen-derived fuels. Applications include heavy-duty trucking, aviation fuels, and maritime fuels.
- Gas replacement: High-capacity factor firm power, lower-capacity factor power, industrial heat, applications for natural gas blending, and long-duration energy storage (seasonal).

Specifically, LPO can finance clean hydrogen projects through several of its lending programs:

- Advanced Technology Vehicles Manufacturing Program: Financing for projects that involve U.S. manufacturing of advanced technology vehicles, qualifying components, and materials that improve fuel economy, including fuel cell-powered machines and indirect use via synthetic/hydrogen-derived fuels.
- Title 17 Clean Energy Financing Program – Innovative Energy and Innovative Supply Chain Projects (Section 1703): Financing for clean energy projects, including for clean hydrogen projects that use innovative technologies or processes not yet widely deployed within the United States. These projects must show a meaningful reduction of lifecycle greenhouse gases emissions or air pollutants, either via the process itself or via the end use of the material.
- Title 17 Clean Energy Financing Program – State Energy Financing Institution (SEFI) – Supported Projects (Section 1703): Financing for qualifying clean energy projects, including for clean hydrogen projects, that receive meaningful support from a State Energy Financing Institution. These projects do not have an innovation requirement.
- Title 17 Clean Energy Financing Program – Energy Infrastructure Reinvestment Projects (Section 1706): Financing for projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or to enable operating

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energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. These projects could include eligible hydrogen fuel cell and energy storage technologies. These projects do not have an innovation requirement.

- Tribal Energy Financing: Financing available to federally recognized tribes and qualified tribal energy development organizations for energy development projects, including hydrogen projects. These projects do not have an innovation requirement.
- Carbon Dioxide Transportation Infrastructure Finance and Innovation: Financing for large-capacity, common-carrier carbon dioxide transport projects (e.g., pipelines, rail, shipping, and other transport methods) that can serve as supporting infrastructure for certain types of hydrogen production projects.

Q7: How is DOE leveraging all existing DOE programs to grow the development of a domestic critical mineral industry and supply chain?

A7: Innovation will enable the United States to develop globally competitive critical mineral supply chains. To this end, DOE invests across the entire innovation pipeline. The Critical Minerals and Materials (CMM) Crosscut coordinates and integrates the DOE Critical Materials Research, Development, Demonstration, and Deployment (RDD&D) Program. The CMM Crosscut Team is comprised of representatives from across DOE to address research needs and related activities across all stages of research, the full supply chain and life cycle.

To spur innovation, DOE launched a first-of-its-kind Critical Materials Collaborative (CMC) in September 2023. The vision of the CMC is to integrate critical materials applied research, development and demonstration (RD&D) across DOE and the federal government, to accelerate the development of domestic critical material supply chains for the nation. The CMC will operationalize coordination and collaboration, while creating a

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value-add for RD&D performers by expanding their access to world-class expertise, capabilities, and facilities.

The CMC convenes DOE investments across the entire innovation pipeline, from the Advanced Materials and Manufacturing Technologies Office's (AMMTO) Critical Materials Innovation (CMI) Hub, to AMMTO's Critical Materials Accelerator Program, to the Fossil Energy and Carbon Management's (FECM) Critical Materials FOA announced in September. These investments represent the first of many DOE programs to be coordinated through the CMC. The CMC will build out the connective tissue needed to translate basic discovery to inform development of new materials, processes, and technologies, accelerate the adoption of innovation, and support the research needs of the emerging domestic critical mineral supply chains.

The CMC will also leverage the 2023 DOE Critical Materials Assessment, the latest in a series of strategy reports DOE has been releasing since 2010, to prioritize investigating substitutes, alternatives, and recycling technologies that secure a sustainable supply of critical minerals and materials. This year marked the first time DOE designated a list of critical materials necessary to secure our clean energy economy.

At the same time, DOE is working to strengthen and secure critical mineral supply chains through large demonstration and deployment activities. The Office of Manufacturing and Energy Supply Chains (MESC) is implementing CMM-related provisions in the Bipartisan Infrastructure Law and Inflation Reduction Act. Two important efforts are the Battery Materials Processing and Battery Manufacturing Recycling Supply Chain Facilities programs to separate and process critical battery materials and the Rare Earth Element Demonstration Facilities program that will extract from unconventional feedstock materials, such as lignite coal and acid mine drainage. The MESC office is also

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working with Treasury to implement \$10B worth of tax credits through the Inflation Reduction Act 48C Qualifying Advanced Energy Project Credit, of which one section explicitly aims to re-equip, expand, or establish industrial facility to process, refine, or recycle critical materials.

In addition, LPO can support qualifying projects that increase the domestically produced supply of critical minerals, which may include but are not limited to:

- **Critical Minerals Processing:** Projects that process critical minerals using innovative technology for end use in a variety of eligible clean energy technologies, or for projects that manufacture eligible advanced technology vehicles or their components.
- **Critical Minerals Recycling:** Projects that employ innovative technology to improve critical minerals recycling, or that recycle critical materials for eventual end use in eligible advanced technology vehicles or their components.

LPO can finance critical materials projects through several avenues:

- **Advanced Technology Vehicles Manufacturing Program:** Loan authority for projects that involve U.S. manufacturing of advanced technology vehicles, qualifying components, and materials that improve fuel economy.
- **Title 17 Clean Energy Financing Program - Innovative Energy and Innovative Supply Chain:** Loan guarantee authority for innovative clean energy projects, including for critical minerals projects that use innovative technologies or processes yet to be deployed within the U.S. These projects must show a meaningful reduction of lifecycle greenhouse gases emissions, either via the process itself or via the end use of the material. These projects support critical minerals as defined in 30 USC 1606(a).
- **Title 17 Clean Energy Financing Program - Energy Infrastructure Reinvestment Program:** Loan guarantee authority for projects that retool, repower, repurpose, or replace energy infrastructure that has ceased operations or to enable operating energy

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infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases. Potential reinvestment in eligible energy infrastructure may include aspects of critical materials processing, manufacturing, or recycling.

- Tribal Energy Finance Program: Loan, loan guarantee, or partial loan guarantee authority available to federally recognized tribes and qualified tribal energy development organizations for projects including critical materials projects.

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QUESTIONS FROM SENATOR CINDY HYDE-SMITH

Q1: It has been recently confirmed that the world's largest known lithium deposit is located in Nevada – furthermore, the company developing that deposit applied for an ATVM loan over a year and a half ago. How is your office making sure that the U.S. is taking advantage of this domestic supply of lithium as quickly as possible to reduce China's influence in our critical infrastructure?

A1: LPO is not able to comment on the status of potential applications that may be in our applicant pipeline.

Before issuing a loan, LPO conducts rigorous due diligence that is comparable to what is considered best practice in the private sector. Due diligence includes eligibility determinations and technical, market, financial, credit, legal, and regulatory reviews, among other items. This due diligence is performed by LPO's professional staff, including qualified engineers and financial and legal experts as well as third-party advisors. In the due diligence process, LPO ensures the project is evaluated to properly identify and manage risks and to ensure the loan will satisfy the intent of the authorizing legislation and provide a reasonable prospect of repayment.

The application process through conditional commitment commonly takes up to a year. However, it can move faster or slower depending on applicant readiness with required materials. Applicants are assigned an LPO expert from an applicable technology field to support applicants through the LPO process.

LPO has and will continue to support qualifying projects that increase the domestically produced supply of critical minerals, which may include but are not limited to critical minerals processing, components manufacturing, and critical minerals recycling. LPO can finance critical materials projects through the following programs: Advanced Technology

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Vehicles Manufacturing (ATVM), Title 17 Clean Energy Financing- Innovative Energy and Innovative Supply Chain, Title 17 Clean Energy Financing- Energy Infrastructure Reinvestment, and Tribal Energy Finance.

Through ATVM, LPO has evaluated and supported projects to diversify critical supply chains and strengthen U.S. energy security. Last year, LPO issued a loan to Syrah Technologies LLC for the expansion of its Syrah Vidalia Facility—a processing facility that produces graphite-based active anode material (AAM), a critical material used in lithium-ion batteries for electric vehicles and other clean energy technologies. Graphite production is currently concentrated in China and this facility would be the first of its kind in the country, bringing a key industry to the United States to support the growing EV sector. With the expanded production capacity enabled by the DOE loan, the facility is expected to produce enough natural graphite-based AAM to support approximately 2.5 million EVs by 2040.

In addition, LPO has offered conditional commitments to a lithium processing facility⁹ and two battery recycling facilities^{10, 11}, helping to increase domestic supply of critical minerals.

- Q2: Once fully functional, Lithium Americas says it expects to domestically produce more than 15 times the amount of lithium that we currently produce as a nation each year. At a time when China is dominating the global lithium supply chain, what is your office doing to ensure critical projects like these are coming online as quickly as possible?
- A2: As outlined in the response to your first question, LPO is working with and evaluating many projects to help diversify critical supply chains and strengthen U.S. energy security.

⁹ [LPO Announces Conditional Commitment to Ioneer Rhyolite Ridge to Advance Domestic Production of Lithium and Boron, Boost U.S. Battery Supply Chain | Department of Energy](#)

¹⁰ [LPO Offers Conditional Commitment to Redwood Materials to Produce Critical Electric Vehicle Battery Components From Recycled Materials | Department of Energy](#)

¹¹ [LPO Announces a Conditional Commitment for Loan to Li-Cycle's U.S. Battery Resource Recovery Facility to Recover Critical Electric Vehicle Battery Materials | Department of Energy](#)

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Today, the United States relies heavily on importing clean energy supply chain components from abroad, exposing the nation to supply chain vulnerabilities that threaten to disrupt the availability and cost of these technologies, as well as the workforce that manufactures them. For example, DOE's 2021 battery supply chain assessment found that currently the United States has less than a 10% global market share for manufacturing capacity across all major battery components and cell fabrication. Onshoring the clean energy manufacturing supply chain is important for increasing U.S. energy independence and reducing foreign governments' dominance in these industries. Thanks to the President's Investing in America agenda, U.S. entities are incentivized to bring back manufacturing jobs to American workers.

Q3: What is China's percentage of global lithium processing capacity compared to the United States?

A3: Though the United States has significant accessible deposits of many critical minerals, today we account for negligible shares of extraction and processing. For example, as of 2023, China was a leading producing nation for 29 of the 43 critical minerals for which information was available to make reliable estimates, as catalogued in the U.S. Geological Survey's Mineral Commodity Summaries 2024 report, available here: <https://pubs.usgs.gov/periodicals/mcs2024/mcs2024.pdf>

Importantly, the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) provided clear direction and tools to onshore and reshore critical minerals supply chain processes here in the United States. Section 40401(a)(2) of the BIL amended LPO's Title 17 Clean Energy Financing Program to include, "projects that increase the domestically produced supply of critical minerals (as defined in section 7002(a) of the Energy Act of 2020 (30 U.S.C. 1606(a)), including through the production, processing, manufacturing, recycling, or fabrication of mineral alternatives." The IRA provided credit subsidy and loan

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guarantee authority to support this expanded eligibility. Through its ATVM program, LPO can provide loans to onshore and scale-up the manufacturing of eligible vehicles and qualifying components, including manufacturing facilities for vehicles, batteries, battery precursor materials, other key vehicle components, and the processing of critical minerals.

- Q4: Can you provide more clarity on the status of the ATVM loan that was applied for by Lithium Americas and if it has not been approved, what has caused the delay since the application was submitted a year and a half ago?
- A4: LPO is not able to comment on the status of potential applications that may be in our applicant pipeline. Please refer to the answer to Question 1 above for LPO's work in this space.

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QUESTIONS FROM SENATOR JOSH HAWLEY

Q1: Do you own any individual stocks?

A1: Upon assuming my Federal position, I divested of a number of my financial holdings that were deemed to be conflicting assets as part of the conflict of interest review that occurred when I became a Federal employee. There are a few such financial interests that I hold that cannot be divested and I received a waiver that allows me to work on certain limited matters involving those entities.

Q2: Please provide a complete list of all conferences, dinners, and other events where you spoke and attendants were required to pay a fee to attend. Please include the date, location, and fee associated with each such event since you joined the Department.

A2: DOE firmly believes in a private-sector led, government-enabled approach to our energy transformation. Under this approach, private sector engagement and leadership is crucial to identifying challenges and opportunities capital allocators face in deploying key energy technologies at scale. As Congress instructed DOE, the private and public sector must work together to inform, implement, and effectively leverage resources in landmark legislation like the Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA), which together will help the United States make progress in this energy transformation.

When I took office as Director of the Loan Programs Office, part of my mandate was to revitalize the Office and help realize and communicate the potential of LPO. This means restoring trust in the institution by talking to the private sector. This mandate was issued

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by Congress, who, on a bipartisan basis in both the Energy Act of 2020¹² and the BIL¹³, provided LPO with specific direction to conduct outreach to industry through in-person engagements like conferences and through online communications. As a result of this engagement, LPO's applicant pipeline has grown significantly.

As referenced in the October 19th hearing with the Committee, officials across branches and all levels of government have found value in attending conferences as a way to engage with and hear from a wide array of industry partners and stakeholders. For example, as Chairman Manchin mentioned at the hearing, the CERAWEEK conference brings together global thought leaders and federal policymakers, including from Congress, to advance new ideas, and discuss new industry insights and solutions relevant to the energy space. Engagements like these are widely attended by DOE staff, including LPO staff and leadership. These types of stakeholder engagements are necessary to foster the private-sector led, government-enabled approach to our energy transformation.

- Q3: Has the Loan Programs Office granted, approved, or renewed any loans to any company in which you hold stock or any financial interest? If so, please provide a complete list of those companies, your financial interest, and the amount of money provided.
- A3: No, LPO has not granted, approved, or renewed any loans to any such company or project.
- Q4: Has the Loan Programs Office granted, approved, or renewed any loans to any company that is or was a member of Cleantech Leaders Roundtable, or any company whose employees have been members of CleanTech Leaders Roundtable? If so, please provide a complete list of those companies, their relationship to CleanTech Leaders Roundtable, and the amount of money provided.

¹² Energy Act of 2020, § 9010(a)(4) (included as Division Z of the Consolidated Appropriations Act, 2021 (P.L. 116-260).)

¹³ Infrastructure Investment and Jobs Act, § 40401(b)(3) (P.L. 117-58).

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- A4: Apart from the rigorous due diligence LPO conducts on projects prior to issuing a loan or loan guarantee related to project details—which may include vetting a) an applicant's financial and technical assumptions and project management plan; b) other factors material to a proposed project; and c) management structures (which may include background checks or other measures to understand a proposed project's owners, sponsors, partners, and management)—DOE does not request or evaluate information about the potential professional or personal membership of an applicant or its employees in domestic organizations, including nonprofit associations or other entities, that are nongermane to the loan application or evaluation process.
- Q5: Do you have any financial interest in Sunnova or any personal or professional relationships with any of its employees?
- A5: I do not have any financial interest in Sunnova.

In general, in carrying out our professional duties, I and other federal career staff are in communication with borrowers and potential borrowers about opportunities at the Loan Programs Office, including Sunnova.

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Questions from Ranking Member John Barrasso

Question 1: In your view, did the Department have a robust vetting process for loan and grant applicants in place at the time of Microvast's selection to receive \$200 million? Do you believe there is more to be done by DOE to prevent taxpayer dollars from being awarded to companies linked to the Chinese Communist Party?

In March 2023, the Department acknowledged the need to improve its vetting procedures by establishing the Research, Technology & Economic Security (RTES) Vetting Center. I agree that improvements are needed.

In November of 2023, my office advised the Department that it will be auditing the Department's process for vetting loan and grant applications focusing on the RTES. I will inform the Committee on the results of this audit.

Question 2: One of the Department's stated goals for its loan and grant programs is to onshore American manufacturing for clean energy products and materials. Chinese companies such as Gotion High-tech are chomping at the bit to set up shop in the U.S. to take advantage of the IRA's production tax credit. The administration seems to be simultaneously trying to outcompete China while welcoming their companies with open arms and giving them tax breaks in the process.

Do you see an issue with this administration's conflicting priorities, and the potential for waste these conflicts may produce?

As you know, tax credits are not administered by DOE. As a general observation however, conflicting priorities may create ambiguities that could increase the potential for fraud, waste and abuse.

Another project that raises the same issue of balancing competing goals is Kore Power, an Idaho-based company that currently makes lithium-ion battery cells in China with Chinese technology and intellectual property. The company won a conditional commitment from the Loan Program Office in June 2023 for an \$850 million loan to help build its first major U.S. manufacturing facility in Arizona. In this case, the Department is moving the project forward on the grounds that U.S. jobs will be created deploying Chinese technology in the U.S., and with the belief that U.S. technology will not go overseas. While it appears that this financing project may support Congress' goals of U.S. job creation, it clearly does not support the legislation's goals of U.S. technology development since this project deploys Chinese intellectual property.

There is every reason to be concerned that foreign adversaries will seek IIRA and IRA funds to advance development of clean energy technology, and that the Department's due diligence procedures may not be sufficient to deal with this reality, particularly when balancing competing priorities.

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Questions from Senator Josh Hawley

Question 1: Have you opened any investigations into Department of Energy employees for compliance with ethics rules regarding the ownership of individual stocks? If so, please provide a list of audits or investigations.

We do not currently have any open investigations involving individual stock ownership by Department of Energy employees. During my tenure, the OIG has investigated a small number of matters involving the ownership of individual stocks by Department of Energy employees, but none of these matters produced any actionable cases.

To put these results in context, there is no general statutory prohibition against a federal employee owning stock that may be impacted by the decisions of the agency employing that person. However, some federal agencies have promulgated regulations strengthening this framework by barring employees from owning certain stocks. For example, the Federal Energy Regulatory Commission (FERC) prohibits employees from owning stock in regulated parties such as pipeline and utility concerns. See 5 C.F.R. § 3401.102. That prohibition also covers parties whose ownership is imputed to employees such as spouses and minor children. Likewise, the Department of the Interior prohibits certain employees from acquiring or holding any direct or indirect financial interest in federal lands or resources administered or controlled by the Department of the Interior. See 5 C.F.R. § 3501.103(b).

Aside from the FERC regulations mentioned above, the Department of Energy has not promulgated any such regulations. Instead, the Department of Energy's supplemental ethics regulations focus on enhanced reporting of recusals associated with employees owning stocks. See 5 C.F.R. § 3301.102.

Absent a more specific regulation, federal employees must still abide by applicable Office of Government Ethics (OGE) regulations. Those regulations however permit the ownership of individual stocks by federal employees. The OGE regulations describe a disqualifying financial interest as having the potential for gain or loss to the employee, or other person specified in the criminal conflict of interest statute, 18 U.S.C. § 208, as a result of governmental action on the particular matter. See 5 C.F.R. § 2640.103(b). For purposes of 18 U.S.C. § 208(a), the disqualifying financial interest might arise from ownership of certain financial instruments or investments such as stock, bonds, mutual funds, or real estate. On the other hand, OGE has established exemptions for ownership of certain financial interests due to the lack of control or limited control an employee has over such investments (such as diversified mutual funds) where the manager of the fund determines what stocks are in the fund. In addition, under 5 C.F.R. § 2640.202(a) an employee may participate in any particular matter in which the disqualifying financial interest arises if: (1) The securities are publicly traded, or are long-term federal government, or are municipal securities; and (2) The aggregate market value of the holdings of the employee, his spouse, and his minor children in the securities of all entities does not exceed \$15,000.

The OIG is currently preparing to begin the fieldwork for a Special Project Report focusing on the issue of conflicts of interests within the DOE complex.

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Question 2: Have you opened any investigation into Secretary Granholm for her compliance with ethics laws, her failure to list her individual stocks, or her misleading testimony to this committee?

In 2021, we reviewed Secretary Granholm's ethical, regulatory, and statutory obligations and her relationship with Proterra, Inc. The primary focus of our inquiries was whether Secretary Granholm violated the criminal conflict of interest statute, 18 U.S.C. § 208. We also reviewed the regulation regarding consideration of appearances, 5 U.S.C. § 2535.502, and Section 1, Paragraph 2 of Executive Order 13989, January 20, 2021, titled "Ethics Commitments by Executive Branch Personnel." Our inquiries did not identify evidence that Secretary Granholm violated existing statutes or regulations with respect to her financial interest in Proterra.

We likewise found no violation in Secretary Granholm's April 20, 2023, testimony regarding her financial holdings. To make this determination, we reviewed the hearing held on April 20, 2023, Secretary Granholm's written testimony submitted for the hearing, her letter dated June 9, 2023, explaining her mistaken belief that she did not own individual stocks, and her financial disclosure reports. Our review did not identify evidence of willful misrepresentation. Specifically, it appears the Secretary was not aware of her husband's stock holding at the time she testified. I will provide more detail on this review in my response to the letter you sent to me on October 24, 2023.

Question 3: Has the Department of Energy supported your efforts to maintain and pursue all audits and investigations that you think are appropriate in order to conduct vigorous oversight of the Department's loan programs?

It is critically important that the OIG be properly funded to conduct oversight of the loan program office.

The House FY24 Energy and Water Development Appropriations bill that passed the House in October, recognizes that funding for the Department of Energy has increased significantly without commensurate increases to funding for the Office of the Inspector General. The House Energy and Water Development Appropriations bill provides a transfer of funds from the Department's unobligated balances under both IIJA and IRA to the OIG. Although it is not the full amount needed for sufficient OIG oversight and does not include a transfer of funds from Puerto Rico Energy Resilience Fund, the transfer language is a step in the right direction.

The Department is not supporting the OIG's request for Congress to authorize the transfer.

The current FY 24 Senate Energy and Water Bill does not provide any additional funding for the OIG. Specifically, it keeps OIG FY 24 funding at FY 23 levels and does not contain any transfer language.



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America's mining industry supplies the essential materials necessary for every sector of our economy – from technology and healthcare to energy, transportation, infrastructure and national security. The National Mining Association (NMA) is the only national trade organization that serves as the voice of the United States mining industry and the hundreds of thousands of American workers it employs before Congress, the federal agencies, the judiciary and the media, advocating for public policies that will help America fully and responsibly utilize its vast natural resources.

We work to ensure America has secure and reliable supply chains, abundant and affordable energy, and the American-sourced materials necessary for U.S. manufacturing, national security and economic security, all delivered under world-leading environmental, safety and labor standards. The NMA has a membership of more than 280 companies and organizations involved in every aspect of mining, from producers and equipment manufacturers to service providers. As such, our membership is uniquely positioned to pursue funding opportunities made available through the Department of Energy's (DOE) programs and appreciates the opportunity to offer testimony on behalf of the industry.

Introduction

Despite being home to extensive and varied mineral resources, the U.S. is facing grave mineral supply chain challenges. Our import reliance has been a well-documented and increasingly problematic issue for decades and has now become a crisis, exacerbated by pandemic and war-related challenges, and the electrification of our economy. In fact, several materials key to the energy transition, including lithium, cobalt and copper, are forecast to enter a supply deficit as soon as 2027.¹

The Biden-Harris administration has signaled a recognition of the immense mineral supply chain challenges we face; indeed, some of the administration's earliest actions included the requirement for a comprehensive supply chain review, acknowledging the vulnerabilities inherent in our overreliance on mineral imports, the need for domestic mining support and lack of domestic processing capabilities. In response, the DOE recently added copper and other minerals to its updated July 2023 assessment of materials essential to global clean energy technology supply chains. These sensible additions allow for greater application and use of current and future DOE funding opportunities and incentives used to strengthen our domestic mineral supply chains.²

Congress has jointly recognized these significant economic and security challenges facing the U.S. and, through the leadership of this committee, has taken action to

¹ S&P Global Market Intelligence, "Mining execs warn of disconnect between metals appetite, pace of new projects," October 5, 2023. <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/mining-execs-warn-of-disconnect-between-metals-appetite-pace-of-new-projects-77724545>

² Department of Energy, "U.S. Department of Energy Releases 2023 Critical Materials Assessment to Evaluate Supply Chain Security for Clean Energy Technologies," July 31, 2023. <https://www.energy.gov/eere/articles/us-department-energy-releases-2023-critical-materials-assessment-evaluate-supply>

address our untenable minerals and materials reliance. Through the Infrastructure Investment and Job Act (IIJA) and the Inflation Reduction Act (IRA), and other legislation, Congress has enacted billions in funding and incentives to grow our capacity for minerals and energy technologies here at home. Together, the DOE and Congress' actions have put in place the largest industrial policy initiatives since the New Deal programs of the 1930's.

Countering an Uneven Global Playing Field

China is the primary producer and/or supplier of mineral commodities listed as essential to U.S. economic and national security.³ It controls more than 80 percent of global rare earth element (REE) production, nearly 90 percent of global mineral processing capabilities, as well as the market prices for REE's at each step of the process. China refines 68 percent of the world's cobalt, 65 percent of nickel and 60 percent of battery grade lithium needed for electric vehicle batteries and energy technologies. Further, China has significant ownership of mineral operations outside its borders, including more than 70 percent of mine ownership in the Democratic Republic of the Congo. Chinese companies also spent \$4.3 billion between 2018 and the first half of 2021 acquiring lithium assets, twice the amount spent by companies from the U.S., Australia and Canada combined.⁴

Goldman Sachs Research also estimates the extent of the vertically integrated nature of China's dominance, with 65 percent of battery components, 71 percent of battery cells and 57 percent of the world's EV's being made in China.⁵ This dominance and China's manipulative market practices remain a major threat, wreaking havoc on domestic operators' ability to compete while hindering our nation's ability to meet the administration's stringent emissions reduction targets and national security objectives.

On the other hand, international competition for minerals is strengthening and nearly every Western ally, aside from the U.S., is prioritizing ramping up domestic mining operations. In the last year, Canada released its strategy to position itself as the "global supplier of choice for clean energy minerals";⁶ the United Kingdom released

³ Notably this reliance comes despite existing U.S. resources. In the 2022 Mineral Commodity Summaries, the USGS indicated the U.S. had an estimated 48 million metric tons (mt) of copper that can be mined and processed economically, 69 million mt of cobalt, 340 million mt of nickel and 750 million mt of lithium. Regardless, in 2021, the U.S. imported 48 percent of U.S. consumption of nickel, 76 percent of cobalt, 45 percent of copper, and more than 25 percent of lithium.

⁴ Payne Institute for Public Policy, "The State of Critical Minerals Report 2023," P.45. <https://payneinstitute.mines.edu/wp-content/uploads/sites/149/2023/09/Payne-Institute-The-State-of-Critical-Minerals-Report-2023.pdf>

⁵ Goldman Sachs, "Resource realism: The geopolitics of critical mineral supply chains," Sept. 2023. <https://www.goldmansachs.com/intelligence/pages/resource-realism-the-geopolitics-of-critical-mineral-supply-chains.html>

⁶ Natural Resources Canada News Release, "Countries Commit to the Sustainable Development and Sourcing of Critical Minerals," Dec. 12, 2022. <https://www.canada.ca/en/natural-resources-canada/news/2022/12/countries-commit-to-the-sustainable-development-and-sourcing-of-critical-minerals.html>

its critical minerals strategy;⁷ and the European Union unveiled a comprehensive proposal including various permitting efficiency actions to ensure the EU's access to a secure, diversified, affordable and sustainable supply of critical raw materials.⁸

Key administration officials have highlighted that the mismatch between soaring mineral demand and our already alarming overreliance on overseas supply - notably from China - is a clear danger in need of decisive action.

- Jake Sullivan, the president's national security advisor, has warned that, "[mineral] supply chains are at risk of being weaponized in the same way as oil in the 1970s, or natural gas in Europe in 2022."⁹
- Secretary of Energy Jennifer Granholm recently told the International Energy Agency that China's dominant position in critical minerals, and willingness to weaponize these supply chains, is a grave threat. "The fuel of this energy transition — critical minerals — is going to make global energy security infinitely more complex and infinitely more important over the next few decades," she said.¹⁰ Granholm has also called for increased domestic mineral production to help meet the challenge, telling an energy conference last year that she was going to work to streamline the permitting process, declaring, "It takes forever to get a new permit. How crazy is that?"¹¹
- Brian Deese, until recently President Biden's lead economic advisor, recently wrote on the China minerals threat, declaring, "permitting laws will need to be reformed in order to expand domestic mining and processing of lithium, copper, and rare earths while still protecting key environmental and tribal equities."¹²

Many in the administration have spoken about the need to secure our mineral supply chains and use our domestic resources, but these words have yet to match coordinated action and have too often been outmatched by decisive and obstructive land withdrawals, monument designations, lease reversals, preemptive vetoes and permit inaction.

⁷ Department for Business, Energy and Industrial Strategy, "Resilience for the future: The UK's critical minerals strategy, 22 July 2022. <https://www.gov.uk/government/publications/uk-critical-mineral-strategy/resilience-for-the-future-the-uks-critical-minerals-strategy>

⁸ European Union's Critical Raw Materials Act, March 16, 2023. https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal/green-deal-industrial-plan/european-critical-raw-materials-act_en

⁹ April 27, 2023, Remarks by National Security Advisor Jake Sullivan on Renewing American Economic Leadership at the Brookings Institution. <https://www.whitehouse.gov/briefing-room/speeches-remarks/2023/04/27/remarks-by-national-security-advisor-jake-sullivan-on-renewing-american-economic-leadership-at-the-brookings-institution/>

¹⁰ Sept. 28, 2023, Secretary of Energy Granholm Remarks as reported at <https://www.mining.com/web/chinas-grip-on-critical-minerals-draws-warnings-at-iea-gathering/>.

¹¹ March 11, 2022, Secretary of Energy Granholm Remarks as reported at <https://www.reuters.com/article/ceraweek-conference-mining-idTRN1KCN2L81WC>.

¹² Brian Deese and Jason Bordoff, Break China's Hold on Batteries and Critical Minerals, Foreign Policy Magazine, Oct. 4, 2023, <https://foreignpolicy.com/2023/10/04/ev-electric-china-us-batteries-critical-minerals-energy-oil-renewable/>.

Though the administration has continued to take a woefully disjointed and oftentimes regressive approach to addressing mineral supply chain security,¹³ the DOE has shown consistent leadership by delivering on funding opportunities and incentives for minerals processing and refining, recycling and manufacturing. It has also provided funding for new and innovative sources for domestic supplies of key minerals and materials for energy technologies, including for coal to REE projects. These opportunities were made available by a portion of the \$500 million included in the IRA and the roughly \$1.2 trillion in incentives within the IIJA.

The NMA has worked closely with the DOE, the Department of the Treasury and Congress to support the implementation of these programs to ensure a wide range of opportunities can be utilized by the domestic mining industry, in-turn, providing the greatest return on taxpayer funding.

The effective implementation of these programs is underway, and the industry is responding and benefiting. Below are just a few of the notable funding announcements and cooperative agreements being established to improve the domestic mineral supply chain and operational efficiency of mining in the U.S.



ENR
DOE Pumps \$466M for Critical Minerals, Renewables at Mine Sites

upword
Michigan Tech, Eagle Mine awarded over \$10 million for EV battery recycling program

CHARLOTTE ALLIANCE
Albemarle, Piedmont Lithium land \$291M in Department of Energy grants to assist in developing plants

CNBC
Lithium company Ioneer scores \$700 million conditional loan from Energy Department for Nevada plant

DOE Announces Intent to Fund Projects That Advance Critical Mineral Innovation, Efficiency, and Alternatives for a Strong Domestic Supply Chain

Biden-Harris Administration Announces \$150 Million to Strengthen Domestic Critical Material Supply Chains

Biden-Harris Administration Announces \$30 Million to Build Up Domestic Supply Chain for Critical Minerals

Biden-Harris Administration Invests \$32 Million to Strengthen Nation's Critical Minerals Supply Chain

¹³ The Congressionally authorized U.S.-China Economic and Security Review Commission found in its 2022 report to Congress that *"The current ability of the U.S. to overcome the scale and scope of China's harmful policies is undermined by the lack of a coherent strategy and fragmented authorities to mobilize resources, coupled with a deficiency in new tools to address economic injury. The U.S. is also impeded by its self-imposed barriers to employing and underutilization of available tools and its difficulties in data sharing and analysis."* https://www.uscc.gov/sites/default/files/2022-11/2022_Executive_Summary.pdf

More Investment in Upstream is Needed

Solutions to meet the anticipated mineral demand that will accompany our energy future will require the rebuilding and strengthening of our domestic supply chains. Key components include increased domestic mineral production and processing, reprocessing of mine waste, increased recycling, and strategic alliances with allied nations. There is no one option that will fill the need – the answer must be comprehensive. Every tool will be needed to meet the speed and the scale of the demand now upon us, and domestic mining and our ready and capable workforce must be at the center of this holistic effort.

Further, the DOE must do more to secure upstream energy minerals value chains. DOE’s Title 17 Innovative Energy Loan Guarantee Program has more than \$400 billion in estimated loan capacity available to provide loan guarantees to accelerate deployment of innovative, all-of-the-above energy projects. This includes more than \$3 billion in loan guarantees available to support efficiencies in “mining, extraction, processing, recovery, or recycling of critical materials projects.”¹⁴

IIIA Section 40401(a)(2) amended Section 1703(b) of the Energy Policy Act of 2005 (42 U.S.C. 16513(b)) by adding a thirteenth category of lending eligibility, specifically, “projects that increase the domestically produced supply of critical minerals (as defined in section 7002(a) of the Energy Act of 2020 (30 U.S.C. 1606(a)), including through the production, processing, manufacturing, recycling, or fabrication of mineral alternatives.”¹⁵ Despite this congressional mandate, there have been no projects funded by DOE that boost the domestic extraction of minerals.

Further, DOE in May 2023 released an Interim Final Rule that “amends Title 17 regulations to implement changes that expand or modify program authority and to revise for clarity and organization.”¹⁶ The interim rule provided another self-imposed barrier to employing underutilized and available tools that support the energy transition.

The NMA is urging its members to pursue these opportunities through partnership with the DOE. However, we urge the DOE to provide funding guidance and implementation solutions to further support the industry’s efforts to strengthen the domestic mineral supply chain.

As the administration has made clear, time is not on our side. Mineral demand is soaring. China’s grip on mineral supply chains is tightening and mineral supply deficits are already weighing on the cost and deployment schedule of critical energy technologies. DOE must move with more urgency to support domestic mining.

¹⁴ DOE Critical Materials Loans & Loan Guarantees handout, accessed Oct. 17, 2023.

https://www.energy.gov/sites/default/files/2021-06/DOE-LPO_Program_Handout_Critical_Materials_June2021_0.pdf

¹⁵ 42 U.S.C. 16513 - Eligible projects. <https://www.govinfo.gov/content/pkg/USCODE-2021-title42/pdf/USCODE-2021-title42-chap149-subchapXV-sec16513.pdf>

¹⁶ Federal Register, Loan Guarantees for Clean Energy Projects (88 FR 34419). <https://www.federalregister.gov/documents/2023/05/30/2023-11104/loan-guarantees-for-clean-energy-projects>

Disjointed Domestic Policy Exacerbates Our Upstream Deficit

With so many variables at play within a mining project, the importance of regulatory certainty in attracting investment in mining projects cannot be overstated. Mining is one of the most heavily regulated industries in the U.S. and one that is highly capital-intensive. The process takes years – and even decades – of exploration, engineering, design and development before minerals can be produced. Unlike coal, and oil or gas exploration, concentrations of useful minerals that are rich enough to form ore deposits are rare with approximately 1 out of 1,000 deposits having the qualities that allow them the chance of being transformed into an operating mine. Coupled with complex state and federal permitting processes, significant time may pass impacting the ability of mining companies to attract investment capital. It is not uncommon for complex, large scale mining projects to take 20 years or more to be permitted, costing billions of dollars before seeing a single dollar in return.

Investors favor projects where they are likely to get the earliest return on their investment and where they know they have the necessary security of title and tenure from the time of location through mine reclamation and closure. As a result, investment dollars for mineral exploration and development tend to flow to countries with a stable political environment, strong economy, an efficient permitting system and predictable regulatory climate. Further, unlike other countries where mining is driven by government investment, U.S. mining is primarily a private enterprise. These unique factors taken together outline the importance of using all available tools that give domestic mines the ability to operate competitively in global minerals market whose participants often do not operate under common and competitive free-market principles.¹⁷

Conclusion

The current state of the U.S. mineral supply chain – from mining through smelting and processing – is a shell of our true domestic potential. Investing in this supply chain and reshoring essential capacity is critical to our own national security and economic competitiveness.

Congress and the DOE have taken important first steps to solving our nation's disjointed minerals policy. However, much more needs to be done to provide certainty, restore investor confidence, and loosen the grip of geopolitical competitors and economic adversaries. This will ensure our nation's ability to meet the dramatic increases in minerals production that will be needed in the coming decades to keep up with new technologies, infrastructure, manufacturing, let alone the administration's energy transition goals.

With more than \$6 trillion worth of mineral resources here in the U.S., a highly trained and highly compensated workforce, and world-class environmental, labor, and safety standards, the DOE must take advantage of its coordinated approach to

¹⁷ Politico, "Action on critical minerals is needed now," Sept. 2023. <https://www.politico.eu/article/action-critical-minerals-needed-now/>

strengthening domestic mineral supply chains, specifically by accepting and supporting mine projects that responsibly increase our domestic ability to extract and produce minerals. While approving a large amount of processing and recycling projects, equal-footing must be given to the extraction projects that are at the beginning of the supply chain for energy technologies and essential to the success of DOE's mission.

The NMA appreciates the opportunity to provide comments to the committee and looks forward to working with Congress and the DOE to support a robust domestic mineral supply chain for generations to come.