UNLEASHING A GOLDEN AGE: EXAMINING THE USE OF FEDERAL LANDS TO POWER AMERICAN TECHNOLOGICAL INNOVATION

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

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HOUSE COMMITTEE ON

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CHAIRMAN BRUCE WESTERMAN

To: House Committee on Natural Resources Republican Members

From: Subcommittee on Oversight and Investigations Staff, Michelle Lane (Michelle.Lane@mail.house.gov) and Andrew Bambrick (Andrew.Bambrick@mail.house.gov) x5–0500

Date: Monday, May 19, 2025

Subject: Oversight Hearing titled *"Unleashing a Golden Age: Examining the Use of Federal Lands to Power American Technological Innovation"*

The Subcommittee on Oversight and Investigations will hold an oversight hearing titled *"Unleashing a Golden Age: Examining the Use of Federal Lands to Power American Technological Innovation"* on **Wednesday, May 21, 2025, at 2 p.m. in 1324 Longworth House Office Building.**

Member offices are requested to notify Jace McNaught (Jace.McNaught@mail.house.gov) by 4:30 p.m. on May 20 if their Member intends to participate in the hearing.

I. KEY MESSAGES

- Throughout America's history, technological innovations—from the first light bulb to the internet—have powered our nation forward. Access to reliable energy, in all its forms, is an essential component of innovation.
- Today, America finds itself at the precipice of a new technological revolution, with artificial intelligence (AI), cryptocurrency, and data centers spawning a massive innovation in technology.
- Prior technological revolutions that have both created efficiencies and transformed our standard of living required immense power input. Today's innovative technologies are no different.
- As energy demand in the U.S. experiences its highest growth rate in over two decades, largely due to an ongoing technology revolution, our domestic supply of natural resources has the power to meet that demand.
- While the U.S. is a leader in these innovative technologies, cumbersome permitting processes, a lack of reliable energy infrastructure, and a push by environmental groups to ignore traditional energy resources threaten America's leadership.
- Foreign entities, such as China, are working to surpass the United States by developing AI and data processing capabilities that will exceed those of the United States, barring policy changes that permit the unleashing of America's natural resources.

II. WITNESSES

- **Ms. Paige Lambermont,** Research Fellow, Competitive Enterprise Institute, Washington, D.C.
- **Ms. Emily Arthun,** CEO, American Coal Council, Gillette, WY
- **Mr. Greg Osuri,** Founder and CEO, Akash Network and Overclock Labs, Austin, TX

- **Mr. Kyle Hart,** Mid-Atlantic Program Manager, National Parks Conservation Association, Washington, D.C. (*Minority witness*)

III. BACKGROUND

Energy Production and Demand in the New Age of Technology Innovation

Today's pace of technological advancement is staggering. Scientists estimate that approximately 2.4 million years passed between the first use of tools and the control of fire for cooking and heat by our ancestors.[1] Nearly 60,000 years passed between the invention of the bow and arrow and gunpowder.[2] The inventions of paper and the printing press are separated by 1,500 years.[3] More recently, a mere 66 years passed between the first human flight and the successful U.S. moon landing.[4] And though the internet's first web browser and website were only released in 1991, many children now use smartphones capable of immense computing before they reach the age of 12.[5] Astonishingly, today's developments in emerging technologies like artificial intelligence and blockchain are measured not in years, but in months and weeks.

Although each technological leap made specific tasks or industries more efficient, each leap forward was accompanied by exponential increases in energy demand. For example, the invention of automobiles built via assembly lines undoubtedly made daily movement more efficient than horse-powered travel, but drove skyrocketing demand for fuel. Similarly, the modern cellphone weighs about 5.5 ounces compared to the 70-pound computer that powered the Apollo mission to the moon, while possessing approximately 2,800 times more processing power.[6] Today there are now many more smartphones than people in the world and the energy demand to produce, use, charge, and dispose of these devices dwarfs that of the 1960s and 1970s.[7] This trend of increased energy demand is only accelerating as the pace of advancement increases. In fact, the energy demands of AI programs, data centers, and cryptocurrencies are so large, that they can only be described as "insatiable."[8]

Recognizing this reality, Republicans in Congress and President Trump have moved to unleash a golden age of American energy dominance by increasing energy exploration and production, especially on federal lands and waters, to power U.S. technological advancement and superiority.

Recent Executive Actions

Since taking office in January 2025, President Trump has recognized that the new age of technological innovation flourishing in the United States requires an immense and reliable power supply. On January 20, 2025, President Trump issued Executive Order (EO) 14156, "Declaring a National Emergency," which declared a national energy emergency and directed agencies to establish a reliable, diverse, and affordable energy supply, including on federal lands.[9] That same day, President Trump also issued EOs 14154,[10] "Unleashing American Energy", and 14153,[11] "Unleashing Alaska's Extraordinary Resource Potential," both of which served to unlock energy resources to solve our nation's energy emergency. Additionally, to underscore the importance of American critical and other hardrock mineral production to energy independence and dominance, President Trump issued three more EOs: 14220, Addressing the Threat to National Security From Imports of Copper;[12] 14241, Immediate Measures To Increase American Mineral Production;[13] and 14285, Unleashing America's Offshore Critical Minerals and Resources.[14] Moreover, to most effectively ensure that our natural resources are being developed and produced, President Trump issued EO 14213, Establishing the National Energy Dominance Council.[15] Finally, recognizing the importance of emerging technologies, President Trump issued EO 14179, "Removing Barriers to American Leadership in Artificial Intelligence", which directed the Assistant to the President for Science and Technology, the Special Advisor for AI and Crypto, and the Assistant to the President for National Security Affairs to develop an action to help enhance America's global leadership in AI innovation and dominance.[16] Together, these orders reflect the reality that rapidly emerging technologies, like AI, decentralized cryptocurrencies, data processing centers, and microchips, will revolutionize the world while requiring a greater amount of baseload fuel sources to power the growing power demand for these innovations.[17]

New Technologies Fuel Growing Power Demand

The new age of innovation includes a number of new technologies, all of which, taken together, demand additional energy. Examples include:

- *Artificial Intelligence (AI):* Over the past 20 years, AI has evolved from science fiction to a tool embraced by millions of users with "the capability of computer systems or algorithms to imitate intelligent human behavior."[18]

This ranges from platforms such as ChatGPT to security systems, fitness trackers, online shopping, and even music playlists.[19] As other nations like China grow their AI capabilities, the United States risks losing its position as a leader in the industry.[20]

- *Cryptocurrency and Crypto Mining:* Cryptocurrencies (crypto) are "digital assets exchanged and recorded on public ledgers, known as blockchains, that do not require central intermediaries (i.e. banks) for clearing and settlement."[21] Cryptocurrency mining describes when transactions are officially entered on the blockchain for exchange and verification.[22] The most well-known form of cryptocurrency is Bitcoin. Bitcoin's energy consumption at its data centers ranges anywhere from 91 to 150 terawatt-hours, which is more power than the country of Finland uses.[23] According to the U.S. Energy Information Administration, cryptocurrency mining is currently estimated to represent anywhere from 0.6% to 2.3% of the United States' electricity consumption, requiring enough energy to power more than three million homes.[24] The increasing popularity of crypto, and its underlying technologies create both opportunities and challenges for the energy sector.[25]

of cloud computing, AI, cryptocurrencies, and similar technologies require large amounts of information technology (IT) infrastructure. Data centers, which often house components of hardware, software, networks, data, and facilities for these technologies, are the primary mechanism by which most of these technologies depend upon.[26] While in their "simplest form, data centers are facilities that house and power large computer systems, they have evolved to house multiple enterprise—level, interconnected servers." Most advanced digital technologies utilize data centers, which require both significant capital investment and energy usage. For example, a recent report found that data centers "consumed about 4.4% of total U.S. electricity in 2023, and, depending upon how much the rest of the economy grows, are expected to consume between 6.7 and 12% of total U.S. electricity by 2028."[27]

As more data centers operate to support AI servers, the need for reliable power will only increase. The Energy Policy Research Foundation calculated that the projected power needs for the 407 data centers that are either planned or under construction will require 19,270 megawatts to operate.[28] This energy demand will power not only the servers but also the storage systems, routers, and other components needed to ensure a seamless transfer of data and connectivity.[29]

- *Semiconductors:* Semiconductors are "fundamental to nearly all modern industrial and national security activities, and they are essential building blocks of other emerging technologies, such as AI, autonomous systems, 5G communications, and quantum computing."[30] The semiconductor industry, and the advanced chips they produce, power everything from the digital devices we rely on to cars and home appliances. Global supply chain shortages, due to a lack of critical hardrock minerals, continue to threaten this industry,[31] which relies on a steady supply of copper, cobalt, and lithium.[32] However, the actions of the Biden administration made sourcing needed materials here at home even more difficult due in large part to obstructionist environmental policies, increasing our reliance on foreign sources, particularly from China, who operates a state supported and market scale industry.[33]

Facing the Challenges of Rising Energy Needs

As the race for technological supremacy heats up, the United States' leadership is at risk of dwindling due to an inability to meet growing domestic power demands. These challenges include a lack of reliable energy infrastructure and an antiquated permitting regime, among others.

Lack of Reliable Energy Infrastructure

Actions pursued by the Biden Administration weakened the stability of the United States' energy supply. For example, President Biden took deliberate actions to move the United States towards an exclusively renewable energy economy[34] by shuttering projects like the Keystone XL Pipeline[35] and launching a war on coal.[36] According to the North American Electric Reliability Corporation (NERC), over 8 gigawatts (GW) of coal power have been retired since 2023.[37] In addition, NERC reports an additional 83 GW of fossil-fired and nuclear generator retirements are anticipated by 2033, while 35 GW of new power will be necessary for data centers alone by 2030.[38]

Currently, oil, natural gas, and coal together provide approximately 80% of American energy.[39] These energy sources provide for 40% of U.S. electric power, 32% of

industrial power, and 14% of residential power.[40] Both wind and solar are weather dependent and, without reliable backup options like coal or fossil fuels, the risk of blackouts and grid failures rises exponentially.[41] As Americans depend on more electricity to power their lives, the demand for power is at its highest point in two decades, while the generation capacity and associated infrastructure to meet that demand is not meeting the anticipated supply.[42]

Permitting, NEPA, and Delayed Energy and Mineral Development

Prolonged analysis under the National Environmental Policy Act (NEPA) and constant litigation challenging the sufficiency of environmental documents have become significant barriers to all forms of energy development, causing uncertainty and deterring investment. The current permitting process is filled with repetitive assessments and lengthy processing times, making it difficult for developers to plan, finance, and build projects efficiently.[43]

In addition, hardrock mineral development requires hundreds of millions of dollars in upfront capital due to the distinct technical challenges associated with hardrock mineral exploration and development. In the United States, exploration is followed by almost a decade of permitting under NEPA and other statutes before production begins.[44] It routinely takes over 10 years and $1 billion in start-up capital before a company produces any product in the U.S.[45] Prolonged delays under NEPA create significant uncertainty, deterring investment in developing minerals needed for renewable energy and countless other high-tech applications.

The current United States permitting process often stifles the ability of innovative technologies to move forward and maintain a competitive global advantage. The NEPA process and other environmental statutes can often lead to unnecessary project delays.[46]

A 2024 study by S&P Global found that U.S. critical mineral projects take an average of 29 years from discovery to production—the second-longest in the world.[47] U.S.-based mining projects also lose over one-third of their value due to delays during the permitting process.[48]

Harnessing America's Vast Natural Resources

Despite the challenges the United States currently faces with infrastructure and permitting, steps are being taken in the right direction. One of the goals of EO 14156 is to ensure that our abundant energy resources can be used. With 1.66 trillion barrels of technically recoverable oil, 4.03 quadrillion cubic feet of technically recoverable natural gas, 470 billion short tons of technically recoverable coal,[49] and the possibilities of geothermal energy to supply our electrical grid,[50] the energy needed to unleash the ongoing technological revolution is well within our reach.

The U.S. Energy Information Administration (EIA) predicts a 50 percent increase in global energy consumption by 2050. Petroleum and other liquid fuels will remain the largest energy source, and natural gas consumption is expected to increase as well.[51] Maximizing energy production in America will limit the need to import from other nations, reduce global emissions and energy costs, create jobs domestically, and allow us to help our allies abroad. In spite of our abundant natural resources and the federal government owning 61 percent of America's onshore and offshore mineral estate, only 25 percent of domestic oil and 11 percent of domestic natural gas come from federal lands and waters.[52]

In addition to natural gas, coal is also a critical natural resource to harness. The United States has the capacity to help meet demand in both the thermal coal and metallurgical coal markets; 84.8 million short tons of coal were exported from the U.S. in 2022, 45 percent of which were thermal coal and 55 percent of which were metallurgical coal.[53] Whereas oil and gas reserves are found on federal, state, and private lands, coal is almost exclusively located on lands owned by the federal government.[54] Accordingly, μfederal policies can more easily impact coal production and consumption," depending on the federal government's policies toward coal, both to America's detriment and advantage.[55] According to the EIA, coal accounts for 9.8% of U.S. energy consumption.[56] Of this, 91.7% accounts for electric power, and 8.2% was for industrial use.[57]

Recognizing this reality, Republicans in Congress have advocated for policies to reform the NEPA permitting process,[58] lower energy costs by increasing American energy production, conduct offshore lease sales in the Gulf of America's Outer Continental Shelf,[59] provide for oil and gas leases on federal lands in Alaska,[60] promote energy exports, build critical infrastructure, and increase domestic critical minerals mining.[61] In fact, legislation to codify many of these policies was previously passed by the House of Representatives, including the Lower Energy Costs Act,[62] the Superior National Forest Restoration Act,[63] Alaska's Right to Produce Act of 2023,[64] and the Mining Regulatory Clarity Act of 2024.[65] This work to unleash American energy,

bolster mineral supply chains, and support critical mineral development continues in the 119th Congress, serving to lower energy costs through streamlining permitting processes and providing pathways for increased production of reliable energy resources.[66]

EO 14156 builds upon this work by directing all agencies to expedite permitting procedures, such as those needed under the Endangered Species Act and the Clean Air Act.[67] It also requires that the Secretary of Defense collaborate with the Secretaries of the Interior and Energy to "acquire and transport the energy, electricity, or fuels needed to protect the homeland and to conduct operations abroad, and, within 60 days, shall submit this assessment to the Assistant to the President for National Security Affairs."68

Fortifying American Energy and Technology Independence

Harnessing America's natural resources and supporting the development of innovative technology is critical not only to our economy but to our national security. For example, AI technologies have a wide range of national security applications, including "intelligence, surveillance, and reconnaissance; logistics; cyber operations; command and control; semi- autonomous and autonomous vehicles; and weapons systems."[69] The United States Military has invested in AI systems and technologies since at least 2017, while other nations, like China and Russia, have released national plans to lead with AI military development.[70]

In addition to using innovations like AI for national defense, these systems can also be utilized as economic weapons. While the United States currently maintains a competitive edge in AI compared to China, that dominance is not guaranteed as China-based companies focus on emerging markets and deploy open models.[71] Although the United States has taken steps to limit China's development of AI technology, primarily through limiting exports of semiconductors, China continues to advance its own domestic AI industry.[72]

In the race to maintain American technological dominance, the United States must also contend with its reliance on foreign nations like China for the minerals necessary to produce the semiconductor industry. China has a stronghold in the processing and supply chains of the hardrock minerals needed for high-tech applications. Because of this overreliance, China has taken steps to limit their exports of hardrock minerals and other technologies needed for innovation.[73] Republicans on the House Committee on Natural Resources have aggressively pursed policies and legislation, like the Lower Energy Costs Act,[74] the Superior National Forest Restoration Act,[75] Alaska's Right to Produce Act of 2023,[76] the Mining Regulatory Clarity Act of 2024, and the BUILDER Act of 2023,[77] which will allow for more domestic mining of critical resources necessary for technological advancement, including industries like the semiconductor, data center, and AI space, which promote additional pathways forward for unleashing American energy dominance.[78]

Conclusion

The United States is well-positioned to remain a leader in innovation. America's abundance of natural resources can provide the baseload supply necessary to meet the growing power demand required for these innovations, which will benefit both our economy and national security. However, cumbersome permitting processes that limit our ability to unleash the full potential of our resource wealth pose a key threat, providing an opportunity for nations like China to challenge our global leadership.

In a time of high energy demand, it is imperative that Congress continue to support technological innovation by ensuring that our natural resources are responsibly developed and that American innovators are provided with the necessary ingredients for a sustainable energy supply to power a technology revolution.

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OVERSIGHT HEARING ON UNLEASHING A GOLDEN AGE: EXAMINING THE USE OF FEDERAL LANDS TO POWER AMERICAN TECHNOLOGICAL INNOVATION

Wednesday, May 21, 2025
House of Representatives,
Subcommittee on Oversight and Investigations,
Committee on Natural Resources,
Washington, D.C.

The Subcommittee met, pursuant to notice, at 2:12 p.m. in Room 1324, Longworth House Office Building, Hon. Paul Gosar [Chairman of the Subcommittee] presiding.

Present: Representatives Gosar, Collins, Begich; Dexter, Hernández, and Huffman.

Dr. GOSAR. The Subcommittee on Oversight and Investigations will now come to order.

Without objection, the Chair is authorized to declare a recess of the Subcommittee at any time.

The Subcommittee is meeting today to hear testimony on, "Unleashing a Golden Era: Examining the Use of Federal Lands to Power American Technological Innovation."

Under Committee rule 4(f), any oral opening statements at the hearing are limited to the Chairman and the Ranking Member. I therefore ask unanimous consent that all other members' statements be made part of the hearing record if they are submitted in accordance with rule 3(o).

Without objection, so ordered.

I ask unanimous consent the following members be allowed to sit and participate in today's hearing—the gentleman from California, Mr. Obernolte.

Without objection, so ordered.

I now recognize myself for an opening statement.

STATEMENT OF THE HON. PAUL GOSAR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ARIZONA

Dr. GOSAR. Good afternoon, everybody. Thanks for coming. We have had a really hot streak with this group right here. So I got to tell you, we are going to have some more fun today.

[Laughter.]

Dr. GOSAR. And I especially want to thank those who have took the time to travel out to D.C. As we explore the nexus of energy and technology in today's hearing, I am so happy we have had representatives from industries at both ends of the spectrum who can speak to the needs of this issue.

Today's pace of technological advancement is incredible. While almost 60,000 years passed between the invention of the bow and arrow and gunpowder, the time between innovations is emerging—

in emerging technologies like artificial intelligence and blockchain today is measured in months and even weeks. Undoubtedly, these emerging technologies are rapidly changing how they interact with the world.

AI not only takes the form of generation tools like ChatGPT, but also to detect online financial fraud, improved GPS and navigation, and distinguishing between valuable polymetal metallic nodules on the ocean floor and sea creatures. Likewise, blockchain technology and cryptocurrencies are changing the way we do business. These digital assets allow for nearly instant and cheap financial transactions, including for things like retail purchases and payroll, and even smart contracts which are self-executing written agreements translated into code.

Yet as these technologies work to update our lives, their appetite for energy is insatiable. Continuous advancements of AI and blockchain means that more people have access to more technologies for more uses. In other words, as emerging technologies improve, demand for them grows, and so does their need for reliable, immense power.

Technologies like A1, blockchain, and the cloud require data centers to store and process generated data. Without data centers to house large-scale computer systems, these technologies cannot function. And without staggering and increasing energy inputs, data centers become—cannot operate.

In 2023 the Berkeley lab found that 4.4 percent of the United States' total electricity was consumed by data centers. The same report estimated that by 2028 data centers would require as much as 12 percent of the total energy production. Given the pace of advancement, this energy needs only to be—is only going to need to grow. To meet these needs the Committee on Natural Resources majority and President Trump have worked tirelessly to implement an all-of-the-above approach to energy development and production. In fact, the White House has issued at least eight executive orders that work to unleash American energy independence and dominance.

Likewise, House Republicans have introduced and passed legislation to, among other things, lower energy costs by increasing American energy production, conduct offshore lease sales in the Gulf of America's Outer Continental Shelf, provide for oil and gas leases on Federal lands in Alaska, promote energy exports, build critical infrastructure, reform the NEPA permitting process, and lastly, increase domestic critical minerals mining.

To be clear, the reason for our national energy emergency is not that the U.S. lacks natural resources. Rather, the reason for our current inability to meet energy demands is foolish and unscientific energy policy championed by environmental extremists. Because of these extremists, more than 8 gigawatts of coal power have been retired since 2023. Mines across the country, including my home State of Arizona, have been shuttered and entangled in permitting red tape and frivolous litigation.

The United States is immensely rich in reliable energy resources like oil, gas, and critical minerals that currently account for 80 percent of America's energy use. We have the natural resources at the ready to power our Nation, including those advanced and

emerging technologies, for generations. According to the Institute of Energy Research, our Nation is sitting on about 1.66 trillion barrels of technically—technologically recoverable oil, 4.3 quadrillion cubic feet of technically recoverable natural gas, 470 billion short tons of technologically recoverable coal, and vast reserves of minerals. As recovery technology continues to improve, these numbers will certainly increase, as well.

As this Committee majority has repeatedly pointed out, by unlocking our plentiful domestic energy resources not only can we meet the growing power demands of emerging technologies, but we can also free ourselves from the constant threat of supply chain insecurities created by China under the Biden administration.

It is imperative that the United States leads the world in technological innovation. To do this we must also lead the world in energy development and production. By increasing production of energy on public lands, we invest in America's future. My legislation, H.R. 34, the LASSO Act, would take 10 percent of this investment off public lands and deposit it into the Social Security Trust Fund, thus creating an incentive for everyday Americans to use our Nation's land.

I challenge my colleagues on both sides of the aisle here today to think not only about the growing energy needs presented by emerging technologies, but also about the data-backed solutions presented by executing an all-of-the-above energy approach. I think I represent one of those bills.

Dr. GOSAR. So thank you. I now recognize the Ranking Member Dexter for her opening statement.

STATEMENT OF THE HON. MAXINE DEXTER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON

Dr. DEXTER. Thank you, Mr. Chair, and thank you also to our witnesses for coming and testifying today.

I would like to start with a reality check. In 1999 Forbes published an article with a sensational prediction: half of the U.S. electric grid would soon be powering the digital economy. They called this article, "Dig More Coal: The Personal Computers are Coming." But that never happened. By 2009 data centers only used about 2 percent of U.S. electricity, not the 50 percent that was predicted. We know now that those projections were wildly inaccurate because the computers powering the Internet became smarter and more efficient.

Today we are hearing a similar tune from fossil fuel and tech giants warning that artificial intelligence will need a massive energy surge that can only be met with coal and methane gas. But just like in 1999, those projections deserve serious skepticism. In December, Lawrence Berkeley National Lab found that the data centers will account for just 6.7 percent to 12 percent of total electricity consumption by 2028, a far cry from the sky-high numbers some are pushing. They note that these projections are more modest than others, and that forecasting past 2028 is a fool's errand. The technology is rapidly becoming more efficient, and there are just too many key uncertainties to accurately quantify the demand past that point.

So why are these inflated numbers being pushed? Because fossil fuel companies and some in big tech want subsidies, they want public land, they want exemptions from our bedrock environmental protections, and they want the public to foot the bill if their predictions don't pan out.

I want to be clear on that last point. Let's say a data center developer tells a utility, "I need 300 megawatts." The utility builds a new gas plant to meet that demand. But if the data center doesn't show up or needs less power, ratepayers, every-day American families, are stuck paying for that unused infrastructure. That has a name, and it is called a stranded asset.

It is not just about the harm these data centers could inflict on our working families. It is about our health. As a pulmonologist I spent decades treating patients struggling to breathe, children with asthma, seniors with COPD, families living near industrial pollution who came to me with worsening symptoms. I have seen firsthand what happens when we let short-sighted energy decisions poison the air we all rely on.

As we will hear today, communities in Virginia are already suffering with this approach. In Virginia, also known as data center alley, they are rolling out massive and unnecessary diesel generators to back up data centers, generators that were supposed to be for emergencies, but are now being used as routine power, spewing harmful pollution into nearby neighborhoods.

Elon Musk's xAI facility in Memphis is also a good example. They claim to only be using 15 backup generators at any time, but a heat sensitive camera showed that they were burning 33 of them. That means more air pollution, particulate matter, sulfur oxides, nitrogen oxides right where families live. Bypassing our basic environmental protections in the name of an AI race is simply not an option.

And let's be clear. None of this is inevitable. A Rhodium Group report shows that advanced geothermal could meet up to 64 percent of expected data center demand by the early 2030s. That is a clean, sustainable path.

History shows us that competition drives efficiency. We have seen it in computing, programing, and cooling technologies. There is every reason to believe that the trend will continue and offset at least some of the energy demand, unless monopolies are allowed to corner the market and choke off innovation.

My conversations with Lina Khan have reminded me that monopolies kill competition and, with it, efficiency. That is exactly the kind of structural failure that leads to energy crises, and it is also a policy failure.

But let's not lose sight of the bigger picture. Like so many hearings in this Subcommittee, this is about corporate subsidies and deregulation for industries awash in cash and led by billionaire Trump donors, all while our communities are being asked to bear the cost. Whether that is higher utility bills, dirtier air, or the continued destruction of our climate, we need real oversight here, not just rubber stamping profit for polluters.

Dr. DEXTER. Thank you, Mr. Chair. I yield back.

Dr. GOSAR. I thank the Ranking Member for her comments. I now recognize the Ranking Member of the full Committee, Mr. Huffman, for his opening statement.

STATEMENT OF THE HON. JARED HUFFMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. HUFFMAN. Good morning, Chairman Gosar, and welcome to the witnesses.

You know, hyperbole is not what it used to be these days with this Administration and this Congress. I mean, it is the golden age of this, the golden age of that, a big, beautiful bill that we spent all night discussing and debating in the Rules Committee. And as we dig into it we find out it is not so beautiful. It certainly is big when it comes to tax cuts and special favors for billionaires and special interests. It is really big when it comes to exploding the debt. But it is not very beautiful because it finances those billionaire tax cuts on the backs of American families by taking away their health care and their nutrition assistance. And of course, it is a massive boondoggle of a giveaway to special interests when it comes to the natural resources title.

So, you know, if this is the golden age of anything, it is the golden age of gaslighting. It makes me almost nostalgic for the time when Republican hyperbole used to have a little subtlety to it. It used to have at least some tether to reality, but now it seems like we spend our time in this Committee talking about imagining the golden age of asteroid mining, and deep sea mining, and any number of other special interest giveaways that our Republican friends can cook up.

But at some point there really should be some serious work done in this Committee, and it should be about the real world, what is actually happening. We are entering into another dangerous wildfire season. But instead of getting us more prepared, the Trump administration is hollowing out the very workforce that we count on to prevent and respond to wildfires.

Let me get my microphone a little closer.

Dr. GOSAR. There you go.

Mr. HUFFMAN. Do you want me to start over again, Mr. Chairman?

Dr. GOSAR. Oh, no. I got it permanently imprinted on my cerebral cortex.

Mr. HUFFMAN. All right, you are following me.

So, look, the Trump administration is hollowing out the workforce we count on to make us safe. For one, thousands of certified red card employees have been lost from the Forest Service just since January. These are experienced staff. They are trained to support firefighting crews. They assist with key jobs like prescribed burns, managing logistics, and stepping in during peak fire events.

Now, heading into fire season with that vulnerability seems like the kind of crisis this Subcommittee ought to at least be talking about, if not investigating. We should be asking administrative Administration officials how many personnel have been cut, how they plan to manage for the upcoming fire season, what level of damage we can expect from the DOGE assault on our Nation's

firefighting capacity. Instead, we are here in the latest of a series of imaginary issues.

By the way, we have got fake emergencies all over the place, a fake energy emergency at a time when we have been producing record levels of oil and gas, exporting record levels of oil and gas. The industry is awash in record profits, but I guess now it is a crisis, it is an emergency, and we have to somehow unleash them from their record profits.

But, you know, it is like this Subcommittee has become less of an oversight body and more of a venture capital pitch for billionaires. And so we saw the space mining venture capital pitch for a billionaire friend of Elon Musk, a client of Elon Musk who was having trouble raising money. Things weren't going so well, like everyone else in this space mining boondoggle. So he was given a platform to pitch Federal subsidies for his company so that, you know, he could continue down his adventure on asteroid mining. We have had many hearings on oil and gas billionaires. Of course, we had the deep sea mining for billionaires hearing.

Today the conversation turns to big tech billionaires. We will hear proposals to exempt data centers from environmental review under NEPA, which, of course, is how we get answers about potential threats to things like our drinking water from data centers. And according to a 2021 study by Virginia Tech and the Department of Energy, data centers are among the top 10 water-consuming industrial or commercial industries in the United States. Why wouldn't you want some scrutiny, some environmental review when it comes to that industry?

And making matters worse, nearly half the data centers are powered by power plants located within water-stressed regions. The arid West, Mr. Chairman, you and I should be very sensitive to how the heck we are going to manage water in the face of this incredible demand.

So these are the kind of impacts that NEPA is intended to review to make sure we get projects right. Instead of gutting NEPA, we should be asking hard questions. This is a time when NEPA really is worth the many years of success that it has brought to us to help us have better projects.

Let's have better hearings, too, Mr. Chairman.

Mr. HUFFMAN. I yield back.

Dr. GOSAR. So was I having an out-of-body experience last week? Didn't we have a good one about firefighting?

Mr. HUFFMAN. Did we have a hearing about firefighting?

Dr. GOSAR. Yes.

Mr. HUFFMAN. You know, what I can't seem to get you to talk about, Mr. Chairman, is the gutting of the workforce that we depend on to keep us safe from fires.

Dr. GOSAR. Well, it has been a long year. So I am now going to introduce the witnesses.

First we have Mr. Greg Osuri. Did I say that right?

Mr. OSURI. Yes.

Dr. GOSAR. OK, Founder and CEO, Akash Network, Austin, Texas.

Then we have Ms. Emily Arthun, CEO from American Coal Council, Gillette, Wyoming. My home state, that is where I was born and raised.

Mr. Kyle Hart, Mid-Atlantic Program Manager, National Parks Conservation Association, Washington, D.C.

And Ms. Paige Lambermont, a Research Fellow at the Competitive Institute of Washington, D.C.

Let me remind the witnesses that your testimony will all be provided, so you are—must limit it to 5 minutes. You are going to see our little lights here. When you are ready to go, it is green. It will turn yellow when you have about a minute to go. And when it turns red, please wrap up, OK?

Make sure you push your button so that it is on. We had a demonstration of that with Mr. Huffman. So we want to make sure we get that right.

I now recognize Mr. Osuri for his 5 minutes.

STATEMENT OF GREG OSURI, FOUNDER AND CEO, AKASH NETWORK, AUSTIN, TEXAS

Mr. OSURI. Thank you, Chairman Gosar, Ranking Member Dexter, and members of the Subcommittee, and the staff for the opportunity to speak today. I am Greg Osuri, the Founder and CEO of Overclock Labs, the team behind Akash Network. I am an open source developer and a cloud infrastructure engineer.

Akash is a decentralized cloud platform used by hundreds of thousands of users. By tapping into idle servers worldwide, it delivers compute power at a fraction of the cost of traditional cloud providers. Our open network, supported by hundreds of global contributors, empower developers to build and deploy AI and other applications without relying on big tech.

Artificial intelligence isn't just a break-through, it is becoming the substrate of civilization. Like electricity in the 20th century and the Internet in the 21st, AI is the next foundational layer. It is not a feature, it is a foundation. From curing cancer to defending the homeland, AI will enhance everything we do. There is no domain that AI won't transform. Yet we are only at the starting line. Super-intelligence is coming, an invention that could define the next 500 years. We will either master it or be mastered by it.

America is leading for now, but we are in a sprint and China is gaining ground. The DeepSeek R1 model, trained for just $5 million, delivered results that rival OpenAI's. They are scaling faster, investing more, and moving with purpose. We cannot afford to fall behind. The future of AI must be built on freedom, transparency, and trust, not surveillance and control. That is America's edge, and we must defend it.

To lead in AI we must confront the energy crisis it is creating. According to Department of Energy, U.S. data centers consumed 176 terawatt hours of electricity in 2023, 4.4 percent of the Nation's total. By 2028 that number could triple. At the high end, AI infrastructure could consume 12 percent of all U.S. electricity, an enormous burden on our grid.

Here is the problem: Our national power generation isn't doubling every 2 years, but the energy needed to train AI is. Our demand is on an exponential curve. Our response can't be linear.

Gartner warns by 2026 energy demands may exceed utility capacity, leaving 40 percent of AI data centers without sufficient power. Meanwhile, China is racing ahead, out-building us, out-powering us, and scaling fast. DeepSeek R1 is a glimpse of how quickly the lead can slip. Without bold action, this energy bottleneck won't just slow AI innovation, it could cost us global leadership.

To maintain momentum we must use every tool available, including fossil fuels, as a temporary bridge. But that is not a stop—that is just a stop-gap, not a long-term plan. Fortunately, we don't need to wait for massive new data centers to power our power plants. Leading AI labs have shown that training doesn't need to happen in hyper-scale facilities; it can be distributed across small compute clusters. That opens the door to a decentralized grid powered by solar, renewables, and local energy sources from homes, campuses, and communities.

This model isn't just more efficient, it is more secure. Decentralization builds resilience: no single point of failure, no single target. That matters, especially in a world of cyber threats and geopolitical risk. We need distributed infrastructure to meet AI's energy demands today while we scale sustainable energy tomorrow.

Yes, we must ease barriers for advanced nuclear to ensure long-term energy sustainability, but decentralization is how we scale now. That is exactly what Akash Network enables, a decentralized AI cloud, open, efficient, and built for the future. AI will shape the future of every industry, every economy, and every nation. The question is, who will shape the infrastructure behind it?

We cannot rely solely on big tech or centralized power. We must build a distributed, resilient, and inclusive AI infrastructure rooted in American ingenuity, powered by clean energy, and open to all. Congress has a chance to lead: incentivize decentralized cloud infrastructure, fund Federal R&D for distributed computing, open Federal lands to power edge innovation, accelerate clean, flexible energy solutions.

Let's ensure that America doesn't just participate in the AI revolution. We lead it, shape it, and share it. For that, America must accelerate. Let's unleash AI's full promise not just through code, but through infrastructure that defines our future.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Osuri follows:]

PREPARED STATEMENT OF GREG OSURI, CEO OF OVERCLOCK LABS (AKASH NETWORK)

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Congress has a chance to lead:

- Incentivize decentralized cloud infrastructure
- Fund federal R&D for distributed computing
- Open federal lands to power edge innovation
- Accelerate clean, flexible energy solutions

Let's ensure America doesn't just participate in the AI revolution—we lead it, shape it, and share it.

Let's unleash AI's full promise—not just through code, but through the infrastructure that defines our future.

Thank you. I look forward to your questions.

Dr. GOSAR. I thank the gentleman for his comments, and now we are going to give Ms. Arthun her 5 minutes.

STATEMENT OF EMILY ARTHUN, CEO, AMERICAN COAL COUNCIL, GILLETTE, WYOMING

Ms. ARTHUN. Chairman Gosar, Ranking Member Dexter, and members of the Subcommittee, thank you for the chance to discuss

the critical role that Federal coal plays in powering American technological innovation including artificial intelligence, cryptocurrency mining, and other advanced technologies. I am Emily Arthun, CEO of the American Coal Council and resident of Campbell County, Gillette, Wyoming, the Nation's energy capital, where Federal coal mining is the lifeblood of the community.

Coal has long been a keystone feature in the American success story, a symbol of industry, production, and prosperity. Coal continues to play a critical role in meeting the United States' growing energy demands, particularly in the context of winning the AI data race. America has always prided itself on energy independence. However, anti-coal regulatory policies from prior administrations have served to weaken our energy independence. In order to continue as the global economic leader, we must utilize our abundant natural resources, innovative technological advancements, and robust energy infrastructure to secure our future.

Coal remains the most reliable and abundant energy source in the United States. As we advance our technological capabilities, especially in AI, the need for a stable and continuous power supply is crucial. AI demands vast computational power to process data, train models, and deploy applications. Coal-fired power plants provide the consistent energy supply necessary to maintain the high performance of AI initiatives.

By utilizing Federal coal reserves, we can ensure our AI initiatives have the dependable energy they require to flourish. This approach enhances energy security by reducing reliance on foreign sources, which is necessary for maintaining competitiveness in the AI data race. Domestic Federal coal reserves safeguard our energy independence and protect technological advancements from external disruptions. Additionally, cryptocurrency mining such as Bitcoin require substantial energy, and Federal coal can meet that demand, keeping the U.S. competitive.

The United States possesses substantial Federal coal reserves that are essential for meeting energy demands. These resource reserves ensure a dependable and cost-effective supply of coal. According to the Energy Information Administration, the United States has an estimated 250 billion short tons of recoverable coal. The Federal Government owns 57 percent of U.S. coal reserves, predominantly situated in the western region of the country, particularly in the Powder River basin, where I am from. The Bureau of Land Management oversees 279 coal leases, covering 421,000 acres across 11 States.

In the Fiscal Year 2023, coal production from Federal lands totaled 243.2 million tons, accounting for roughly 42 percent of the 577 million tons produced nationwide. Federal coal generated approximately $523.6 million in royalties, $1.58 million in rentals, and $3.1 million in bonus payments during the Fiscal Year of 2023. BLM-managed land coal jobs for 2023 totaled 29,000 jobs and contributed $9.2 billion to the economy. By continuing to invest in Federal coal leasing, we can sustain these jobs and stimulate economic growth. The economic stability is vital as we strive to lead in AI, cryptocurrency, and other technological fields. The coal industry in the Western States is important for State economies.

For example, Wyoming employed 5,118 individuals in 2023 in mining alone, with an average salary of $103,000.

While some argue against the use of Federal coal, it is important to recognize that advancement in coal technologies has significantly mitigated environmental impacts. Revolutionized projects like 8 Rivers, Allam-Fetvedt, Cycle Carbon at the Dave Johnston Plant in Glenrock, and Rivotto's Nx25, an emissions reduction solution, will transform coal-fired plants with emission-reducing technologies.

To close, I reiterate that Federal coal reserves are indispensable for powering American technological innovation. By leveraging these resources we can support the development of AI, cryptocurrency, and other advanced technologies, ensuring that the U.S. remains at the forefront of global innovation. Investing in coal not only provides reliable energy, but also supports economic growth and job creation, making it a cornerstone of our technological and prosperous future.

Thank you, and I look forward to your questions.

[The prepared statement of Ms. Arthun follows:]

PREPARED STATEMENT OF MS. EMILY ARTHUN

Chairman Gosar, Vice-Chairman Boebert, Ranking Member Dexter, and Members of the subcommittee, thank you for the chance to discuss the critical role that federal coal plays in powering American technological innovation, including artificial intelligence (AI), cryptocurrency mining, and other advanced technologies. I am Emily Arthun, CEO of the American Coal Council and resident of Campbell County, Gillette, Wyoming—the nation's Energy Capital—where federal coal mining is the lifeblood of the community.

Coal has long been a keystone feature in the American success story—a symbol of industry, production, and prosperity. Coal continues to play a critical role in meeting the United States' growing energy demands, particularly in the context of winning the AI data race. America has always prided itself on energy independence, however anti-coal regulatory policies from prior Administrations have served to weaken our energy independence. In order continue as the global economic leader we must utilize our abundant natural resources, innovative technological advancements, and robust energy infrastructure to secure our future.

Coal remains the most reliable and abundant energy source in the United States. As we advance our technological capabilities, especially in AI, the need for a stable and continuous power supply is crucial. AI demands vast computational power to process data, train models, and deploy applications. Coal-fired power plants provide the consistent energy supply necessary to maintain the high-performance computing infrastructure essential for AI development. By utilizing federal coal reserves, we can ensure our AI initiatives have the dependable energy they require to flourish. This approach enhances energy security by reducing reliance on foreign sources, which is necessary for maintaining competitiveness in the AI data race. Domestic federal coal reserves safeguard our energy independence and protect technological advancements from external disruptions. Additionally, cryptocurrency mining, such as Bitcoin, requires substantial energy. Federal coal can meet this demand, keeping the U.S. competitive globally by powering data centers. This guarantees energy for data centers, manufacturing, and infrastructure, supporting innovation and keeping our global advantage.

The United States possesses substantial federal coal reserves that are essential for meeting energy demands and facilitating technological progress. These reserves ensure a dependable and cost-effective supply of coal. According to the Energy Information Administration, the United States has an estimated 250 billion short tons of recoverable coal. The federal government owns approximately 57% of U.S. coal reserves, predominantly situated in the western region of the country, particularly in the Powder River Basin.[1]

The Bureau of Land Management (BLM) oversees 279 coal leases covering 421,903 acres across 11 states. In fiscal year 2023, coal production from federal lands totaled 243.2 million tons, accounting for roughly 42 percent of the 577.2 mil-

[1] Coal / Bureau of Land Management

lion tons produced nationwide. Federal coal generated approximately $523.6 million in royalties, $1.58 million in rentals, and $3.1 million in bonus payments during fiscal year 2023.[2]

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While some argue against the use of federal coal, it is important to recognize that advancements in coal technologies have significantly mitigated environmental impacts. Revolutionized projects like 8 Rivers Allam-Fetvedt Cycle Carbon (AFC-C) at the Dave Johnston Plant in Glenrock WY and Rivotto's Nx25 an emissions reduction solution will transform coal-fired plants with emission-reducing technologies.

To close, I reiterate that federal coal reserves are indispensable for powering American technological innovation. By leveraging these resources, we can support the development of AI, cryptocurrency, and other advanced technologies, ensuring that the U.S. remains at the forefront of global innovation.

Investing in coal not only provides reliable energy but also supports economic growth and job creation, making it a cornerstone of our technological and prosperous future.

Thank you. I look forward to your questions.

Dr. GOSAR. Thank you, Ms. Arthun, and I now recognize Mr. Hart for his 5 minutes.

STATEMENT OF KYLE HART, MID-ATLANTIC PROGRAM MANAGER, NATIONAL PARKS CONSERVATION ASSOCIATION, WASHINGTON, D.C.

Mr. HART. Good afternoon, Chairman Gosar, Ranking Member Dexter, and members of the Subcommittee. Thank you again for the opportunity to testify. My name is Kyle Hart. I work for a non-profit called the National Parks Conservation Association and serve as the Mid-Atlantic Field—or Program Manager.

NPCA, we are a nationwide, non-profit, non-partisan organization dedicated to protecting and enhancing America's national parks for present and future generations. In my role as the Mid-Atlantic Program Manager I basically work in Virginia and Maryland, which is sort of becoming the data center capital of the world, or is the data center capital of the world, and I work to protect parks in those two States from park threats.

I live in Virginia, and in my free time I spend my time on sort of America's vast resource of public lands hunting, fishing, hiking, and camping. NPCA has been working on this issue of data centers for more than 4 years now. We came to this issue in early 2021, when a 1 million square-foot data center project, which is the equivalent of about five Walmart supercenters, was proposed inside of the authorized boundary of Prince William Forest Park, which is a national park site in Prince William County, Virginia, just outside of D.C. Prince William Forest Park is visited by more than 350,000 Americans in 2024, and the proposed data center complex in question threatened sensitive environmental resources, the

[2] Coal / Bureau of Land Management
[3] The BLM: Valuing America's Public Lands 2024
[4] 2025–2025 WMA Concise Guide to Wyoming Coal

park's primary watershed, Quantico Creek, hardwood forest, and wildlife habitat.

Less than 2 months after that we were alerted to a proposal directly adjacent to Manassas National Battlefield Park, a project that would be the world's largest data center campus, also known as the Prince William Digital Gateway. That project has a maximum permissible build-out of 27 million square feet, which is the equivalent of about four Pentagons' worth of square footage, and it would quite literally share the boundary with Manassas National Battlefield, and would be on land that is designated under the National Register of Historic Places, as well as numerous other environmentally sensitive areas of cultural significance.

Over time we also started to examine sort of the broader impacts that the data center industry writ large poses to our national parks and other environmental resources. Data centers, obviously, as we have talked about today, use a tremendous amount of water, energy, and land. The threat to our regional water supply has not been adequately studied. And in Loudoun County alone, which is the data center capital of the world, data centers used 1.6 billion gallons of water annually.

There is also the threat to the broader electric grid, threatening ratepayers with rolling brownouts, higher electric bills, and, of course, an increased reliance on fossil fuel infrastructure. This increase in reliance on fossil fuel infrastructure threatens years of work from NPCA and partners to reduce impacts on regional air quality and haze pollution that impacts national parks around the region.

Also of concern is the need for new, high-voltage transmission lines to get power from where it is generated to where the load is. Many national park sites including Manassas National Battlefield, Harpers Ferry, the Appalachian Trail are all under threat from massive new transmission lines that would cross-cut these park sites, negatively impacting viewsheds, natural and cultural resources, and overall visitor experience.

A recent study from the State's Joint Legislative Audit and Review Commission in Virginia, found that the average ratepayer in Virginia could expect to see as much as $444 annually on their bills to support this infrastructure build-out. In Maryland ratepayers could see $800 million worth of cost shift from infrastructure needed to serve the data center industry in Virginia.

At NPCA, of course, we recognize that data centers are a critical part of our country's digital infrastructure and our economy. However, data centers, like any other industrial and commercial development, present both direct and indirect threats to our national parks all over the country. Lawmakers such as yourselves, regulators, and the data center industry must understand these impacts and be proactive in how we plan for and build out data centers to ensure that parks are protected.

We are certainly not opposed to innovation, but innovation should not come at the expense of places such as hallowed ground at Manassas Battlefield and Harpers Ferry. These are special places that tell the story of our American democracy, honor our collective shared history, and preserve the natural beauty that defines our Nation. We must find a path forward that fosters both

technological progress and environmental responsibility. That begins with acknowledging the unique and irreplaceable role that national parks play in our society, and ensuring that future development does not come at their expense.

Thank you again for this opportunity to testify, and I welcome your questions.

[The prepared statement of Mr. Hart follows:]

Testimony of Kyle Hart
Mid-Atlantic Program Manager, National Parks Conservation Association
Before the House Committee on Natural Resources
Subcommittee on Oversight and Investigations

Hearing: "Unleashing a Golden Era: Examining the Use of Federal Lands to Power American Technological Innovation"

May 21, 2025

Chairman Gosar, Ranking Member Dexter, and Members of the Subcommittee:

Thank you for the opportunity to appear before you today. My name is Kyle Hart, and I serve as the Mid-Atlantic Program Manager for the National Parks Conservation Association (NPCA). NPCA is a nonpartisan, nonprofit organization with more than 1.7 million members and supporters across the country, dedicated to protecting and enhancing America's national parks for current and future generations.

At NPCA, we recognize that data centers are a critical part of our country's digital infrastructure and economy. However, data centers, like any industrial or commercial development, present both direct and indirect threats to our national parks. Lawmakers, regulators, and industry must understand the impacts we have seen in our region, be proactive in how we plan for and build out our data centers and better engage with local communities and park advocates to protect parks from inappropriate development. NPCA's work in Virginia on this issue provides a cautionary story with lessons learned we want the Congress to keep in mind when considering any legislative action.

In Virginia and increasingly Maryland, we have been alarmed about the impact the increasing number of industrial-scale data center developments proposed immediately adjacent too—or even within the authorized boundaries of—our region's national battlefields, historic sites and other special places. We are also troubled by the potential impacts that new transmission lines being proposed to meet the energy demand of data centers will have on park sites around the Mid-Atlantic region.

The rapid expansion of data center developments proposed near national parks or within their broader landscapes of the Mid-Atlantic threaten the natural, cultural, and historical resources that millions of Americans cherish. NPCA has a long history of opposing industrial and commercial development next to and near parks, so our concern is consistent with our longstanding work in protecting parks from development that is incompatible with them.

NPCA first became aware of the risks to Virginia parks posed by data centers in 2021 with the proposed Potomac Technology Park (Image 1). This data center development was planned to include 1 million square feet of data center space inside the congressionally authorized boundary of Prince William Forest Park, a national park site in Northern Virginia that welcomed more than 355,000 visitors in 2024. The proposed development would have clearcut dozens of acres of

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The full document is available for viewing at:

https://docs.house.gov/meetings/II/II15/20250521/118174/HHRG-119-II15-Wstate-HartK-20250521.pdf

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QUESTIONS SUBMITTED FOR THE RECORD TO KYLE HART, NATIONAL PARKS CONSERVATION ASSOCIATION

Questions Submitted by Representative Paul A. Gosar

Question 1. H.R. 34, the Land And Social Security Optimization (LASSO) Act requires 10 percent of revenue generated by lands under the administrative jurisdiction of the Department of the Interior, including submerged lands on the Outer Continental Shelf, and the Forest Service to be deposited into the Federal Old-Age and Survivors Insurance (OASI) Trust Fund. Would you agree that putting public lands revenue into the OASI Trust Fund would stimulate growth in the Trust Fund? Please give a detailed explanation of why or why not.

Answer: NPCA does not currently work on the Federal Old-Age and Survivors Insurance (OASI) Trust Fund and therefore does not have an opinion on this.

Question 2. Would you agree that putting public lands revenue into the OASI Trust Fund would encourage increased utilization of public lands under the multiple use doctrine? Please give a detailed explanation of why or why not.

Answer: NPCA does not currently work on the Federal Old-Age and Survivors Insurance (OASI) Trust Fund and therefore does not have an opinion on this.

Questions Submitted by Representative Jared Huffman

Question 1. What impacts will DOGE cuts to funding and staff, and closures of federal facilities have on our public lands when it comes to data centers?

Answer: As data centers are proposed to be constructed on or directly adjacent to federal lands, or massive new infrastructure projects, like transmission lines and mining operations, are undertaken to serve the increasing electricity and critical mineral needs of data centers around the nation, federal agencies will certainly face an onslaught of new permit requests requiring detailed NEPA review. When an agency like the National Park Service reviews a permit request through NEPA, expert staff at individual park sites and within regional offices will review the permit and analyze environmental impacts. As the Department of Governmental Efficiency and the Department of the Interior continue to reduce staffing at the National Park Service and other agencies, it is likely that fewer and fewer staff will be available to review permits and determine how to reduce or eliminate environmental impacts and protect park resources. Not only will this reduce the ability of agencies to adequately review permits; it will also cause permit delays as staff are stretched thin and asked to review these permits and conduct environmental reviews while being under-resourced and understaffed.

Question 2. From your perspective, how dangerous is it when large-scale industrial development like data centers advance behind a veil of secrecy, particularly in water-scarce places across our country? And what's the case for requiring transparency of data centers' water usage?

Answer: As the old adage goes, knowledge is power, and elected officials and regulators should constantly be striving to have as much information as possible prior to making decisions on environmentally damaging projects like data centers. As data centers are being proposed across the nation, particularly in water-scarce places, it is imperative that data centers be transparent with both decision makers and the public about their long-term water needs. And as regulators are reviewing data center proposals, they must take into account both the individual facility's water needs as well as the region's water needs as a whole. This should also be occurring with proper modeling, as climate change will increase heat events and the frequency and severity of droughts around the nation.

Question 3. Based on your experience with data centers in Virginia, what would you say Members of Congress should consider when deciding whether to use public lands of any kind for data centers?

Answer: A recent study by Virginia's Joint Audit and Review Commission (JLARC) highlighted numerous environmental consequences of data center development. One of their main points was that data centers constitute intense heavy industrial development. Data centers often require years of intense construction, which can cause noise and clean air impacts as heavy machinery operates on the site. Operational data centers are large concrete buildings which can have significant stormwater runoff implications. Data centers also require tremendous amounts of energy and back-up power sources. These backup generators are traditionally massive diesel generators, which can spew fine particulate matter, NO_X, and CO_2 into the atmosphere, reducing regional air quality. Operational data centers are also known for noise complaints around the country.

National park sites and other public lands are largely incompatible with such intense industrial development. These public lands are set aside to be protected and enjoyed by the American people for numerous types of outdoor recreation. Such intense industrial use will negatively impact visitors' experience at these sites, as well as local water and air quality, wildlife habitat, and more. Around the country sit thousands of sites ripe for redevelopment opportunities, such as abandoned mines on private lands and factories, old shopping malls, and more, that are much more suitable for data center development than our crown jewel public lands.

Should federal agencies consider the construction of data centers on federal lands, such as for internal agency use, those agencies should strive to build projects in a way that does not negatively impact the environment and do so in the most transparent and environmentally responsible way, including the development of renewable energy sources, utilizing alternative backup generation sources, not diesel generators, and choose sites most suited for industrial development, not well-preserved places enjoyed by the American public.

Question 4. What are some of the consequences of the current lack of transparency?

Answer: In places with large amounts of data center development, like Virginia, regulators and decision makers often find themselves flying blind, reviewing and often approving data center projects without a full understanding of the impacts to regional water supply and the electric grid. Because of this, the entire regional grid, operated by PJM, now finds itself with massive energy shortfalls, which could bring regional blackouts and will require billions of dollars' worth of upgrades to the system. These transmission system upgrades will be paid for by ratepayers. In Maryland, transmission upgrades to feed data centers (mostly in Virginia) are set to cost more than $800 million and will be paid for by Maryland ratepayers. Recently, a Maryland electric company BGE informed their customers to expect as much as a 30% increase in their bills starting on June 1. These increases are driven largely by capacity shortfalls and infrastructure upgrades being driven by out-of-state data centers.

If data center developers were required to be transparent about their energy use before constructing their projects, regulators and utility companies would be able to adequately plan for and appropriately allocate costs for needed infrastructure and generation capacity. Moreover, this would allow citizens to fully understand the impacts of data center projects. Around the PJM region, new massive transmission lines are being planned to slice through communities and national park sites. Prior transparency and planning would allow officials and communities an opportunity to engage in the process to prevent these impacts beforehand.

Question 5. What are some of the potential consequences of huge amounts of water withdrawals from municipal water supplies?

Answer: The consequences of massive amounts of water withdrawals are twofold. First, as demands on the system increase, environmental advocates and communities are worried that drinking water shortages are imminent. Without proper transparency and planning, as discussed above, massive water withdrawals could lead to system-wide shortages, forcing people and other businesses to reduce water usage (or even not have water at all) for extended periods of time.

Second, as municipal water systems increase their withdrawals from local waterways, regions run the risk of negatively impacting the broader river ecosystem. Increased withdrawals on non-tidal rivers can reduce flows beyond levels that support aquatic life and the outdoor recreation many of these areas rely on for tourism. In freshwater tidal rivers, significant increases in withdrawals could impact the water's salinity. This can negatively impact aquatic ecosystems, as well as other water users, such as farmers.

Dr. GOSAR. Last but not least, Ms. Lambermont, your 5 minutes.

STATEMENT OF PAIGE LAMBERMONT, RESEARCH FELLOW, COMPETITIVE ENTERPRISE INSTITUTE, WASHINGTON, D.C.

Ms. LAMBERMONT. Chair Gosar, Ranking Member Dexter, and distinguished members of the Subcommittee, thank you for holding this hearing and inviting me to testify today. My name is Paige Lambermont, and I am a Research Fellow in the Center for Energy and Environment at the Competitive Enterprise Institute, a non-profit public policy organization dedicated to free-market limited-government principles with a focus on regulatory issues. I am also a visiting fellow in the Center for Energy and Conservation at the Independent Women's Forum. I am grateful for the opportunity to speak to you today on this important issue.

I have three main points I want to make in my testimony: number one, power demand from AI is rising, revealing underlying issues on the power grid; number two, there are legislative and regulatory actions that can be taken to meet this demand; and number three, our public lands and Department of Energy sites can play a vital role in meeting this challenge.

AI technology has the potential to solve complex problems across sectors of the economy and create significant benefits, both economically and in terms of human health and flourishing. But as AI technology develops, its power demand grows as well. More than 400 data centers are currently planned or under construction in the U.S., totaling 19 gigawatts of new power demand. A 2024 report by Goldman Sachs projects that data centers will consume 8 percent of U.S. power demand by 2030, and that 47 gigawatts of new power capacity will be needed to meet that demand. This new growth comes at a time when existing thermal generation, the dispatchable sources that are available when called upon, is being quickly retired.

Between now and 2034, more than 79 gigawatts of natural gas, coal, and nuclear power are set to retire. New power plants will be necessary to fill this gap. The private desire to build this infrastructure exists, but policy reforms are necessary to make those projects possible. This makes it essential to remove existing policies that distort power markets and make it more difficult and expensive to build new power plants.

Permitting reform is essential to allow power plants to be built more quickly. The National Environmental Policy Act in particular is ripe for reform, but its interactions with other laws can trigger additional reviews. This then requires overlapping layers of regulation that provide no added environmental protection, but require the duplication of significant work for those looking to develop new projects. Reforming these laws in parallel would reduce barriers to new development while still maintaining high standards. Ideal reforms would be broad based and technology neutral, allowing new power plants and grid infrastructure to be built more quickly and efficiently where and how they are needed.

Additionally, the energy subsidies contained in the Inflation Reduction Act, particularly the Investment Tax Credit and Production Tax Credit, are also especially harmful to grid reliability. These tax credits have historically paid wind, solar, and

other energy companies for investment in new facilities and for each megawatt of power they produce, and make it difficult for more reliable thermal units to compete economically. This is because they lower the price at which wind and solar generators can bid into power auctions and remain competitive. This means that other generators are competing with artificially low prices that they may be unable to match, resulting in less reliable power over time. Reforming our permitting system and repealing the ITC and PTC would go a long way toward creating an environment where companies are willing and able to build reliable power in response to market demand.

There is a clear role for public lands to play in meeting this new power demand. Colocation, wherein new data centers are sited next to power plants and situated behind the meter before their connection to the broader power grid, has been a common solution by companies looking to power data centers. Because data centers operate around the clock, deals with nuclear and natural gas companies have been especially prominent. Among these are several notable deals. Microsoft has signed a deal with Constellation Energy to reopen the shuttered Three Mile Island Nuclear Power Plant, a first-of-its-kind action. Google has agreed to a colocation agreement with Kairos Power, a small modular reactor company. Meta is soliciting bids for between one and four gigawatts of collocated nuclear power, and Ohio natural gas power plants are being collocated with a data center park.

Technology companies have shown that they are willing to support power projects to meet this new data center demand. Given the popularity of colocation, the Department of Energy released a list of 16 locations that would be primed for partnerships with private companies to build collocated artificial intelligence data centers with power plants. Many of the identified sites are national labs, some of which already host both super-computer projects and demonstration projects for advanced nuclear reactors. Allowing power plants and data centers to be collocated alongside these facilities would allow for faster permitting and approval of the projects, while also allowing for collaboration and innovation.

Ultimately, artificial intelligence is a technology that will bring numerous benefits. The disruption of added power demand is something that we ought to work to mitigate to reap the benefits of this innovation. Public lands have incredible possibilities in this space, especially given the unique infrastructure that already exists at these sites. Viewing the AI power demand as a challenge rather than treating it as a crisis will enable innovative solutions in this space.

Thank you very much, and I would be happy to answer any questions you might have.

[The prepared statement of Ms. Lambermont follows:]

U.S. House of Representatives
Subcommittee on Oversight and Investigations
Committee on Natural Resources
1324 Longworth House Office Building

May 21, 2025

Hearing on "Unleashing a Golden Age: Examining the Use of Federal Lands to Power American Technological Innovation"

Written Statement of Paige Lambermont
Research Fellow, Center for Energy and Environment
Competitive Enterprise Institute

Chair Gosar, ranking member Dexter, and distinguished members of the subcommittee, thank you for holding this hearing and inviting me to testify today.

My name is Paige Lambermont and I'm a Research Fellow in the Center for Energy and Environment at the Competitive Enterprise Institute, a nonprofit, non-partisan public policy organization dedicated to free market, limited government principles with a focus on regulatory issues. I am also a visiting fellow in the Center for Energy and Conservation at the Independent Women's Forum, and a Catalyst Policy Fellow at the Independent Institute.

I am grateful for the opportunity to speak to you today on an important issue: innovative ways to ensure that power grid reliability keeps up with the development and deployment of artificial intelligence technology.

I have three main points I want to make in my testimony:

1. Power demand from AI is rising, revealing underlying issues on the power grid.
2. There are legislative and regulatory actions that can be taken to meet this demand.
3. Our public lands and Department of Energy sites can play a vital role in meeting this challenge.

Power demand is rising

AI technology has the potential to solve complex problems across sectors of the economy and create significant benefits, both economically and in terms of human health and flourishing. This technology is capable of computational work that is impossible for humans alone and will continue to develop and drive innovation. But as AI technology develops, its power demand grows as well. AI data centers are generating significant new demand for electricity.

More than 400 data centers are currently planned or under construction in the US, totaling 19 GW of new power demand.[1] A 2024 report by Goldman Sachs projects that data centers will consume 8 percent of US power demand by 2030, and projects that 47 GW of new power

[1]Max Pyziur, "Chart of the Week #2024-45 US Data Centers: A Provisional Summary in Two Tables," Energy Policy Research Foundation, November 13, 2024, https://eprinc.org/wp-content/uploads/2024/11/EPRINC-Chart2024-45-DataCenterDevelopmentSummary.pdf.

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The full document is available for viewing at:

https://docs.house.gov/meetings/II/II15/20250521/118174/HHRG-119-II15-Wstate-LambermontP-20250521.pdf

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Dr. GOSAR. Thank you, Ms. Lambermont. Now we are going to go to members for 5 minutes for their questions. The gentleman from Georgia, Mr. Collins, is now recognized for his 5 minutes.

Mr. COLLINS. Thank you, Mr. Chairman, and I want to highlight that I appreciate you having this hearing. You know, I know that we have heard some testimony just earlier about how we should just stick our head in the sand and worry about this when this gets to be a huge problem.

And this is going to be a huge problem. China makes no bones about it. They want to dominate economically, socially, militarily, and in every aspect of our lives by 2045. And by gosh, they are on the way there. And if we just want to hang out and do nothing, then you will wake up 1 day and we will have China in charge. So I appreciate that.

You know, the America is on the precipice. We have got AI, we have got quantum technology. I have heard it in several of your testimonies about the different things on data centers and Bitcoin mining. And even in my district we have got data centers, we have got Bitcoin mining, we are reshoring manufacturing. And we do need to have good, reliable, cheap, affordable energy.

And Ms. Arthun, is that correct? Thank you for what you said. I want to restate that real quick. Coal remains the most reliable and abundant energy source in the United States.

Well, let's take a look at my district. Just down the road from my house, 20 miles, we have a coal-burning electric-generating facility. It has four units. Only three of the four are operating right now because one of the customers decided to shut their unit down due to political pressure, political correctness. Instead of running that big, clean, beautiful coal, they decided to go and bend to the winds or the sun or the solar panels.

So I want to start—and Mr. Hart, I looked through your testimony, and in your written testimony—and you just mentioned something about the 400 annual. You argue that utility costs will increase because of data center construction. However, isn't that because there just isn't reliable energy supply chains out there now?

Mr. HART. Thank you for the question, Congressman.

So I don't have the expertise on sort of the reliability question. I think the cost shift comes from sort of the billions of dollars of new infrastructure that will be needed. Existing infrastructure simply won't meet the demand.

And so, you know, the report that Virginia recently——

Mr. COLLINS. I know, even though I just gave the example, the three out of four running coal plant units, but that is OK.

Also in your written testimony you also agree with me. You state that questions about power grid reliability and energy sustainability are contributing to higher costs. So if there was a reliable supply chain of energy in the United States, wouldn't you agree that it would help lower energy costs?

Mr. HART. Once again, thank you for the question, Congressman.

So the simple fact is even if I am not familiar with the example in your district, but let's take Virginia, which is where I am very familiar with. The report in Virginia highlights that no matter how you shake it, new generation will need to be constructed, and new generation costs money. Like, that is just the reality. And the current rate structure in Virginia, and arguably around the PJM region, does not adequately address that. And the solution to that

is, essentially, you would require large-load customers, primarily data centers, to essentially sign contracts with utilities on the front end for power purchase agreements.

Mr. COLLINS. Let me help you out, man. A reliable supply chain, it will help. Because obviously, it is going to help increase the supply. So, I mean, in highlighting the lack of sustainable energy, wouldn't you agree that harnessing our natural resources like coal, oil, and gas will help us meet this growing energy demand and lower prices?

Mr. HART. Thank you for the question, Congressman. Frankly, I am not an expert on sort of energy cost and what the cheapest form of energy is.

Mr. COLLINS. I know what you brought, a problem. And you should have brought a solution. I mean, it just sounds like you don't even have a solution. I mean, you acknowledge that these data centers, they are important, and that there are barriers to constructing them, but you don't present any type of solution to the cost of energy in the data center demands.

Mr. HART. Mr. Congressman, I think our solution would be to bring big tech into the fold, and have them essentially front some of the costs for these solutions. And we are technologically sort of neutral in terms of what that power supply would be, as long as the impact to national parks is effectively mitigated.

And I think the bigger question at hand is really who pays for this infrastructure. And if everyday ratepayers are paying for the infrastructure——

Mr. COLLINS. Our infrastructure is there, sir, and we have plenty of it. We just need to unleash it.

Mr. Chairman, I am out of time and I yield back.

Dr. GOSAR. Yes. You know, the gentleman yields back, but I will tell you I think we all need to be part of the solutions because you can't just say no. It is about what it is going to take to say yes. That is a big key.

The gentleman from Puerto Rico, Mr. Hernández, is recognized for his 5 minutes.

Mr. HERNÁNDEZ. Thank you, Mr. Chairman. Before I begin I want to disclose that I used to work for the data center industry and for a big technology company. But having said that, I have not hesitated to criticize them in the past, I do not hesitate now, and I will not hesitate in the future.

We live in a political climate that often flattens complex issues into partisan sound bytes, and the truth is more nuanced. Data centers consume significant amounts of energy. That is undeniable. But it is also true that many of the same companies powering our digital infrastructure are leading innovators in the clean energy transition. Some are not waiting for mandates. They have set ambitious, self-imposed targets—net zero emissions, water neutrality by 2030 or 2040—and they are making real progress. For example, Amazon Web Services matched 100 percent of its electricity use with renewable energy in 2023, supported by over 600 renewable projects in 28 countries. Microsoft is pioneering hydrogen fuel cells for backup generators.

And if they are cleaner than the current diesel generators, we want many of them in Puerto Rico, Microsoft, if you are listening.

Google reports it has quadrupled computing power in 5 years without increasing energy consumption. I think that government and civil society must continue to incentivize that kind of innovation, but we also have a duty to ensure that the United States remains a leader in innovation and doesn't cede its technological leadership in artificial intelligence to foreign adversaries.

Let me put it plainly. AI is not a toy. AI is not a fad. It is, in my view, a leap on the scale of the personal computer, of the smart phone, of the Internet, even of the printing press. We cannot afford to ignore it. And speaking as a Democrat, we cannot let our legitimate environmental concerns blind us to the strategic imperative of AI development.

I agree that there is a lot of uncertainty regarding the future energy demands of AI, and we must approach this uncertainty with a high degree of responsibility. At the same time, I don't want to downplay the energy implications of AI in the sense that while we have some efficiency break-throughs through technology like AI companies like DeepSeek, and as we see AI become more efficient, we might see AI become more popular, and we might see AI consumption increase. And therefore, that could offset the energy gains in efficiency.

Ezra Klein, in his book, "Abundance," puts it succinctly: "The AI revolution makes the cost of energy abundance even more urgent. In the last few decades U.S. energy infrastructure projects have been slowed by all the challenges we have described: a lack of productivity in construction, permitting blockages, extended environmental reviews, and long interconnection queues. These bottlenecks are largely self-made, and if we don't make it easier for AI companies to build in America, we should expect them to build data centers abroad." We should not, and we cannot let that happen. Let us be honest. Let us be ambitious. And above all, let us be strategic and pragmatic. A clean energy future and an AI-powered future must not be at odds. We must make room for both. But we cannot yield our leadership in AI. There is too much to lose.

Having said that, in terms of questions, Mr. Hart, you have spoken about development of data centers near valued sites like national parks, and I understand and respect that concern. Do you have any concrete suggestions as to government efforts that could mitigate these risks, but at the same time support responsible AI and data center growth?

Mr. HART. Yes, thank you for the question, Congressman.

So I think my response would be sort of a lot of what we have talked about today. We need to make sure that the environmental review continues to exist, that NEPA is being adequately followed, and I think, more importantly, that, you know, Federal agencies have the staffing—you know, the Park Service, Forest Service, and others have the staffing necessary to do that environmental review. So I think that is a large part of it.

And I think the other large part of it is, you know, I think the impetus becomes on the tech companies a little bit to ensure that, you know, when they are planning to build data centers, that they are doing it in concert with community, in harmony with national park sites, and planning ahead and thinking about these solutions.

Quite frankly, like, I probably wouldn't be here today if it wasn't for these numerous parks that were under threat from data centers. And all of that is because of, essentially, you know, data center operators throwing community concerns into the wind and——

Mr. HERNÁNDEZ. But wouldn't you agree that data center companies have advanced significantly in pursuit of clean energy, and innovated a lot in that respect, including here in Virginia? Well, there in Virginia.

Mr. HART. Yes, sir. Data center operators, as you have pointed out, absolutely, have invested a large sum of money in clean energy. The simple reality is that energy demands have outpaced what the clean energy supply can keep up with. And so we are at—and arguably, the reason for this hearing today is I would say that we are at a bit of an impasse. Utilities around Virginia are proposing significant new fossil fuel infrastructure. You see the same thing in the broader PJM territory. And so we are at a bit of an impasse in terms of meeting demand with clean energy alone, and that is arguably the question that we are here to solve today.

Mr. HERNÁNDEZ. In that respect that is what I mean when I say that we have to be strategic and pragmatic. If we need to bridge that gap in the short term with other energy sources, we should be able to.

Thank you, I yield back.

Dr. GOSAR. Thank you, Mr. Hernández.

So Mr. Hart, you do believe in federalism, then, right?

Mr. HART. I am sorry, Chairman, can you repeat the question?

Dr. GOSAR. Yes. You believe in federalism, right? Consultation with locals?

Mr. HART. I suppose so, yes, sir.

Dr. GOSAR. OK. The gentleman from Alaska, Mr. Begich, is recognized for 5 minutes.

Mr. BEGICH. Thank you, Mr. Chair. So I am going to start by talking a little bit about Alaska.

Alaska, as you know, is relatively remote. We are two-and-a-half-times the size of Texas, but only 740,000 people in the entire State. We have hundreds of trillions of cubic feet of natural gas that are currently stranded on Alaska's North Slope. And there is no way, no pipeline to get that out presently. We do have some decent connectivity in Alaska, and Starlink does extend to Alaska's North Slope.

So my question to anyone who would like to answer on the panel, given Alaska's remoteness but abundant energy supply, do you believe that remote installations of AI or crypto mining rigs could make sense as a way to tap into America's stranded energy resources, and also at the same time advance our AI and crypto mining missions?

Ms. LAMBERMONT. I will take this one. Thank you, Congressman, for the question.

I think that that is certainly a possibility. I think that colocation is especially beneficial in a situation like that, where you have got abundant resources but are distantly located from infrastructure. The great thing about colocation is that it doesn't require the same transmission infrastructure. If the place that is using the energy

is right next to the place that is producing it, it creates great systems there. So there could be opportunities for natural gas plants or for small modular nuclear in that situation. And I think that whatever the free market determines there will work, and it sounds like a situation in which the market might determine it works.

Mr. BEGICH. That is fantastic. And, you know, I couldn't agree with you more. I think that Alaska, and probably in addition to many other places around our country, is well positioned to deliver the energy resources necessary to power the AI revolution, as well as the crypto revolution.

One of the things that is so important as we think about our ability to compete with respect to AI and many of these other emerging technologies is that it is not only the energy that we have to have, we have to have an abundant mineral supply and a domestic supply chain for the minerals necessary for semiconductors and for the grids for transmission capacity. How important do you believe the domestic supply chain is for the certainty of developing these industries domestically?

And do you support a localized supply chain to support these industries?

And I will present that to Ms. Arthun.

Ms. ARTHUN. Well, certainly, we have to have a strong supply chain. And what we have found since COVID is our supply chains were really weak in the United States. Whether it was critical minerals that were being imported from foreign adversaries—I know there was a hearing earlier today about critical minerals from China and processing, which is at an all-time low in the United States. So, yes, the supply chains are critical.

And when I look at coal as that supply chain, it is very important. What we have found is coal not only as a thermal utility for power, but we are finding that there is rare Earth elements in coal, and that we can use coal for those elements that are needed for batteries and technological advances.

In addition to that, our metallurgical coal is greatly needed in the States for infrastructure. Even within when you look at renewable energy and the amount of steel that goes into wind energy and solar, those supply chains are critical.

Mr. BEGICH. That is a great response, and I couldn't agree with you more. I think that when we look at the coal resources that we have nationally, we are starting to see that a number of these resources do have rare Earth byproducts or other critical mineral byproducts. I would like to mention for the purposes of the record, Alaska has 49 of the 50 critical minerals on the Critical Minerals List. And it is so important that we ensure that we have the domestic capacity to produce the resources we need in order to be successful in these emergent technology domains. Alaska provides those resources. Our coal industry has those resources. We have abundance. We are blessed with abundance in this Nation if we have the courage to develop the resources that we have on our Federal lands.

And with that I yield back.

Dr. GOSAR. I thank the gentleman from Alaska. I now acknowledge the Ranking Member, Ms. Dexter, for her 5 minutes.

Dr. DEXTER. Thank you, Mr. Chair, and thank you once again to everyone for being here.

Mr. Hart, I am going to start with you. Ms. Lambermont recently co-authored a report that suggested Federal lands should be used for both housing data centers and the energy development that can go with it. And Mr. Hart, could you please describe the potential harms of building data centers on public lands?

Mr. HART. Yes, absolutely. So let's start with, you know, I think the simple fact is that data centers are industrial development, and Federal lands inherently are sort of protected lands, right? Like, that is kind of the premise, particularly on national park sites. And so inherently doing industrial development on Federal lands is going to come with an environmental cost.

And so once again, we would point towards existing regulatory structures that encourage full and comprehensive environmental review, and kind of going into this with eyes wide open and making sure that we are protecting what we have.

I think the other side of this coin is, is there a need to actually do this? At its core, I sort of question whether we, from a construction of data centers perspective, really need to utilize Federal lands to do so. Numerous, arguably thousands, of sites exist across the country on private lands that are ripe for redevelopment. In sort of a town that I fish in often, Waynesboro, Virginia, there is essentially a vacant DuPont plant that is just sitting there. Other localities across the country have similar sites. And I would look towards the data center industry and regulators to encourage redevelopment of sites before turning towards protected sites for development.

Dr. DEXTER. Thank you for that. And I am going to turn, I think, to Mr. Osuri.

You mentioned that renewables should be—should power data centers. And I agree with my colleague that we need to incentivize innovation and make sure that we are assessing our best way to approach this. As somebody who has deep air quality concerns, the use of diesel-powered generators is of great concern to me. And I wonder why you believe that we need to focus on renewable power to power these data centers.

Mr. OSURI. Because I believe decentralized training or decentralized computing infrastructure will be the state-of-the-art, or will be the primary way we train AI. And that gives us an opportunity to tap into a distributed grid where renewables shine.

Renewables, I believe, are not so great at utility scale, but they are great at a residential area or a smaller scale. We are also seeing some 100-kilowatt data centers now that could participate in a larger AI training run for which renewables are great.

Dr. DEXTER. Great. And I am not sure who—the best person is to ask this, so I am going to ask you, Mr. Osuri, first, and see if you want to defer. But you mentioned DeepSeek in your testimony, and I would share that my impression from the surprise that was generated in the community when it launched at a much more efficient—for its chatbot model, that it was much more efficient than anyone expected, did you see that coming, or did you anticipate that such a huge improvement in efficiency was going to be realized at the beginning of 2025?

Mr. OSURI. No one anticipated a DeepSeek. We did see data when it comes to patents being filed by researchers in China that exceeds American patents, and we did see quite a lot of talent from China—or talent, rather, that is trained in America, went back to China because they could not stay further here in the country. But the DeepSeek was definitely a surprise, and the general consensus in the industry was America was leading, and seeing a DeepSeek from China was very disturbing.

Dr. DEXTER. And I have a bias that I just shared at the beginning that, to a certain degree, the United States did think that it was at the head, and wasn't necessarily incentivized to be as innovative as our Chinese counterparts seem to have been. Part of that, I might posture or position myself to suggest, is that we have cloud computing and AI generation, vertical integration. So there isn't really the same motivation. It costs a lot. But if you have the cloud computing capacity already, Microsoft, Amazon, others that maybe you don't have the same motivation to innovate.

So I wonder if you have any thoughts about vertical integration, and whether or not we should diffuse that so that we can incentivize innovation in this area.

Mr. OSURI. From a DeepSeek standpoint, I think the innovation really came because there was a restriction on how many chips they can get access to, and they were able to have certain breakthroughs by using less resources. So it is a market-driven, you know, outcome more than, you know, incentivized outcome.

I am not sure if that answers your question.

Dr. DEXTER. No, I think they weren't necessarily going to benefit from the increased use of the cloud, but that may or may not be accurate or valid. I am earnestly asking.

I don't know if any of our other panel members might have any thoughts.

[No response.]

Dr. DEXTER. Fair enough. I think it is a question that we will continue to investigate.

And it looks like I went over. So thank you, Mr. Chair.

Dr. GOSAR. Oh, you are fine. Have you got another one?

Dr. DEXTER. I will yield. I have other questions, but I will yield.

Dr. GOSAR. OK.

Dr. DEXTER. Thank you.

Dr. GOSAR. The gentlelady yields back.

Emily, Ms. Arthun, according to the Institute of Energy Research, the United States has about 470 billion short tons of recoverable coal. Can you share with the Committee what the economic impact of utilizing the coal is?

Ms. ARTHUN. Absolutely. Utilizing Federal coal for data mining operations can offer several potential economic benefits. And if we look at what occurred in 2023 from the BLM's record, it was $9.2 billion in economic advantages for the country from coal, Federal coal leases, simply said.

And living in Gillette, Wyoming, I see every day the economic impact of coal mining, of the Federal coal mining that is done in the community from—just the—from the volunteerism within the community to what it does for the State economically, schools,

hospitals, infrastructure. And so mining is very—coal mining is very important.

Dr. GOSAR. So my follow-up question to you is that, you know, I share the same thing. I want clean air, I want clean water, I want clean land. Now, when coal was first started, when we first burned coal, it is a totally different thing than we do now, right? Can you give us a little more—tell us a little bit more about the process?

Ms. ARTHUN. Correct. You know, as with any industry, you continue to get better as time goes on. And we do that. And I can specifically say from my standpoint, I look out on one of the—my house looks out on one of the last coal utilities built in the States. And through technology it is also one of the cleanest-burning coal technologies.

But not only has that coal plant lowered emissions, but there is the integrated test facility there that actually invites companies in with technology to sample and to test what their technology has through the flue gas that is taken from the plant. And so they are actually testing new technology right there in Gillette, Wyoming to continue to decrease emissions.

Not only that, I also have the luxury of driving by Federal coal reclaimed land, and can see that wildlife is out there, the Eagle Butte property actually harvests hay off that I have fed to my cows. And so I get to live how Federal programs can really be done well and provide for a strong environmental stewardship.

Dr. GOSAR. So there is other benefits, right? So my question to you is also some of the stuff that are ending up as byproducts actually are involved in other aspects of our construction industry, are they not?

Ms. ARTHUN. Absolutely. You will find that you can use coal ash in concrete, which strengthens and is stronger throughout the building process. You find the rare Earths. We are just now starting to understand everything that rare Earths are going to go in and how many are in coal and how that can be used. And we find rare Earths in batteries and cell phones, in just about everything that we use when we come to technology.

Dr. GOSAR. So technology is really advancing this cause, right?

Ms. ARTHUN. Technology is very important.

And I want to reiterate that burning coal for thermal energy has come a long ways. We have a project in Wyoming, Glenrock, Wyoming, at the Dave Johnston Power plant. It is 8 Rivers, and they are looking to build a plant that would be all—it would be 97 percent in-house. Like, no—there would be no CO_2 emitted because it is using it to fire the generators. Another one is a Rivotto's NX25. It is used as a non-hazardous solution that goes on the coal prior to burning, which enhances the burning of the coal and releases less CO_2. And so every day we get better at our jobs.

Dr. GOSAR. That is great.

Mr. Osuri—did I say that right again?

Mr. OSURI. Yes, sir.

Dr. GOSAR. OK. So part of our problem in the process of patenting is we have changed our patent process, have we not?

Mr. OSURI. I am not familiar with the patent process.

Dr. GOSAR. Well, it is, because when I first came here in 2011, it was first to file or—yes, first to discover. And then we went to first to file. And back then we were number one in the world. We are not number one in the world anymore. And in fact, that is why a lot of things go through China for us to decide about what is going on. You are still right, they are trailing us quite a bit, but I think that that process of that technology involvement, we want to inspire people to get in that technology because I want things different.

So, for example, we heard from the mining that you have to have nuclear propulsion to be in space. So that is why we want new and, you know, small modular nuclear. So that technology is what is going to save us big time.

Mr. OSURI. Yes.

Dr. GOSAR. OK. I am going to do a second round, so I am going to yield to the gentlewoman, the Ranking Member, Ms. Dexter, again.

Dr. DEXTER. All right. Thank you, Mr. Chair.

Ms. Arthun, I appreciate your position about coal becoming much more technologically advanced over, you know, time—since it has been started. My understanding is that we started mining coal in the 1700s really, effectively. Is that your understanding?

Ms. ARTHUN. Yes.

Dr. DEXTER. OK. So we have had over 200 years to advance technology. Is that accurate? That over that time it has become cleaner is what you are asserting, is that right?

Ms. ARTHUN. Yes.

Dr. DEXTER. OK. I understand from a 2023 science journal that they examined the health impacts of airborne particulates from coal, and they had to isolate coal particulates from other pollutants because the particles are the most toxic substances to the human body. And they found between 1999 and 2020, so more than 200 years after we started mining coal, that coal-fired power plants were responsible for approximately 460,000 deaths in the United States, and nearly half a million lives have been lost. So I am glad that it is cleaner, but it is still obviously having a large impact on our community.

Do you believe that Science is reliable, Science Journal being a highly peer-reviewed journal? I would suggest that that should be the case, but I would love to hear your thoughts.

Ms. ARTHUN. I am actually not a scientist or a doctor, and cannot speak to the validity of the study. And so I would prefer to say I don't know.

Dr. DEXTER. OK, and totally fair enough. I will just say that Science is one of the most elite, peer-reviewed journals, so it has to be relatively reliable science.

So the good news is that data also showed that deaths dropped significantly when coal plants installed pollution control equipment. And take the Keystone plant in Pennsylvania. Before installing emissions controls it was linked to more than 600 deaths per year. And after installation, that number dropped to 80. So I think what I am hearing is that you are asserting that we should be using those kinds of pollution controls on all coal-fired plants. Is that safe to say?

Ms. ARTHUN. I think the technology is developing. And like I said, I live by one of the last plants that is out there, and it is a very clean-burning coal plant, and has emission reducing technology on it. The technology is continuing to be developed, and we have great milestones that are out there, and the ability to be able to put it on existing plants needs to be supported, and needs to be given the tax credits that can make it affordable in order to be put on those existing plants.

Dr. DEXTER. OK.

Ms. ARTHUN. And so that is something that is out there. And like I said, the ITC, they are testing new technology all the time.

Dr. DEXTER. I am just going to interrupt because I don't want to run out of my time, but I do appreciate that.

But I hear you, that retrofitting is expensive. But if we understand that we can dramatically drop from 600 deaths per year to 80, I would suggest that we should not be firing our coal power plants unless we have that health protection on them. So what I am hearing from you is agreement that that should be the case, but you would need industry investment or some sort of support to make that happen. Is that fair?

Ms. ARTHUN. That is correct. There needs to be support for those programs to be implemented.

Dr. DEXTER. OK. So in your mind, I just want to understand. What would be an acceptable number of deaths from coal attributed to those coal-fired plants?

Ms. ARTHUN. I think the example that you—is there an acceptable number of deaths from any event, correct? We would like to mitigate car accidents and we would like to mitigate——

Dr. DEXTER. I think we are talking about energy. So solar, wind. We aren't seeing direct human deaths that we have quantified. I am sure people might think there might be, but nothing has been scientifically proven yet. Geothermal, I think that is also true. So I just want to understand.

I hear you advocating for coal-fired plants. I certainly understand that is, you know, a perspective of my colleagues. I just want to understand, like, what is an acceptable number of human deaths to run those plants, in your mind?

Ms. ARTHUN. I would tell you that I don't think any death is acceptable in any industry. I do feel that everything is being done to protect the U.S. citizens when we look at what technology is doing for coal plants.

Dr. DEXTER. OK. And so I would just assert with my colleagues that we clearly see that this is a risk, and we should make sure any policy that liberates coal mining or coal-fired plants should be duly partnered with policy that makes sure that we mitigate any human deaths. Is that fair?

And I will yield to the Chair. Thank you.

Dr. GOSAR. I thank the gentlewoman.

So Ms. Arthun, that is why you had scrubbers, right?

Ms. ARTHUN. Correct.

Dr. GOSAR. So sometimes it is very misleading about science, because if I determined that, you know, an airway is going this way, you know, it is coming from the southwest to northeast, and I put my monitors in a pathway that is going to get a lot of wind,

maybe from California—I am actually going to talk about an actual case—and it was the Navajo generating plant up in Page, Arizona. Two gentleman back there know all about it, too.

So what they did is the smog that they were actually filtering, it wasn't coming from the Page plant. It was coming from California and China. Because if you look at the winds, they go like this. They are all over, OK? And they actually have imprints of those air waves, how the air moves. OK? It is like what our planes look at. You know, you have these big—you are riding back and forth. So with that, I think it was misleading.

So, I am not a pulmonologist, I will tell you that right now, OK, but I do see a problem that the worst pollution that we will see—and this is not my opinion—happens to be a catastrophic wildfire. Why? Because they are filters. They have heavy metals in them. And when they explode, they explode in the air. You are actively breathing in mercury, lead, all these different things. So where is our mitigation here?

And I love her comments, you know, but what is acceptable? Well, first of all, I want to make sure those numbers are right. Number two is I want to make sure that we take the worst offender and go back down the list. The other thing is we have to mitigate things. We can't have our cake and eat it too. I would love to have that, but we have got to have it.

I can tell you right now, on the west side of Phoenix, where I have—I represent, I got to tell you the data centers are going up right and left. And just to show you how much energy is going, you brought up Three Mile Island. Somebody did. I know. Yes, you did. And why is that? Can you give me an answer there, Ms. Lambermont?

Ms. LAMBERMONT. Yes. Is that why Three Mile Island is being brought back on——

Dr. GOSAR. Yes.

Ms. LAMBERMONT [continuing]. And things like that?

Well, I think that the interesting case for Three Mile Island is that when it was closed 5 years ago, it was because there was no economic need to keep it online, due to a lot of the sort of market distortions that had occurred before and the lack of power demand that was—power demand wasn't increasing at the time.

But now that it is, an existing plant that could be easily brought back online just makes sense as a first resort, right? You already have this existing nuclear power plant that has barely been disassembled. Bring it back online. It is not very much more expensive, especially because most of the cost of a nuclear plant is the upfront capital costs, not the cost to maintain it over time. So if you can bring it back cheaply and quickly, it makes perfect sense as the sort of beginning source.

And I think that those low-hanging fruit places like Palisades Nuclear Power Plant, Three Mile Island are a great starting place before we get into these building new power for colocation situations.

Dr. GOSAR. Got you. So, yes, Ms. Lambermont, Arizona has 77 of these data centers, with another 18 planned under construction. Your testimony notes that 18 data centers that are either planned

or under construction will require 2,400 megawatts of power. That is baseload, right?

Ms. LAMBERMONT. Yes, that is going to be round-the-clock power is what the data centers are going to need.

Dr. GOSAR. That is what they call baseload.

Ms. LAMBERMONT. So, yes, you are going to need baseload and dispatchable sources that you can control.

I mean, part of that can come from other sources, but you are going to need power around the clock. So there will need to be something to back it up when the intermittent sources are not operating. So if you are colocating, it makes the most sense to have something that is around the clock. Otherwise, you need multiple things.

Dr. GOSAR. Yes, Mr. Hart, there was a reason I asked you about federalism. federalism means that you have to—the Federal Government has to consult with local people. It has got to pass the muster with local people, OK?

Number two is you talked about public lands. Well, my bill, the LASSO Act, actually puts 10 percent of all money generated off of public lands into a kitty for the Social Security Trust Fund. We owe it $3 trillion, $3 trillion. We only pay interest on it.

It seems to me when I own an asset, I was a businessman, I am going to leverage it. And it seems to me that if I put the national—that national lands, or the money coming off of that, I am going to stimulate growth in that fund. Would you agree with me?

Mr. HART. Thank you for the question, Congressman. I am not familiar with your legislation or this concept generally, so I would defer and say that we would have to get you an answer in writing at a later date.

Dr. GOSAR. Oh, I will make sure you have the question in writing.

Dr. GOSAR. So, I find it very interesting that you made a general comment. And to me, that bothers me because the public lands are all our lands. They are all of us, not the elites. It is all our land. And we are financially in dire straits. I will say that right now. I don't think anybody will disagree with me. And so we now have to start thinking smarter. Think smarter and don't play harder. We have got to make this thing work.

And we have so much talent right here. If the four of you—you know, I wish we had more people to talk and ask questions because I think there is a lot here that we are not getting to.

So, you know, I really—you know, it is coming from the national parks. Please look at the public lands. The West knows them very, very well because there was a Teddy Roosevelt who took over, and God bless him for giving us Yosemite and Yellowstone. But there was another group that came in about 15 years later. It was called the Taylor Grazing Act folks. They took some of this land that is public land. Nobody wanted it. And they said you got to use it, OK?

So there are lots of things you have to look at. There is also the checkerboard. So like in Payson, Arizona, 6 percent of that county, Gila County, is actually private. The rest is State government and Federal lands.

So I would hope that you would really look at this, particularly the federalism, because I think you, as a person of leadership, has

to tell people, listen, if you are going to put that here, this is what kind of energy you need. This is what we bought off on. That is truly federalism. Makes sense?

Mr. HART. Yes, sir. Thank you.

Dr. GOSAR. You bet you. Well, I have got to tell you, everybody, I thank you so very much. I wish there were more people, like I said, here.

Oh, yes, I do have one more thing. This is an easy one. I am going to ask each one of you the same question, OK? So listen carefully. What was the question you wanted asked today that wasn't asked? And what is its answer?

I will start with you, Mr. Osuri.

Mr. OSURI. What immediate actions can this Committee take to support decentralized AI infrastructure development on Federal lands?

Dr. GOSAR. What is his answer?

Mr. OSURI. Prioritize access to power-ready Federal land for distributed AI or infrastructure, That means identifying under-utilized parcels near substations or renewable assets where small-scale modular AI facilities can be deployed.

Enable flexible zoning and fast-track permitting for decentralized data centers on Federal sites, and launch a Federal pilot program for HAI infrastructure. What that means is fund or coordinate pilot deployments of decentralized AI nodes on Federal research labs, national parks for environmental monitoring, and for all tribal lands for inclusive innovation. And use these to model resilience, energy efficiency, and low-cost access.

Third is streamlined interconnection and land use approvals. Work with Department of Energy, Bureau of Labor, BLM, and USDA to reduce bureaucratic barriers for clean, energy-powered distributed compute nodes, especially where excess renewable generation exists.

And number four is expand incentives for distributed cloud R&D and hardware innovation. Include decentralized AI infrastructure in Federal funding programs like ARPA-E, NSF, and DOE innovation hubs.

Dr. GOSAR. You would be surprised. I actually had a legislation called PLREDA that actually made the government go out and decide where wind and solar were very applicable, so it streamlined that process. Amazing.

OK, Ms. Arthun, you are up. Now, what was the question that you wanted asked and that wasn't asked, and what is its answer?

Ms. ARTHUN. The question is, what policies and regulations are needed to ensure the responsible use of Federal coal in data mining, AI, cryptocurrency.

Dr. GOSAR. What is the answer?

Ms. ARTHUN. To align the Federal coal program with the current state of the industry, it is imperative to right-size the Federal coal royalty rate. A proposed reduction to 7 percent per ton of coal from the current 12.5 would be instrumental. You talked about the country and the crisis we are in economically. This change will not only increase the coal supply, but also reduce the cost of coal-based energy and products, ultimately boosting aggregate Federal revenues. This would allow companies that mine Federal coal to

put capital into these reserves. A modernized royalty rate can invigorate the coal industry and supported its sustainable growth.

In addition, in light of these factors, it is evident that the Biden-era no-coal leasing decisions in Buffalo, Miles City, and Rock Springs management plans must be repealed. This repeal will enhance coal resources access by lifting all Federal coal leasing moratoriums, thereby restoring balance to the Federal RMPs. Reverse moratoriums will revitalize Federal coal leasing activities and ensure equitable access to coal resources, fostering industrial stability and growth. By doing so, we can create job opportunities, support the growth of the data mining industry, and drive innovation in energy management systems. It is imperative to right-size the Federal coal royalty rate to align the Federal coal program and the current state of the industry.

Dr. GOSAR. Great. Mr. Hart, what was your—what was the question you wanted asked that wasn't, and what is its answer?

Mr. HART. Absolutely. So the Congressman from Georgia kind of flirted with this idea at the outset of sort of ratepayer protections and that sort of stuff, and I want to dig in a little bit. So the question would be largely, what are the implications for ratepayers for this, and what happens, more importantly, if this load, this energy demand never materializes or, more importantly, phases out after a certain period of time?

And so the—I think the answer to that question is arguably the most complex question of this whole issue: What happens if we invest hundreds of billions of dollars in new infrastructure, new generation infrastructure, and new transmission infrastructure, and then the load doesn't materialize?

We have heard, and I kind of tried to touch on this in Virginia, electric co-ops like small utility companies are afraid of actual solvency. Like, if data centers don't pay their bills, if they build new infrastructure and data centers actually are like, "Actually, we don't need that much power," like, you will see electric co-ops literally go bankrupt. And I think that is a big problem.

And so I think the solution to this, and Ms. Lambermont has touched on this, is colocation, right, is working with data center developers to basically build their own power generation behind the meter so that the ratepayers are not born with, essentially, the risks of building all of this new infrastructure. And so at its core, the solution is urging the data center industry and regulators to look for solutions that don't pose these risks both to national parks through new transmission lines and ratepayers, and come up with innovative solutions to this problem.

Dr. GOSAR. So let me follow up on that, then. So in order to make a great decision, let's say supervisor or a State legislator or even a Congressman, you need to know the facts about how things were paid and what the return on investment it is. Right?

Mr. HART. Absolutely.

Dr. GOSAR. OK, thank you very much. I appreciate that.

Ms. Lambermont?

Ms. LAMBERMONT. Yes, thank you, sir. And Mr. Hart and I are very much having the same idea about a question we would like to be asked. My question is going to be how can colocation agreements help consumers and prevent stranded assets?

I think that colocation is one of the best options in this situation, because it gives companies the ability to make decisions in the free market on their own, while also insulating regular consumers, right? If you are doing a colocation agreement behind the meter, it is not going to affect the broader power grid in the same way. So I think encouraging colocation agreements in that way, and also one idea at the State level is consumer regulated electricity. It is the idea that you can form your own sort of off-grid microgrids.

So instead of just one data center colocating with a facility, you could have a company get together several other companies to form their own microgrid that was just for, say, a data center park. And instead of impacting the rest of the grid with their power demand, they will provide their own power, provide their own sort of microgrid, and be allowed to do that. It requires sort of amendments to public utilities commissions within the—at the State level, but it is one idea that would allow for sort of innovative solutions that don't put other ratepayers in jeopardy and still allow the power to be built for what it is needed for. Thank you so much.

Dr. GOSAR. Isn't technology and innovation just super?

Ms. LAMBERMONT. Yes, sir.

Dr. GOSAR. Well, I want to thank the witnesses for their testimony. The Chair now recognizes—oh, hold on.

Dr. DEXTER. Mr. Chair, if I may.

Dr. GOSAR. Yes.

Dr. DEXTER. May I ask that we submit for the record the Science article that discussed the excess deaths related to coal burning?

Dr. GOSAR. Without objection, so ordered.

Dr. DEXTER. Thank you.

Dr. GOSAR. I thank the witnesses for their valuable testimony and the members for their questions.

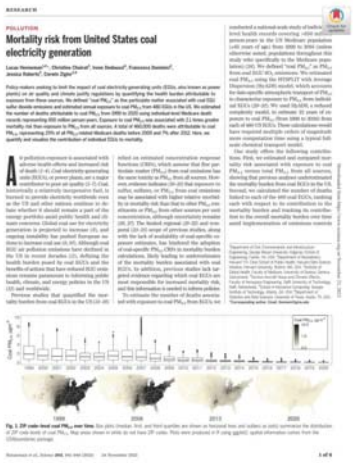
Members of the Committee may have some additional questions, I promise you there will be, for the witnesses, and we ask that you respond to these in writing. Under Committee rule 3, members of the Committee must submit their questions to the Subcommittee clerk by 5 p.m. on Friday, May 23. The hearing record will be held open for 10 business days for these responses.

If there is no further actions, the Subcommittee is adjourned.

[Whereupon, at 3:37 p.m., the Subcommittee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

Submissions for the Record by Rep. Dexter



Mortality risk from United States coal electricity generation

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The full document is available for viewing at:

https://docs.house.gov/meetings/II/II15/20250521/118174/HHRG-119-II15-20250521-SD003.pdf

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