AI IN THE EVERYDAY: CURRENT APPLICATIONS AND FUTURE FRONTIERS IN COMMUNICATIONS AND TECHNOLOGY

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS AND TECHNOLOGY

OF THE

COMMITTEE ON ENERGY AND COMMERCE

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C O N T E N T S

[1]The report has been retained in committee files and is included in the Documents for the Record at https://docs.house.gov/meetings/IF/IF16/20250604/118333/HHRG-119-IF16-20250604-SD13189497.pdf.

AI IN THE EVERYDAY: CURRENT APPLICATIONS ANDFUTURE FRONTIERS IN COMMUNICATIONS AND TECHNOLOGY

WEDNESDAY, JUNE 4, 2025

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

The subcommittee met, pursuant to notice, at 10:31 a.m., in the John D. Dingell Room 2123, Rayburn House Office Building, Hon. Richard Hudson (chairman of the subcommittee) presiding.

Members present: Representatives Hudson, Allen, Latta, Bilirakis, Carter of Georgia, Dunn, Joyce, Fulcher, Pfluger, Cammack, Obernolte, Houchin, Fry, Kean, Goldman, Fedorchak, Guthrie (ex officio), Matsui (subcommittee ranking member), Soto, Clarke, Peters, Dingell, Kelly, Barragán, Menendez, Landsman, McClellan, Castor, and Pallone (ex officio).

Staff present: Jessica Donlon, General Counsel; Sydney Greene, Director of Finance and Logistics; Kate Harper, Chief Counsel, Communications and Technology; Megan Jackson, Staff Director; Noah Jackson, Clerk, Communications and Technology; Sophie Khanahmadi, Deputy Staff Director; Brayden Lacefield, Special Assistant; John Lin, Senior Counsel, Communications and Technology; Joel Miller, Chief Counsel; Elaina Murphy, Professional Staff Member, Communications and Technology; Dylan Rogers, Professional Staff Member, Communications and Technology; Jackson Rudden, Staff Assistant; Chris Sarley, Member Services/Stakeholder Director; Hannah Anton, Minority Policy Analyst; Parul Desai, Minority Chief Counsel, Communications and Technology; Tiffany Guarascio, Minority Staff Director; La'Zale Johnson, Minority Intern; Dan Miller, Minority Professional Staff Member; Mary Ann Rickles, Minority Intern; Emma Roehrig, Minority Staff Assistant; Michael Scurato, Minority FCC Detailee; Johanna Thomas, Minority Counsel.

Mr. HUDSON. The subcommittee will come to order. The Chair recognizes himself for an opening statement.

OPENING STATEMENT OF HON. RICHARD HUDSON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NORTH CAROLINA

Good morning, and welcome to today's subcommittee hearing on examining artificial intelligence and how it is being used in communications, technology industries. AI is top of mind right now, not

just in this country but all over the globe. It has been used in different industries for many years, but recent advancements in large language models, machine learning, and generative AI have pushed this technology into the spotlight, capturing public attention and forever transforming how we live and how we work.

The applications for this new technology are widespread, and we are continuing to find new ways that AI can be used to benefit Americans' lives.

Whether you know it or not, almost everyone uses AI in our daily lives, like when you use ChatGPT to create a shopping list, or ask Siri for directions. Or even more specifically, when you called the ride share to get here this morning, it uses AI to find the fastest route based on traffic patterns. Your cell phone provider uses AI to reduce harmful spectrum interference on your phone, ensuring there is no lapse in service. The entertainment industry uses AI to predict what types of content viewers may enjoy and drives decisions on when that content should be produced. It is being used to develop content and enhance the editing process. Our military uses AI to enhance efficiency with encrypted communications and perfect precision with drones, like we have seen in the war in Ukraine.

Even the National Football League uses AI to create the perfect schedule to limit unnecessary travel for players, create an even playing field for teams, and maximize fan accessibility for the biggest games.

As demand for AI grows, we must consider what physical infrastructure will be required to continue advanced AI development.

Storage capacity and energy consumption demands that data centers are expected to skyrocket by 2030 due to increased AI use. As data capacity increases, we will need robust fiber optics and wireless connectivity to ensure powerful new AI systems can reach their fullest potential and enable every industry to grow.

But the United States is not the only country developing advanced AI. China recently released its DeepSeek AI model, which showed their advancements. Our adversaries will stop at nothing to undermine our leadership in technological advancement and utilize AI to threaten our very way of life. We must continue to innovate and develop to prevent that from happening. Competition in AI is a global issue, and it is imperative that the United States maintains its leadership.

To do this, our country and Congress must encourage an environment where AI companies can innovate, compete, and excel on the global stage. Just like the light regulatory touch that gave rise to the internet and some of the most successful and cutting-edge companies on the planet, AI must be given the same opportunity to ensure American companies set the standard for the rest of the world.

This is an exciting time, and an opportunity to talk about these issues. Navigating these new and evolving technologies will not be without its challenges, but it is our job to meet them head on.

Innovation has provided untold benefits to Americans and to our economy. Today we will hear from our witnesses about how artificial intelligence is being used across the communications and technology industries, as well as what is required for the United States to maintain its leadership in developing AI models.

I look forward to hearing from the witnesses today about these issues and how Congress can stand ready as a partner.

[The prepared statement of Mr. Hudson follows:]

Opening Statement for Chairman Richard Hudson
Subcommittee on Communications and Technology
"AI in the Everyday: Current Application and Future Frontiers in Communications and Technology"
Wednesday, June 4, 2025, at 10:30 AM

Introduction

Good morning, and welcome to today's subcommittee hearing on examining artificial intelligence (AI) and how it is being used in communications and technology industries.

AI is top of mind right now, not just in this country, but all over the globe. It has been used in different industries for many years, but recent advancements in large language models, machine learning, and generative AI have pushed this technology into the spotlight, capturing public attention and forever transforming how we live and work.

The applications for this new technology are widespread and we are continuing to find new ways AI can be used to benefit Americans' lives.

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Even the National Football League uses AI to create the perfect schedule to limit unnecessary travel for players, create an even playing field for teams, and maximize fan accessibility for the biggest games.

As demand for AI grows, we must consider what physical infrastructure will be required to continue advanced AI development.

Storage capacity and energy consumption demands at data centers are expected to skyrocket by 2030 due to increased AI use. As data capacity increases, we will need robust fiber optic and wireless connectivity to ensure powerful new AI systems can reach their fullest potential and enable every industry to grow.

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Our adversaries will stop at nothing to undermine our leadership in technological advancement and utilize AI to threaten our way of life. We must continue to innovate and develop to prevent that from happening.

Competition in AI is a global issue, and it is imperative that the United States maintains its leadership.

To do this, our country and Congress must encourage an environment where AI companies can innovate, compete, and excel on the global stage. Just like the light regulatory touch that gave rise to the internet and some of the most successful and cutting-edge companies on the planet, AI must be given the same opportunity to ensure American companies set the standard for the rest of the world.

Conclusion

This is an exciting time and opportunity to talk about these issues. Navigating these new and evolving technologies will not be without challenges, but it's our job to meet them head-on.

Innovation has provided untold benefits to Americans and to our economy. Today, we will hear from our witnesses about how artificial intelligence is being used across the communications and technology industries, as well as what is required for the United States to maintain its leadership in developing AI models. I look forward to hearing from the witnesses today about these issues and how Congress can stand ready as a partner.

I now yield five minutes to my colleague, Ranking Member Doris Matsui, for her opening statement.

Mr. HUDSON. I now recognize the ranking member, the gentlelady from California, for her opening statement.

OPENING STATEMENT OF HON. DORIS O. MATSUI, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Ms. MATSUI. Thank you very much, Mr. Chairman.

I am glad we are holding this hearing today, as connectivity and artificial intelligence go hand in hand. Already, AI is a part of everyday lives, from the improving GPS driving directions to extending the battery life of our cell phones and preventing network outages. As AI evolves, it will transform how we communicate, improve network resiliency, defending against cyber attacks, and supercharging connectivity for consumers and businesses.

To realize AI full potential and ensure AI benefits us all and not just a few, we must act with urgency to close the digital divide by investing in the infrastructure and skilled workforce that underpins AI's success.

Unfortunately, the Trump administration would rather pay lip service to American AI leadership than act. The reality is that they are undermining this exact goal by derailing our AI supply chain with tariffs, gutting our AI talent pipeline by attacking universities and slashing research dollars, and weakening our AI infrastructure by freezing Federal broadcasting funding.

Universal connectivity is the building block for universal AI access. This includes the fiber networks that provide reliable, scalable, and high-speed connections for AI applications to process large amounts of data. To achieve this, we must act quickly and fully carry out our Federal broadband programs to connect the tens of millions of Americans who still lack access to high-speed internet.

And that is why I am alarmed that the President continues to sabotage the $42 billion Broadband Equity, Access, and Deployment, or BEAD, Program.

BEAD is a once-in-a-generation investment from Congress to expand affordable broadband. States are at the 1-yard line ready to reach the end zone and get shovels in the ground. But for almost 6 months, the Trump administration has put BEAD on ice, blocking our States from connecting more Americans, all while threatening to waste even more time with rule changes that would undo the work our States have already accomplished.

To make matters worse, President Trump is weakening our AI workforce through his cancellation of nearly $3 billion in digital equity grants. Congress established these grants with bipartisan support to provide communities with digital literacy skills, training in technology, to reap the full benefits of online access.

President Trump's attack on digital equity funds, including trying to cancel California's $70 million grant, is leaving behind our most vulnerable communities, including rural Americans, seniors, Americans with disabilities, and veterans.

This is unacceptable. To be the global AI leader, America also must lead on setting commonsense guardrails, responsible and safe AI. Otherwise, it will harm innovation by damaging consumer trust

and weakening protections for a fair, open, and competitive playing field for AI technologies flourish.

I have long championed policies that advance U.S. leadership in AI and other emerging technologies. This includes strengthening AI infrastructure from fiber and wireless connectivity to our semiconductor supply chain. I have also worked to preserve our States' roles in laboratories of democracy, to provide as critical insight on AI policies where innovation and competition thrive alongside commonsense safeguards.

Now is the time to learn from our States and work on bipartisan solutions to advance innovation and empower all Americans to access the benefits of AI.

And that is why the 10-year AI State moratorium that my Republican colleagues jammed through in their reconciliation bill is so misguided and dangerous. We can't afford a 10-year hold on our States' ability to identify and protect the American people from AI-specific harms, not when AI is developing rapidly and spreading to all parts of our lives, and especially not without strong Federal AI safe guardrails in place.

I look forward to hearing from our witnesses about how we can strengthen our AI leadership. And with that, I yield the balance of my time.

[The prepared statement of Ms. Matsui follows:]

Committee on Energy and Commerce

Opening Statement as Prepared for Delivery
of
Subcommittee on Communications and Technology Ranking Member Doris Matsui

Subcommittee on Communications and Technology Hearing on "AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology"

June 4, 2025

Thank you, Chairman Hudson. I'm glad we're holding this hearing today, as connectivity and artificial intelligence go hand in hand. Already, AI is a part of our everyday lives— from improving GPS driving directions to extending the battery life of our cellphones and preventing network outages. As AI evolves, it will transform how we communicate—improving network resiliency, defending against cyberattacks, and supercharging connectivity for consumers and businesses.

To realize AI's full potential—and ensure AI benefits us all, not just the few—we must act with urgency to close the digital divide by investing in the infrastructure and skilled workforce that underpin AI's success. Unfortunately, the Trump administration would rather pay lip service to American AI leadership than act. The reality is they are undermining this exact goal by: derailing our AI supply chain with tariffs, gutting our AI talent pipeline by attacking universities and slashing research dollars, and weakening our AI infrastructure by freezing federal broadband funding.

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I look forward to hearing from our witnesses about how we can strengthen our AI leadership.

And with that, I yield the balance of my time…

Mr. HUDSON. Thank you.

I now recognize the chairman of the full committee, the gentleman from Kentucky, for 5 minutes for his opening statement.

OPENING STATEMENT OF HON. BRETT GUTHRIE, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY

Mr. GUTHRIE. Thank you, Chairman Hudson, and thank you, Ranking Member Matsui, for bringing us together for this important hearing, and thank the witnesses for all of you for being here and for your participation. I look forward to hearing about all the ways the artificial intelligence is currently being used and the promise that AI holds for the future.

AI is a top priority for the Energy and Commerce Committee this year. Committee's jurisdiction covers almost every layer of the AI tech stack, from energy needed to power massive amounts of computing power, to the fiber optic cable and wireless connections needed to move the data through interconnected networks, to the data itself which underpins innumerable lines of code that together form the modeling needed to generate outputs for the consumer commercial application of AI technologies.

We started this Congress by holding multiple subcommittee hearings related to AI regulation and used cases spanning all the industries under this committee's jurisdiction, including the committee's first full committee hearing on the existential opportunities and risks of AI technology.

Today's hearing will focus on AI and the communications and technology sectors where we are committed to supporting the development of this transformational technology and to ensuring that American innovation continues to set the global standard for advanced networking and connectivity.

When ChatGPT came roaring into everyday life in 2022, it provided a clearer, accessible example of the power of AI for everyday consumer use. While it is a fantastic tool, it is only one example of how AI can be used, and there are many ways that AI technologies have been deployed over the last couple of decades to support other applications.

For example, some applications use AI technologies to detect and prevent spam robocalls. So hearing that is going up—that is why I wasn't here at the very beginning—two floors above us. A lot of times when we go home, we come back—most people around here say, "What are you hearing back home?" Well, I can tell you robocalls is one of the number-one priorities—of everything going on in this Congress and this country, robocalls are one—and spam is used to prevent—I mean AI technology is used to prevent the spam robocalls.

And there are other areas to implementing sophisticating cyber security systems, to prevent secure—to prevent and secure consumer data.

Law enforcement officers and other first responders in the field can utilize real-time language translation to help assist people facing language barriers. Even today, music artist Randy Travis is taking full advantage of AI. After suffering a stroke that reduced

his ability to sing and speak, he used AI tools to recreate his own voice from his own recordings to continue producing new music.

I firmly believe that we are beginning to uncover the possibilities that AI has to offer. America is uniquely positioned to continue innovating as a global leader in this sector. But this requires a commitment on our part. It is vitally important that we hear from industry experts that is enabled AI technology to develop rapidly and how we can allow AI to continue to thrive in America while addressing potential risk along the way.

At the same time, our adversaries are also developing cutting-edge AI technologies in an effort to capture global technological dominance. We cannot allow countries that do not share our values to lead in technology as important as this. As I have said before, we do not secure—if we do not secure AI leadership, China will fill the void.

Europe is not going to fill the void. They made decisions in their energy policy and their regulatory policy to eliminate themselves from this transformational technology that improves the quality of life of the people that live in our societies, and we need to do it correctly. And if we cede development of AI technologies to China, which as a nation, does not share the same ethical values we do, we will also cede the ability to shape future development of these technologies in a free and democratic society.

As such, it is important that we take a measured approach and strike the right balance between facilitating innovation and providing principled guardrails where needed to address gaps in current law.

As we have seen with Europe's approach, as I said, on everything from energy production to data privacy, imposing heavyhanded regulation of AI stifles innovation and stunts economic growth.

If we can get this right—and we have to do this together—there is no limit to American innovation and artificial intelligence or the benefits it will unlock for all Americans.

I really appreciate our witnesses for being here. Mr. Pickering, welcome back to Energy and Commerce Committee. I am not sure there is any Member here on our side of the aisle that served when you were here, but that wasn't that long ago. But thank you for—maybe Mr. Latta might have served at the same time you did. But anyway, we really appreciate you being here and all of you being here, and we look forward to your testimony. And I yield back.

[The prepared statement of Mr. Guthrie follows:]

Opening Statement of Chairman Brett Guthrie
Subcommittee on Communications and Technology
"AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology"
Wednesday, June 4, 2025, at 10:30 AM

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real-time language translation to help assist people facing language barriers.

Even country music artist Randy Travis is taking full advantage of AI. After suffering a stroke that reduced his ability to sing and speak, he used AI tools to recreate his own voice from his own recordings to continue producing new music.

I firmly believe that we are just beginning to uncover the possibilities that AI has to offer. America is uniquely positioned to continue innovating as a global leader in this sector, but this requires a commitment on our part. It is vitally important that we hear from industry experts what has enabled AI technology to develop rapidly and how we can allow AI to continue to thrive in America, while addressing potential risks along the way.

At the same time, our adversaries are also developing cutting edge AI technologies in an effort to capture global technological dominance. We cannot allow countries that do not share our values to lead in technology as important as this. As I've said before, if we do not secure AI leadership, China will fill the void. And if we cede the development

of AI technologies to China, which as a nation does not share the same ethical values that we do, we will also cede the ability to shape future development of these technologies in a free and democratic society.

As such, it's important that we take a measured approach and strike the right balance between facilitating innovation and providing principled guardrails where needed to address gaps in current law. As we have seen with Europe's approach on everything from energy production to data privacy, imposing heavy-handed regulations on AI that will stifle innovation and stunt economic growth.

If we can get this right, there is no limit to American innovation in artificial intelligence or the benefits it will unlock for all Americans.

Thank you again to the witnesses for your participation and I look forward to hearing from you.

Mr. Chairman, I yield back.

Mr. HUDSON. Thank you, Chairman.

I now recognize the gentleman from New Jersey, the ranking member, for 5 minutes for his opening statement.

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

Mr. PALLONE. You notice, Chip, that he said only there may not be a Republican, but definitely is a Democrat: me. But in any case.

We have now had numerous hearings this Congress on artificial intelligence, and we have heard about the benefits and risks of AI. And while we continue to hold hearings and debate the need to adopt commonsense guardrails to protect consumers from bad actors using AI, some States have already moved forward and adopted these laws providing basic consumer protections from the negative consequences of some uses of AI.

But instead of learning from what the States are doing, House Republicans last month passed a 10-year ban on a State's ability to enforce their own laws protecting consumers from AI's harms. And this provision, which was included in the budget reconciliation, is nothing more than a giant gift to Big Tech. And I hope—you know, we are working to see if we can get the Senate parliamentarian to rule this out of order under the so-called "bird bath," but that is not because of the Republicans' efforts. It is because of the Democrats' efforts.

The problem is this provision would block enforcement of laws on the books right now that are protecting consumers from real-world harms. Some States have laws requiring companies to disclose when they are using AI. Others have laws protecting against the use of deepfakes in elections and protecting consumers when AI is used in healthcare, education, housing, and employment.

Now, Republicans want to ban the enforcement of all these State laws with absolutely no national bill ready to go to address these concerns. Instead of enriching Big Tech, we should be working toward strong Federal legislation to govern and guide the development of these powerful AI systems which are rapidly being incorporated into more and more aspects of our everyday lives.

The Trump administration also continues to undermine our progress in building the connectivity infrastructure needed to power the AI models of today and tomorrow. For no good reason, the administration continues to stand still in rolling out one of the key demands of AI: that is fiber. Broadband programs designed to bring high-capacity fiber to both data centers and our homes are critical if America wants to continue to lead the world in AI.

Any delays in connecting every home and business to reliable high-speed internet only benefits our foreign adversaries. America's strength comes from our ability to build and deploy the most advanced technology here and then share it with the rest of the world.

But this can't happen if everyone in America does not have high-speed internet access. And I therefore urge the Trump administration to get out of its own way and let the Bipartisan Infrastructure Law's $42 billion BEAD Program move forward as intended, letting

the States deploy networks that are fast, reliable, and can meet the technological demands for decades to come.

Now, I also have to acknowledge that simply bringing the internet to American homes will not allow us to lead the world in AI. To complete the task, Americans need to understand how to use AI. That is why House Democrats voted to include the Digital Equity Act as part of the Bipartisan Infrastructure Law. This Act funds programs that can help seniors, veterans, the disabled, and others learn the skills needed to fully participate in our digital economy.

Yet in the last couple of weeks, President Trump unilaterally and illegally, in my opinion, decided to stop the funding to these programs, falsely claiming that they are racist. I can't stress, teaching grandparents and veterans, the disabled how to use AI as well as protect themselves from scams and scheduling doctor appointments and applying for jobs online has nothing to do with race.

The Digital Equity Act recognizes the digital divide, and it is not—it is not a racial divide. I mean, there is an element of a racial divide, certainly, but it is because there is so many people who are seniors and veterans and disabled, regardless of their race or ethnicity, that need to know how to use it. And it has nothing to do with race. And it is just unfortunate that the administration is doing this.

Last thing I wanted to say, Mr. Chairman, is while we still need guardrails to govern and guide the development of AI, there is no question that AI has the potential to advance how our communications networks serve the public. For instance, AI models can be deployed in our networks to help enhance resiliency and reliability so that when natural disasters hit or other life-threatening events occur, Americans can rapidly assess the damage and quickly get the help they need. And that is why it is crucial that we fund the deployment of Next Generation 911 across the country.

Again, it is a shame that the House Republicans want to use spectrum auction proceeds to fund this giant tax giveaway for billionaires and B corporations instead of helping fund Next Generation 911, which is obviously what I have been pleading all along. That is what we should be using that 80—$8 billion in spectrum auction, and not to pay for the—well, you call it—what do you call it? The Big Beautiful Bill. I call it the Big Ugly Bill.

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

[The prepared statement of Mr. Pallone follows:]

Committee on Energy and Commerce

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

Subcommittee on Communications and Technology Hearing on "AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology"

June 4, 2025

We've now had numerous hearings this Congress on artificial intelligence. We've heard about the benefits and risks of AI. And while we continue to hold hearings and debate the need to adopt common sense guardrails to protect consumers from bad actors using AI, some states have already moved forward and adopted laws providing basic consumer protections from the negative consequences of some uses of AI.

Instead of learning from what the states are doing, House Republicans last month passed a 10-year ban on a states' ability to enforce their own laws protecting consumers from AI's harms. This provision, included in their GOP Tax Scam, is nothing more than a giant gift to Big Tech.

It would block enforcement of laws on the books right now that are protecting consumers from real-world harms. Some states have laws requiring companies to disclose when they are using AI. Others have laws protecting against the use of deepfakes in elections, and protecting consumers when AI is used in health care, education, housing, and employment.

Republicans want to ban the enforcement of all these state laws with absolutely no national bill ready to go to address these concerns. Instead of enriching Big Tech, we should be working towards strong federal legislation to govern and guide the development of these powerful AI systems, which are rapidly being incorporated into more and more aspects of our everyday lives.

The Trump Administration also continues to undermine our progress in building the connectivity infrastructure needed to power the AI models of today and tomorrow. For no good reason, this Administration continues to stand still in rolling out one of the key demands of AI – fiber. Broadband programs designed to bring high-capacity fiber to both data centers and our homes are critical if America wants to continue to lead the world in AI.

Any delays in connecting every home and business to reliable, high-speed internet only benefits our foreign adversaries. America's strength comes from our ability to build and deploy the most advanced technology here and then share it with the rest of the world. But this cannot happen if everyone in America does not have high-speed internet access. I therefore urge the Trump Administration to get out of their own way and let the Bipartisan Infrastructure Law's $42 billion BEAD program move forward as intended – letting the states deploy networks that are fast, reliable, and can meet the technological demands for decades to come.

We must also acknowledge that simply bringing the internet to American homes will not allow us to lead the world in AI. To complete the task, Americans need to understand how to use AI. This is why House Democrats voted to include the Digital Equity Act as part of the Bipartisan Infrastructure Law. This Act funds programs that can help seniors, veterans, the disabled, and others learn the skills needed to fully participate in our digital economy.

Yet, in the last couple of weeks, President Trump unilaterally and illegally decided to stop the funding for these programs falsely claiming that they are racist. But teaching grandparents and veterans how to use AI, as well as protect themselves from scams, schedule doctor appointments and apply for jobs online has nothing to do with race, and everything to do real life in today's digital age. And these programs provide a legally sound lifeline to those in need.

Finally, while we will need guardrails to govern and guide the development of AI, there is no question that AI has the potential to advance how our communications networks serve the public. For instance, AI models can be deployed in our networks to help enhance resiliency and reliability, so that when natural disasters hit or other life-threatening events occur, Americans can rapidly assess the damage and quickly get the help they need. This is why it is crucial that we fund the deployment of Next Generation 911 (NG911) across the country. So, it's a shame that House Republicans want to use spectrum auction proceeds to fund giant tax breaks for America's billionaires and big corporations instead of helping fund NG911.

And with that, I yield back the balance of my time.

Mr. HUDSON. Thank you.

We have now concluded with Member opening statements. The Chair reminds Members that, pursuant to the committee rules, all Members' opening statements will be made part of the record.

We would like to thank our witnesses for being here today to testify before the subcommittee. Our witnesses will have 5 minutes to provide an opening statement, which will be followed by a round of questions by Members.

The witnesses here before us today are Chip Pickering, chief executive officer of INCOMPAS, and former member of this committee, as has been noted. Welcome back.

Ronnie Vasishta, senior vice president of telecom for NVIDIA. Thank you for being here.

Jim Shea, chief executive officer for DeepSig, Incorporated. Thank you, sir.

And Asad Ramzanali, director of AI and technology policy, Vanderbilt Policy Accelerator at Vanderbilt University. I believe you have been in this room before too. Glad to have you back. Thank you.

Mr. Pickering, you are recognized for 5 minutes for an opening statement.

STATEMENTS OF CHARLES W. "CHIP" PICKERING, JR,, CHIEF EXECUTIVE OFFICER, INCOMPAS; RONNIE VASISHTA, SENIOR VICE PRESIDENT OF TELECOM, NVIDIA; JIM SHEA, CHIEF EXECUTIVE OFFICER, DEEPSIG, INC.; ASAD RAMZANALI, DIRECTOR OF ARTIFICIAL INTELLIGENCE AND TECHNOLOGY POLICY, VANDERBILT POLICY ACCELERATOR, VANDERBILT UNIVERSITY

STATEMENT OF CHARLES W. "CHIP" PICKERING, JR,

Mr. PICKERING. Mr. Chairman, Ranking Member Matsui, Chairman Guthrie, all the Members on the committee, it is great to be back to what I consider my home, where I served for 10 years on the Energy and Commerce Committee. I love this committee. I love and respect deeply the role that it plays in this institution and in setting the policies, the critical policies, of this country.

I am the CEO of INCOMPAS. And to talk a little bit about who we are and who I represent, we are the founding voice of competition in network policy. We advocated over 40 years ago for the breakup of the AT&T monopoly system, bringing the first competition to the telecommunication networks and then, as we went into the 1990s and into the current age, competition across all networks and the internet.

And today, we have assembled something that is different than and unique from all other associations in our space. We now have members that are new energy companies, new SMR nuclear fusion companies, traditional gas and gas pipeline transmission and grid companies that are on one side of the data center. And we have all the stack of data centers from small to regional to hyper scale. And then we have all of the broadband networks from fiber to fixed to wireless to satellite LEO systems.

And then on the other side of the market, we have all of the leading American technology companies, but we also have the new en-

trants, the new startups, the innovators, the entrepreneurs that are creating the new AI models. So both on the model side and on the what we now call AI infrastructure on both sides of the data center.

And we think that makes us uniquely credible. To be honest, we try to create a membership that matches your jurisdiction. You are the only committee in all of Congress that is on both sides of the data center and has the jurisdiction on all of the major elements and questions of AI policy.

And you have a serious obligation and responsibility to get this right. We are now in a race against China to win the future of an AI economy, an AI-driven national security and cybersecurity, and we need a national framework of AI policy on each of the major questions to win that race.

So today I would—I want to start a conversation of how do we do that? And how do we win that race? And there are two major objectives: one is to maximize competition among all models because, as you maximize competition, you get the greatest investment and the greatest innovation. In this race, unlike what we faced in the World War II and the nuclear race and in the Cold War, the space race—those were Federal Government-funded initiatives.

The AI race is primarily funded by the private sector and private actors. So what we need to do is give the predictability and the certainty of a national framework so that the investments made to win that race will be made without a patchwork of unpredictability and uncertainty.

We need to be able to build—this is the time to build the infrastructure of a new age that will bring back American manufacturing and bring enormous benefits in every sector of our economy and for the healthcare, education, and workforce of our country. And to do that, we need to build as fast as possible. We need bipartisan permitting reform to clear the obstacles that delay and cost our companies who are building—fiber, wireless, satellite companies who are building the data centers and are building the new energy and the new energy supply and the transmission and grid that we need to power AI.

So I fully support the speed to BEAD, and the need to get the shovels in the ground to build the broadband networks.

We need to infuse, through spectrum auction authority, new spectrum into the marketplace. We need to do everything that we can to close the digital divide. And so, Congressman Joyce, and working on a bipartisan basis—how do we build fiber networks across the railroad so that we can close the digital divide without the railroad industry holding us up, delaying us, and charging exorbitant prices?

It is critical that—in most communities, that you have to still cross the tracks to reach the full community and to close the digital divide.

In the Senate, there is a piece of legislation that makes sure that BEAD is not taxed, so we don't need to tax the broadband grants and defeat the purpose of the deployments to every corner of the country.

Finally, INCOMPAS fully supports the effort of this committee in creating a national framework to have a pause or temporary moratorium that would give you the time that you need to form a national framework around all AI issues. I want to commend Congressman Obernolte and Congressman Lieu and the bipartisan workforce that has created a set of recommendations and one of the most extensive reports in Congress and the leadership on a bipartisan basis. The moratorium is simply a means that we don't have 1,000 State actions that could slow, delay the investments we need on both sides of the data centers and the full models and the full stack of the AI ecosystem.

This committee has had a rich history, from 1934, of bringing telephone service to every American, electricity to every American, and internet infrastructure, internet age. Every time, it was this committee in this room that made those policies. And we need this committee, under present bipartisan leadership, to find a way to create the national framework so that we win the race and bring all the benefits and secure our national security and America's future. And I look forward to working with everyone to that purpose and to that end.

[The prepared statement of Mr. Pickering follows:]

June 2, 2025

Summary of Charles (Chip) W. Pickering, Jr's Written Testimony

The AI Race Against China: The Stakes
We are in an AI race against China comparable to the Nuclear and Space Races of decades past. Succeeding in this race is critical to our global economic leadership and national security.

The Two-Part Solution: Modernization and Federal Leadership

1. **Modernize Government with AI**

The federal government must lead by example, achieving savings and efficiency through AI adoption. We were very pleased to see this committee's work in advancing $500 million for AI modernization through the Department of Commerce in H.R. 1, the reconciliation package.

2. **A Federal Strategy is Essential**

We need national predictability — not a patchwork of state uncertainty. The interstate nature of AI systems, data flows, and infrastructure demands consistent national standards. A temporary pause on state AI laws – like the one contained in H.R. 1 – gives Congress and the Administration the space to agree on a federal strategy and is necessary to maximize savings, investment, and innovation.

Permitting Reform: Remove Barriers and Unleash Deployment
Every AI application requires reliable and high-capacity broadband networks. Policymakers should use this once-in-a-generation moment to break down existing barriers to accelerate both energy and digital infrastructure deployment.

All-Of-The-Above National AI
America's AI leadership requires full competition in every part of the technology stack. From wireless to fiber technology, to nuclear, natural gas and renewable energy, to open source and closed proprietary models. By supporting all approaches based on user needs and market demand, we unlock the full investment created by intense competition.

Building on This Committee's Rich History
This committee created the national framework and policies for the internet infrastructure and economy that guaranteed American technology leadership. We encourage the Committee to build on that legacy to create bipartisan policy for American leadership in technology, digital and energy infrastructure, and each successive generation of American commerce.

INCOMPAS and the AI Competition Center: Coordinating the National Conversation
Since 1982, INCOMPAS has championed open networks and open markets, and open competition. Through our AI Competition Center, launched in 2023, we are engaging in policy development and education for this critical era.

Conclusion: Seizing America's AI Moment
INCOMPAS, alongside our AI Competition Center, are eager to work with this subcommittee, your colleagues, and broad constituencies across the AI ecosystem to build a national AI framework.

June 2, 2025

House Committee on Energy and Commerce — Subcommittee on Communications and Technology hearing titled *AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology*

Written Testimony of Charles W. "Chip" Pickering Jr.

Chairman Hudson, Ranking Member Matsui, and distinguished members of the Subcommittee:

Thank you for the opportunity to testify before you today on one of the most consequential technology policy issues of our time: ensuring America wins the AI race through modernization and a coordinated federal approach.

I am Chip Pickering, Chief Executive Officer of INCOMPAS, the Internet and competitive networks association. INCOMPAS represents the complete competitive ecosystem — from fiber and wireless infrastructure providers to cloud platforms, AI developers, data centers, energy companies, and emerging technology startups. Crucially, we are the only national association that brings together the full AI stack — a unique coalition positioned to address America's AI future comprehensively.

Before joining INCOMPAS, I was privileged to represent Mississippi's Third District for 12 years and was proud to serve on this very subcommittee for many years. Throughout my time on Capitol Hill, I witnessed firsthand this panel's critical role in shaping the foundational policies that enabled the Internet economy we know today.

1. The AI Race Against China: The Stakes

We are in an AI race against China comparable to the Nuclear and Space Races of decades past. The critical difference is this race is funded primarily by private sector players in AI infrastructure and models. American companies and private investors directed approximately $110 billion to AI in 2024 — nearly 12 times more than China. But this lead is not guaranteed.

China has declared AI a "strategic technology" with plans to lead global AI investments by 2030, establishing a National Data Administration, and leveraging centralized planning. They will graduate almost double the number of STEM students than the United States in 2025 and are overtaking the U.S. in scientific article publications. Meanwhile, the U.S. maintains significant advantages: the world's most dynamic technology sector, unparalleled entrepreneurial culture, democratic values, and strong venture capital networks.

The imperative for continued American leadership requires immediate, coordinated action. The stakes could not be higher — AI will determine our economic competitiveness and national security for generations.

2. The Two-Part Solution: Modernization and Federal Leadership

First: Modernize Government with AI

The federal government must lead by example, achieving savings and efficiency through AI adoption. When federal agencies lag behind private sector AI adoption, inefficiencies and security vulnerabilities are created. This gap must be closed through coordinated federal action — and demonstrable adoption for purposes of public service efficiency and delivery.

We were very pleased to see this committee's work in advancing $500 million for AI modernization through the Department of Commerce in H.R. 1, the reconciliation package. It is a solid start to modernizing and securing federal information technology systems through the integration of commercial AI, automation technologies, and the replacement of antiquated public systems. This investment will:

- Improve operational efficiency and service delivery;
- Enhance cybersecurity through AI-enabled threat detection;
- Demonstrate responsible government AI deployment;
- Create pathways for innovative companies to serve government needs; and,
- Allow the public to see how AI can improve public service outcomes for them.

Second: A Federal Strategy is Essential

Beyond government operations, we must maximize efficiency of fiber, spectrum, and energy networks — the foundational infrastructure for AI success. Harnessing the intersection among these sectors is essential to form a national AI policy. We need national predictability — not a patchwork of state uncertainty. A patchwork of state frameworks at this time would be imprudent. The interstate nature of AI systems, data flows, and infrastructure demands consistent national standards. Moreover, our global aspirations mean we must approach this endeavor as a national priority.

A temporary pause on state AI laws – like the one contained in H.R. 1 – gives Congress and the Administration the space to investigate, publish findings, and agree on a federal strategy that integrates energy, education, investment, national security, workforce development, and access. This moratorium is needed to maximize savings, investment, and innovation.

Consider the real-world impacts of regulatory fragmentation:

- The healthcare innovator who dreams of building an AI-powered product to level the playing field cannot navigate 50 different state requirements for medical AI applications.
- Ambitious educators trying to learn and adopt best practices can benefit from nationally consistent frameworks for AI in education, and investments in AI R&D efforts at leading academic institutions.
- The farmer deploying AI to predict crop yields and engage in multistate commerce faces uncertainty about data use and algorithmic transparency requirements.
- Data center operators building critical infrastructure for American AI developments face uncertainty about varying state requirements for AI governance and data processing.
- Communications providers delivering the high-speed connectivity essential for AI applications cannot efficiently deploy services across multiple jurisdictions with inconsistent AI frameworks.
- Advanced energy companies developing next-generation nuclear technologies to power AI infrastructure need consistent federal frameworks for both energy and AI policy coordination.

This is why federal leadership is essential. Just as this subcommittee provided extraordinary leadership for the Internet revolution in the 1990s, creating bipartisan, durable frameworks, we need that same approach for AI today.

3. Permitting Reform: Remove Barriers and Unleash Deployment

Universal broadband access is a prerequisite to universal AI access. Every AI application — from training large language models to deploying autonomous systems — requires reliable

and high-capacity broadband networks. Policymakers should use this once-in-a-generation moment to break down existing barriers to fast and affordable deployment. We need comprehensive permitting reform across deployment methods — from fiber to fixed wireless, to satellite — that accelerates both energy and digital infrastructure deployment.

Fiber Networks

INCOMPAS member companies are investing billions in fiber networks that provide the high-speed, low-latency connections essential for AI applications. These networks must reach beyond metropolitan areas, and into rural and underserved communities that risk being left behind in the AI economy. AI should not be a bicoastal story — it must be a national one.

However, deployment faces persistent barriers that directly impact America's AI competitiveness, including:

- Restrictions to rights-of-way, poles, and conduits;
- Needlessly lengthy permitting processes that can delay deployment by months and, in some cases, years;
- Imposition of unreasonable, excessive, or arbitrary fees; and,
- Anticompetitive, exclusive arrangements that limit access to residential and commercial multiple tenant environments.

For our domestic cohesion and our geopolitical strength, we need every state to have the tools they need to compete. This isn't just about faster Internet — it's about ensuring every community can participate in the AI economy and that America has the infrastructure foundation to compete globally.

Spectrum Management

AI applications increasingly require real-time data processing and edge computing, making wireless connectivity, including mobile, fixed wireless, and satellite services, essential. To ensure that wireless networks can accommodate AI's capacity requirements, Congress must take action, including reinstating the Federal Communications Commission's spectrum authority as called for in H.R. 1. Additionally in H.R. 1, Congress is also requiring NTIA and the FCC to identify 600 megahertz of spectrum for non-federal, licensed use in the Reconciliation package, which is another important signal that this country intends to optimize its spectrum resources to achieve a digital and AI-enabled future.

Congress must also lead in encouraging federal agencies to adopt robust spectrum sharing frameworks that make more intensive use of this limited resource. As part of this effort, agencies like the FCC and NTIA should promote the utilization of AI in spectrum management. AI can dynamically optimize spectrum use and allow government and private sector engineers to detect and mitigate interference automatically, creating opportunities for maximizing use of spectrum bands.

Moreover, AI technologies and services promise cutting-edge breakthroughs that the government should harness to support the massive growth in IoT devices, autonomous vehicles, and smart infrastructure. This requires both technological innovation and regulatory flexibility that only federal coordination can provide.

Energy Infrastructure

AI cannot survive without American energy — and lots of it. The International Energy Agency (IEA) estimates that global electricity consumption from data centers, AI development, and cryptocurrency could double by 2026. U.S. electricity demand is expected to rise at a 2.4% compound annual growth rate between 2022 and 2030, with data centers accounting for about 90% of that growth.

This critical juncture presents us with an unmatched opportunity: America can take advantage of two major technology revolutions occurring simultaneously. This is an opportunity to holistically revitalize our energy mix, to make it more resilient and secure at the grid level, and to diversify our sources and deliver for the long term. The competition for AI dominance may actually expedite the energy transition in ways that reindustrialize our economy, provide economic opportunity across the country, and nurture a new era of energy abundance and strategic autonomy.

America will need deployment across natural gas, nuclear, and renewable sources. Nuclear energy, which supplied 48% of U.S. carbon-free electricity last year, offers stable, reliable baseload power essential for AI operations. Natural gas will continue to be important, but alternative renewable sources can lead growth in U.S. power generation in the next decade if we enable them. American AI power is inextricably linked to the broadest, most resilient energy mix possible — there is no other way.

We need policies that:

- Accelerate energy deployment through streamlined permitting;

- Modernize grid infrastructure with AI-enabled management systems;
- Support diverse energy sources, including advanced nuclear technologies; and,
- Enable behind-the-meter solutions for data centers and AI facilities.

4. All-Of-The-Above National AI

America's AI leadership requires full competition in every part of the technology stack — from wireless to fiber technology, to nuclear, natural gas, and renewable energy, to open source and closed proprietary models. This balanced approach recognizes that different AI tools serve different purposes, and American leadership requires excellence across the entire spectrum. By supporting all approaches based on user needs and market demand, we unlock the full investment created by intense competition.

Our approach is rooted in core American values that have driven decades of technological innovation: universal service, a broad marketplace of participants, openness, and competition. This approach:

- Creates competitive dynamics that drive innovation;
- Provides choice and flexibility for users and developers;
- Maximizes investment opportunities across different AI approaches; and,
- Ensures no single approach or company can dominate the AI ecosystem.

5. Building on This Committee's Rich History

This committee created the national framework and policies for the Internet infrastructure and economy that guaranteed American technology leadership. History provides our guide. The

Internet policies developed in this committee during the 1990s succeeded because they were bipartisan, balanced, and flexible. They promoted competition, innovation, and investment, while addressing legitimate concerns about security and consumer protection.

This committee's track record proves what's possible. The Internet Tax Freedom Act of 1998 — that "temporary" moratorium renewed repeatedly on a bipartisan basis — prevented a patchwork of state internet taxes from strangling what became today's $5 trillion digital economy. Similarly, this committee's pioneering bipartisan spectrum auctions strategy created a market-based approach that generated over $200 billion while establishing America's wireless leadership. These frameworks unleashed private sector innovation while providing regulatory certainty — unleashing millions of jobs and securing America's geopolitical leadership.

The federal framework that is unlocked by a similar temporary moratorium follows this proven playbook: a temporary federal moratorium that creates space for thoughtful and durable national policy. Just as ITFA prevented 50 different state tax regimes from fracturing the digital economy, comprehensive national policy formation prevents 50 different state AI frameworks from fragmenting our national competitiveness.

Regarding this committee's jurisdiction specifically, this national approach creates both the space and incentive for the Energy and Commerce Committee to perform its historical role: creating bipartisan policy for American leadership in technology, digital and energy infrastructure, and each successive generation of American commerce. The lessons from ITFA and spectrum policy show us the way forward — across the aisle.

6. INCOMPAS and the AI Competition Center: Coordinating the National Conversation

Since 1982, INCOMPAS has championed open networks and open markets, and open competition. Through our AI Competition Center, launched in 2023, we are engaging in policy development and education for this critical era. This process has included:

- Gathering industry and academic leaders on the cutting edge of AI development to serve on our Advisory Council to provide insight based on their respective expertise;
- Working with our members to understand how they deploy AI systems in their own businesses;
- Engaging legislators and their staff on the transformational potential of AI, building a broad coalition of voices;
- Convening policy groups across the critical areas of AI development — namely workforce evolution and resilience, American energy security and leadership, and the power and potential of proprietary and open source models; and,
- Publication of one of the first national policy frameworks for this groundbreaking technology.

Our membership reflects the comprehensive approach needed for American AI leadership. What we need now is the policy framework to unleash that potential.

Conclusion: Seizing America's AI Moment

America has the tools to lead — the most innovative companies, the most dynamic markets, the culture of striving, and the most adaptable institutions in the world. From the data center operators building critical infrastructure to the communications providers connecting our communities, from the venture capital firms funding breakthroughs to the energy innovators

developing next-generation power systems — we have everything needed for success except the policy framework to unleash that potential.

INCOMPAS, alongside our AI Competition Center, are eager to work with this subcommittee, your colleagues, and broad constituencies across the AI ecosystem to build that framework. We will continue to be engaged constructively and substantively as things progress to the Senate and beyond. The foundation you lay today will determine America's AI future. Like putting man on the Moon, AI — powered by vast energy and communications networks across America — requires comprehensive American political leadership and ambition. Let's build it together. And let’s engage with the same bipartisan spirit, sense of shared purpose, and strategic vision that made us the leader of the Internet age.

Mr. HUDSON. Thank you.

Mr. PICKERING. Thank you.

Mr. HUDSON. Mr. Vasishta, you are recognized for 5 minutes for an opening statement.

STATEMENT OF RONNIE VASISHTA

Mr. VASISHTA. Thank you very much.

Chairman Hudson, Ranking Member Matsui, thank you for—and members of the subcommittee, thank you very much for the invitation to speak to you today.

As said, my name is Ronnie Vasishta, and I am senior vice president of telecom at NVIDIA.

NVIDIA, as you may know, is an American full stack accelerated computing company, proud to be helping drive American technology leadership globally. We have spent over three decades inventing the technology that powers modern AI. As you have heard from the Members' opening statements today, AI is not just another app or algorithm. It is the engine behind a new industrial revolution. And just like the roads and electric grids of the past, the countries that build AI infrastructure will reap the rewards of this next era.

At this critical point in time, there is also the need to redefine the telecommunications infrastructure around the world as well by leveraging AI. The convergence between AI and telecoms presents an unprecedented opportunity for renewed U.S. leadership globally.

But we must act quickly. Over the last few decades, the telecom industry has evolved through generations of standards known as 2G, 3G, 4G, 5G. And the industry is now working, as you may suspect, on 6G, with a target completion date of 2030.

Now, while 2030 might sound like a long time to go, we are actually—already the train has left the station, and we are losing time.

The early deployments of 6G may start as early as 2028. What is already clear is that whoever seizes the advantage in the development and the deployment of AI-native 6G will win the 6G race.

The United States invented the foundational cellular wireless technology, but today there are no—there are no American wireless equipment providers. Now is the time to act to regain the U.S. leadership in 6G.

And AI offers a number of advantages for the wireless industry. First, AI can be applied to network operations to increase energy efficiency, to enhance security, to improve network resiliency, and, very importantly, increase spectral efficiency.

Second, future networks will additionally support an entirely new kind of traffic, not just voice, video, and data, but AI traffic, the control and connectivity autonomous vehicles, smart glasses, robotics, and many more applications that we have yet to think of.

Third, putting wireless processing and AI on the same infrastructure—that has never been done before—will enable new economic opportunities for telecos.

AI networks need to be software-defined. This will enable the same infrastructure to underpin both the telecommunications infrastructure and the AI infrastructure. New features and generations and new standards of wireless—think of this—will be software updates rather than the requirement to completely overhaul telecom infrastructure.

And fourth, AI will enable enhanced cybersecurity for telecom networks. AI is essential for real-time threat detection and automated remediation and incident response, as we have heard.

AI can process massive data streams, can quickly identify and neutralize attacks, whether they are occurring on a device or at the network edge or in the cloud. This convergence of AI and wireless infrastructure will fundamentally reshape the global telecommunications landscape.

NVIDIA is working closely and actively with partners across industry and academia to provide the tools and platforms and to drive American innovation for this global ecosystem. Just for an example, in the last couple of days we have been here with other members of the AI WIN Project, which was announced in just March of this year. Booz Allen Hamilton, Cisco, Mitre, the ORAN Development Company, and T-Mobile were all working together to enable this U.S. leadership. This project will deliver American AI-native full stack software defined and secure wireless platform that will enable that U.S. leadership in 6G.

But ensuring U.S. leadership in next-generation wireless networks requires industry and public sector to work together. Congress and the U.S. Government can help ensure this leadership by supporting R&D and continued innovation, by working with U.S. companies together as we set and place our requirements into universal global standards, and enabling and promoting U.S. companies to win at every layer of the AI infrastructure stack.

I am confident that together we can maintain U.S. leadership in AI and regain leadership in wireless communications through the development and global deployment of AI-native wireless telecommunications networks.

Thank you very much for the opportunity to speak to you today, and I look forward to all your questions.

[The prepared statement of Mr. Vasishta follows:]

"AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology"
Hearing Before the United States House of Representatives Energy & Commerce Committee
Subcommittee on Communications and Technology
June 4th, 2025
Written Testimony of Ronnie Vasishta
Senior Vice President of Telecom
NVIDIA

Chairman Guthrie, Ranking Member Pallone, Chairman Hudson, and Ranking Member Matsui, thank you for the invitation to speak with you today, and for your thoughtful engagement on artificial intelligence, telecommunications, and American competitiveness.

My name is Ronnie Vasishta and I am the Senior Vice President of Telecom at NVIDIA.

Many still think of NVIDIA as a chip company, but we are much more. NVIDIA is a full stack accelerated computing company. We've spent over three decades inventing the technology that powers modern AI. Our platforms support breakthroughs in healthcare, manufacturing, transportation, and energy. We serve over 40,000 companies and 6 million developers around the world.

We're proud to be an American company helping to drive American leadership and promote American infrastructure globally. AI is not just another app or algorithm. It is the engine behind a new industrial revolution. And just like the roads and grids of the past century, the countries that build AI infrastructure will define the rules, reap the rewards, and shape the next era.

Today, we are at an unprecedented point of inflection between this new AI-driven industrial revolution and the need to redefine how telecommunication networks are built and delivered. In this new era of AI, telecommunications infrastructure will continue to be critical national infrastructure, essential to any nation's productivity, security, stability, and global leadership but must evolve to meet changing demands. I am here today to talk about the necessary convergence of AI and telecommunications and the opportunity for renewed U.S. leadership it presents us.

Applying AI to telecommunications is not theoretical - it is happening today. In a recent NVIDIA-conducted survey of 450 telecom professionals, 80% of respondents said they believe

that AI is crucial for their company's future success, and two-thirds plan to increase spending on AI infrastructure this year.

Over the last few decades, the telecom industry has evolved based on standards defined by the international telecommunications community. The mobile wireless standards are commonly known as 2G, 3G, 4G, and most recently 5G. The international community is now working on 6G standards with a target completion date of 2030. While this may sound far into the future, the standardization process is well underway and initial field deployments may start as early as 2028. Whoever seizes the advantage in the development and deployment of AI-native wireless network infrastructure will win the 6G race.

Over time, the telecommunications equipment supplier base has consolidated. The United States invented the foundational cellular wireless technology and once led the world in its development but over the last few generations of standards we have lost an American wireless telecommunications infrastructure provider. Other countries have taken over this leadership role and now supply the vast majority of the world's critical telecom infrastructure, including here in the US. If we act now, AI offers a once-in-a-generation opportunity for the U.S. to reclaim leadership in mobile wireless networks.

Key implications of AI and telecommunications

Improved telecom operations: AI is extremely good at optimization. The application of AI to mobile network operations can increase energy efficiency, enhance security, and improve network resiliency. Another key benefit is improved spectral efficiency, which will enable more effective use of limited spectrum. These benefits are essential to the wireless networks of the future as consumers and businesses connect hundreds of billions of devices, including for mission critical applications.

Demand for delivery of new services: Traditionally, telecommunications networks delivered voice, data, and video. In the future, mobile networks will also be called upon to support a new kind of traffic—AI traffic. AI traffic will include the delivery of AI services to the edge, or inferencing at the edge. Mobile networks will support applications such as autonomous vehicles, smart glasses, generative AI services on phones or devices, holographic communication services, collaborative robots, and many more applications that we haven't thought about yet. The transmission of this massive increase in data needs to be resilient, fit for purpose, and secure.

Opportunities for economic growth: For the first time, the wireless ecosystem can spur economic growth without having to make costly investments in infrastructure that is specific to

mobile networks. Currently, telecommunications infrastructure, particularly the Radio Access Network, or RAN, are single-purpose, hardware-defined systems that are custom built for the sole purpose of delivering RAN services. Different vendors lack interoperability, and hardware upgrades are required for each new generation. Moving towards software-defined RAN architecture will enable the same infrastructure stack to run both mobile wireless services and AI applications. This is a game changer.

Enhanced Cybersecurity: In the 6G era, cybersecurity enters a new dimension—where artificial intelligence (AI) becomes a necessary requirement across the topology of the network as well as deeply embedded into every layer of the 6G stack. As 6G networks become decentralized and connect billions of IoT devices, AI is essential for real-time threat detection and automated remediation and incident response. It processes massive data streams to quickly identify and neutralize attacks, whether they are occurring on the device, at the network edge, or in the cloud. Together, AI and AI driven cybersecurity ensure that our hyper-connected world remains resilient, secure, and adaptive.

The convergence of AI and wireless infrastructure will fundamentally reshape the global telecommunications landscape. Fortunately, the U.S. is poised to lead in the development and deployment of these next generation networks.

NVIDIA is uniquely positioned to help drive this evolution. We are working closely with partners across the telecommunications industry and academia to provide tools and platforms to drive American innovation for the global ecosystem. Through our free 6G research software and tools running on accelerated computing hardware, NVIDIA provides a platform for the 6G developer ecosystem to simulate, develop, test and validate groundbreaking algorithms and methods that were not previously possible due to lack of data, tools, and hardware acceleration. Our 6G research platform is empowering thousands of researchers globally, including major universities, startups, and 6G research institutions in the United States. As these developers use this tool, it drives software improvements and builds a global ecosystem around U.S. platforms.

Today, mobile network operators around the world are investing in multi-purpose AI infrastructure that is monetizable and software upgradable, enabling them to run AI training and inferencing alongside mobile wireless services. We are working with T-Mobile in the United States, SoftBank in Japan, and others to validate the commercial, performance, and other benefits of software defined Radio Access Networks running on AI infrastructure

We recently announced the AI WIN Project, along with Booz Allen Hamilton, Cisco, MITRE, the ORAN Development Corporation (Cerberus/ODC), and T-Mobile. AI aims to deliver an

American, AI-native, full-stack, software-defined and secure wireless platform that will enhance spectral efficiency and lower operational costs on a unified, accelerated infrastructure, thereby enabling U.S. global leadership in 6G and beyond.

Conclusion: Ensuring U.S. leadership in next generation wireless networks requires immediate action to ensure U.S. companies lead the way in setting the standards, developing the infrastructure stack of the future, and deploying AI-native network solutions.

Congress and the U.S. government can help ensure U.S. leadership in next generation wireless networks by:

- Supporting R&D and continued innovation, with a focus on software defined networks. This includes supporting telecommunications work at the National Science Foundation, the National Telecommunications and Information Agency, and the Department of Defense's Office of Research and Engineering.
- Encouraging U.S. companies to participate in international standard making bodies, such as 3GPP, to promote technologies developed in the US,
- Enabling U.S. companies to win at every layer of the AI native wireless stack both domestically and in deployments around the world.

The telecommunications industry is facing a fundamental evolution with the adoption and deployment of AI and U.S. companies are working together to drive innovation and lead globally in the development and deployment of this new network architecture.

Thank you for the opportunity to speak to you today and I look forward to your questions.

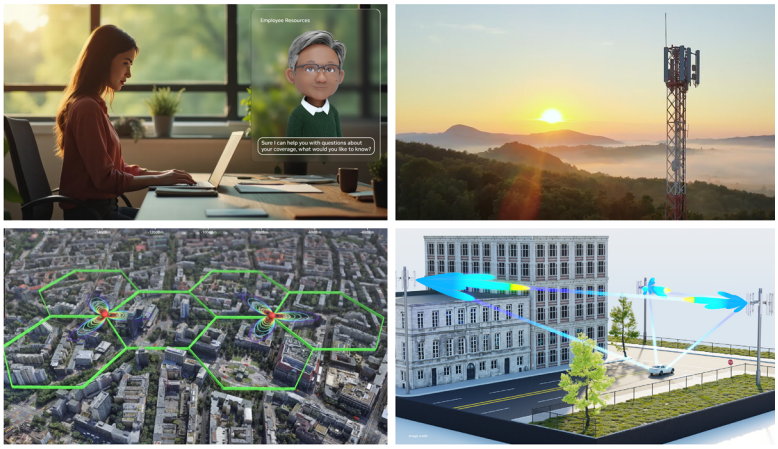
Attachments:

State of AI in Telecommunications: 2025 Report

Survey Report

NVIDIA

State of AI in Telecommunications: 2025 Trends



The Trends Driving AI in Telecommunications

For the third annual edition of NVIDIA's ***State of AI in Telecommunications*** report, we surveyed 450 telecom professionals across the globe to evaluate how the industry is investing in, deploying, and benefiting from AI. Results indicate that the industry has embraced AI throughout diverse lines of business, from external solutions such as virtual customer service assistants to integrating AI into the radio access network (AI-RAN).

The survey found that 97 percent of telecom respondents are assessing or adopting AI with the goals of enhancing customer experiences and employee productivity, improving network operations, reducing costs, and opening new business opportunities. Specifically, generative AI adoption has grown within the telecom industry, with half of respondents saying that they've already implemented their first generative AI use case.

AI investments continue to expand within the industry, with 65 percent of respondents indicating an increase in 2025. The industry expects to prioritize these investments across building AI infrastructure, accelerating adoption through third-party AI solutions, and training staff on AI skills.

Perspectives From the Field

The survey focuses on telecommunications professionals who are the primary agents responsible for investing, implementing, and delivering AI to their companies. The survey was fielded from October to November 2024 and included a mix of single-choice and multiple-choice questions. Respondents represented a global mix of telecommunications companies, including network operators, system integrators, internet service providers, network equipment providers, independent software vendors, and more. Sixty percent of respondents are senior executives and directors, while 40 percent are individual contributors. In terms of roles, 80 percent of the respondents represent engineering, network operations, architects, data engineering, cloud ops, and IT. This year, the survey includes a dedicated section on the adoption, implementation, and challenges of generative AI solutions.

Key Insights on AI in Telecommunications

Increased AI Adoption and Investment

97% said they're adopting or assessing AI in their operations.

49% said they're actively using AI in their operations, up from 41 percent in 2023, indicating a growing trend of AI integration in the telecom industry. And 65 percent of respondents said that they plan to increase spending on AI infrastructure in 2025.

Integrating AI Into Network Operations Gains Traction

37% cited network planning and operations, including AI-RAN, as an investment priority.

Investing in AI solutions for network infrastructure has become a growing priority within the telecom industry. Network planning and operations, including integrating AI into the radio access network, was cited by 37 percent of respondents as an investment priority, while another 33 percent said they're investing in AI for field operations optimization. Future areas of investment include using AI to monetize 5G and research and development of 6G networks.

Improving Customer Experiences the Top Use Case

44% said optimizing customer experiences has been a priority,

making it a top investment priority for the third year in a row. While using AI for customer experiences is still a top use case, other priorities have begun to catch up, especially investments in AI-enabled network infrastructure.

Generative AI Goes Mainstream

49% of respondents said they've actively adopted or are assessing generative AI use cases.

Of respondents who have shown interest in adopting generative AI, 84 percent are planning to offer generative AI services to their customers, indicating that they're looking toward generative AI as a business opportunity.

Increase in Open-Source AI Solutions

40% indicate they plan to use open-source tools,

an increase from 28 percent in 2023. Respondents noted a trend toward using multiple approaches for AI development. In-house AI solutions also grew from 27 percent to 37 percent year over year. And engagement with third parties to codevelop AI solutions will continue, according to 43 percent of respondents.

AI's Biggest Business Impact? Employee Productivity.

58% reported employee productivity as the biggest benefit of AI.

This was one of the most significant findings of this year's survey, up from 33 percent in 2023. In terms of business metrics, 83 percent of respondents agreed that AI had a net positive revenue impact, and 77 percent confirmed AI helped to reduce costs.

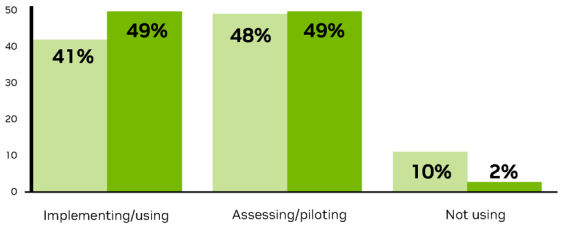
Adoption of AI Reaches an All-Time High in Telecom

The telecom industry has shown increased interest in adopting AI and continues to take steps to integrate it across infrastructure and lines of business. Overall, 97 percent of respondents said that their companies are engaged with AI, up from 90 percent in 2023. Respondents are split in terms of active implementation and assessment of AI, with 49 percent actively using it and another 49 percent in an assessment phase of trials or pilots. Respondents who said they're not using or planning to use AI fell from 10 percent in the 2023 survey to just 3 percent this year.

97%

of telcos are adopting AI. Nearly half are already deploying it.

Current AI Stage 2023 2024



Globally, data analytics was the most common computational workload for AI among survey respondents, with 61 percent saying they're using or assessing its use. At 49 percent, generative AI was the most popular deep learning workload.

49%

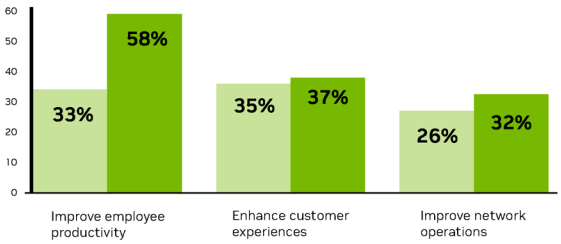
of respondents said generative AI was the most popular deep learning workload.

AI Is Driving Tangible Business Impact in Telecommunications

AI Boosts Employee Productivity and Improves the Bottom Line

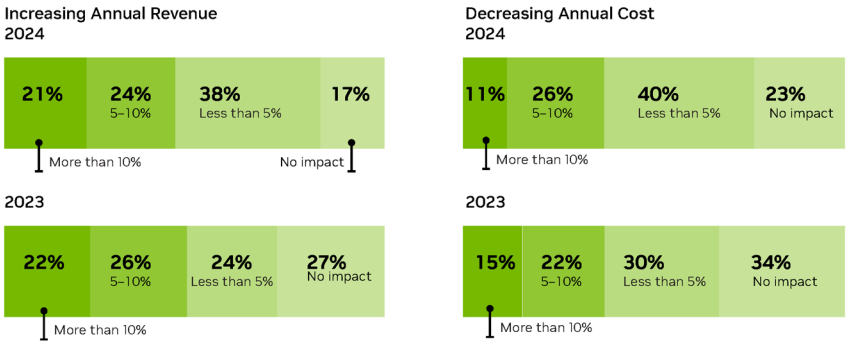
The greatest impact of AI in the telecommunications industry has been on employee productivity, according to 58 percent of respondents, up from 33 percent in 2023. Enhancing customer experiences was the second-highest response on how AI has helped improve business operations, according to 37 percent of respondents. Thirty-two percent agreed that AI helped improve network operations, as AI-defined networks become more commonplace.

Top 3 Improvements With AI 2023 2024



Respondents said that their companies have seen AI positively affect their bottom line, with most agreeing that AI has helped to increase revenue and reduce costs. Eighty-three percent of survey respondents confirmed that AI is helping to increase annual revenue, with 21 percent saying that AI had contributed to a more than 10 percent increase in specific areas of business. Seventy-seven percent agreed that AI helped reduce annual operating costs.

AI Impact on Revenue and Cost



Challenges in AI adoption persist, with the three main challenges from our 2023 survey either increasing or remaining at the same level in 2024.

The need for AI experts—such as data scientists, engineers, architects, and developers—has been the key obstacle to AI adoption at scale in telecommunications, according to 43 percent of respondents, up from 34 percent in 2023. Inability to quantify the return on investment (ROI) was cited by 38 percent as the main challenge, up from 33 percent in 2023. Lack of budget for AI adoption was cited by 30 percent, the same as 2023.

43%

of respondents say the need for AI experts has been the key obstacle to AI adoption at scale in telecommunications.

AI Investment to Increase in 2025

Telecommunications Companies Are Looking to Ecosystem Partners to Scale Enterprise AI

The maturation of AI within the telecom industry will lead to more AI investment in the coming year.

At 65 percent, roughly two-thirds of telecom respondents are planning to increase their AI infrastructure budget in 2025. This is also underscored by the industry's confidence in AI's role for driving business success—77 percent of respondents agreed that "AI will be a source of competitive advantage for my company" and 80 percent agreed that "AI is important to my company's future success."

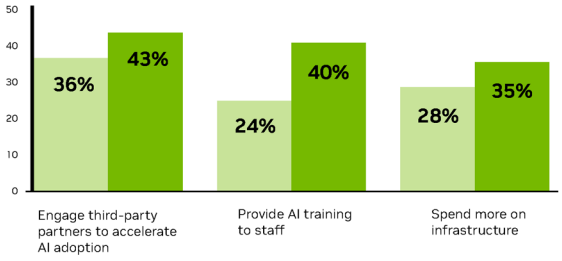
65%

of respondents say they're planning to increase their AI infrastructure budget in 2025.

Investment in AI will be spread across different priorities, but the primary theme is that spending will be concentrated on resources for further development and adoption of AI at scale. The top investment priority in the coming year, cited by 43 percent of respondents, will be to engage third-party partners, such as independent software vendors, global system integrators, and service delivery partners, to accelerate AI adoption. The next-highest priority will be investing in AI training for employees to take advantage of the productivity companies can gain with AI solutions. This is also in response to one of the main challenges

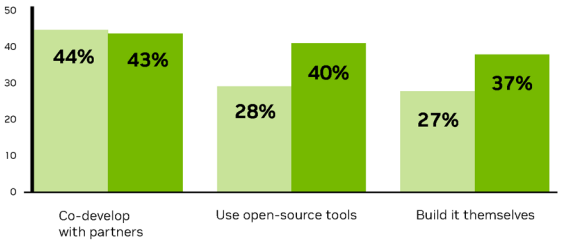
previously mentioned—lack of in-house AI expertise. Thirty-five percent of respondents said they'd spend more on AI infrastructure next year, while 34 percent are ready to invest in identifying additional AI use cases.

Top 3 AI Spending Priorities 2023 2024



Telecommunications companies utilize a mix of internal resources and external partners to develop their AI solutions. Forty-three percent of respondents noted that they co-develop AI with partners, while 37 percent said they build it themselves. Forty percent of telecom professionals surveyed use open-source tools.

How They Develop AI Solutions Today—Top 3 2023 2024

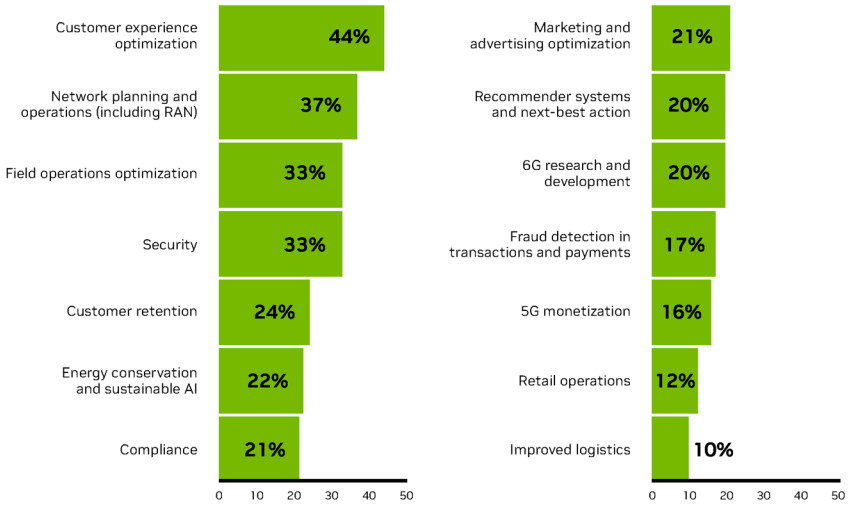


Integrating AI Into Telecommunications Network Infrastructure

AI Is Finding Its Way Into the Full Operational Stack

AI adoption is spreading throughout telecommunications lines of business, as evidenced by the wide range of use cases that companies have invested in. The top investment priority for AI has been customer experience optimization at 44 percent. Network planning and operations, including integrating AI into RAN infrastructure, was the second-most-cited investment area at 37 percent. Similarly, 33 percent of respondents said they invested in AI to optimize field operations in the last year.

AI Use Cases Today—2024



Infrastructure will remain a priority use case in the coming year, with 37 percent citing network planning and operations as the top use case for investment in the next 12 months. Using AI to fortify cybersecurity was next at 36 percent, followed by customer experience optimization at 35 percent.

Among those that noted they're investing in AI for 5G monetization and/or 6G research and development, about two thirds of respondents—66 percent—confirmed they're investing or considering investing in deploying AI services on the RAN for operational and user needs. Fifty-three percent are investing in using AI to enhance spectral efficiency for the RAN. And 50 percent are investing in colocating AI and RAN applications on the same infrastructure. These are the themes of AI-RAN, which combines accelerated computing into the network infrastructure stack, providing a software-defined, accelerated platform that can power RAN and AI from the same infrastructure.

5G and 6G Investment Priorities

66%
deploying AI services on the RAN for operational and user needs.

53%
using AI to enhance spectral efficiency for the RAN.

50%
colocating AI and RAN applications on the same infrastructure.

Generative AI Adoption, Benefits, and Challenges

Telcos Are Leveraging Generative AI to Support Internal and External Business Goals

Telecommunications companies have embraced generative AI, spreading it throughout their operations and lines of business, including customer-facing solutions, back-office assistants, and within-network infrastructure. Generative AI is a new application of AI that uses neural networks to identify patterns and structures within existing data to generate new and original content, such as text, images, video, audio, 3D assets, and more.

Of respondents who are assessing or have deployed generative AI, 54 percent said they've already deployed their first generative AI service or application, with another 34 percent saying they'd do so within the next year.

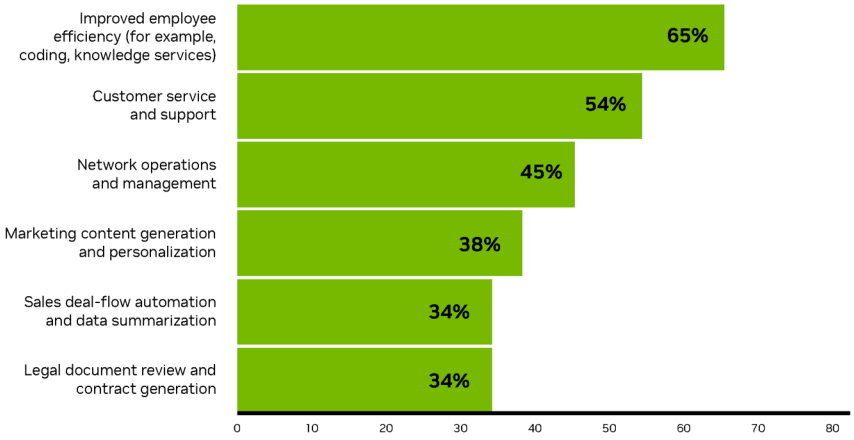
Employee productivity and efficiency, such as coding or content-generating assistants, is the most prominent use case of generative AI, according to 65 percent of respondents. Customer service and support is the next-most-cited use case of generative AI at 54 percent.

The biggest year-over-year jumps in how respondents reported using generative AI have been within sales and legal teams. Thirty-four percent reported using generative AI for sales deal-flow automation and data summarization, up from 22 percent in 2023. And 34 percent said they've used generative AI in legal document review and contract generation, up from 21 percent last year.

54%

of respondents said they've already deployed their first generative AI service or application.

Top 6 Gen AI Use Cases—2024



Overall, 84 percent of telecom respondents said that their companies plan to offer generative AI solutions externally to customers. Providing generative software-as-a-service (SaaS) solutions was the top use case at 52 percent. A little more than a third of survey respondents, 35 percent, said they'll offer generative AI as a platform for developers, including compute services, while 34 percent said they're planning on offering generative AI compute infrastructure.

Telecom companies are realizing a wide range of ROI in generative AI. The top was improved employee efficiency, such as coding assistants or knowledge services (for example, creating content based on a user query from a specific data source). Customer service and support had the next-greatest ROI, followed by network operations and management.

The most important factor when inferencing generative AI models was accuracy of the results, according to 39 percent of respondents, far and away the leading answer in the survey. Flexibility of deployment and data residency and compliance were the next-most-important factors, cited by 14 percent of respondents each.

Similar to the challenges faced in general AI adoption and implementation, a third of respondents, 34 percent, said that their main challenge in implementing generative AI was an inability to quantify ROI. A lack of AI experts to implement generative AI was also cited by about a third of respondents at 32 percent. And 21 percent said that a lack of budget was their main challenge in adopting generative AI.

Looking Forward

AI is embedding itself into the telecommunications industry. Our third annual survey revealed how development and deployment continue to grow as AI transforms telecom companies in nearly all aspects, from networks to operations.

Adoption of AI is especially important for telecom companies, because of their unique placement in the daily lives of nearly every person on the planet. Not only are they key enablers of foundational services such as voice and internet, but they're also the trusted source of local infrastructure, becoming a platform for innovation and adoption of all kinds of software, including AI. Telecom operators will be both adopters of AI and the engine that pushes AI solutions to billions of customers in nearly every country on the planet.

We can see this clearly in how the telecommunications industry is adopting AI into the network stack. The next evolution of software-defined networks is AI-native networks, where AI enables both wired and wireless networks to become more energy- and cost-efficient and offer the flexibility to adapt to varying workloads and conditions.

In wireless cellular networks, AI is helping to drive the monetization of 5G networks, while also playing a critical role in the research and development of 6G technologies. And with AI-RAN in wireless cellular networks, telecom operators can both be the primary users of AI and the hub for how AI is deployed at the edge in local regions and territories.

Generative and agentic AI have the potential to spread to all aspects of the telecommunications industry—increasing employee productivity, reimagining customer experiences, unlocking new revenue opportunities, and building a future-proof platform for network operators to further develop domain-specific applications.

As AI adoption matures in telecommunications, the benefits will become more widespread. It will help drive new revenues, increase ROI, and deliver powerful new applications and services while boosting network performance and operational efficiency.

Ready to Get Started?

To learn more about how innovative telecom companies are using AI and generative AI, visit nvidia.com/telco-ai

NVIDIA

Mr. HUDSON. Thank you very much.
Mr. Shea, you are recognized for 5 minutes.

STATEMENT OF JIM SHEA

Mr. SHEA. Chairman Hudson, Ranking Member Matsui, and members of the subcommittee, thank you for the opportunity to be with you and testify today.

I am Jim Shea, CEO of DeepSig, a small business bringing artificial intelligence software for wireless communications and sensing to market. Today, I will outline how AI is transforming 5G, enabling superior spectrum management, and providing essential capabilities for national defense and everyday applications.

DeepSig, Inc., headquartered in Arlington, Virginia, was founded in 2016 by me and Dr. Tim O'Shea to evolve and bring to market AI wireless technology that Tim developed at Virginia Tech. The company's 48 employees are focused on delivering AI sensing and communications software to meet commercial and defense needs.

Working with partners such as Intel, NVIDIA, and Qualcomm, DeepSig's AI-based OmniPHY software replaces traditional wireless processing algorithms with AI and 5G systems.

When you make a call, the signal from your mobile travels to a base station, often reflecting off of multiple buildings and obstacles while competing with interfering signals. Traditional wireless algorithms employ a simplified one-size-fits-all approach to pull signals out of noise. AI, on the other hand, can learn the local wireless environment by monitoring received signals to rapidly develop AI models that better sort signals from noise and impairments, dramatically improving spectrum efficiency and reducing dropped calls.

This breakthrough extends to 5G massive MIMO technology, flight panel antennas that focus wireless signals at individual users. Traditional massive MIMO algorithms use a library of fixed antenna beams, but AI can learn the best beam shapes and directions for each user to optimize performance and the user experience.

Taken together, these and other AI technologies are referred to as AI, wireless, native wireless. AI-native is seen as a key enabling capability in 6G as it evolves through the standardization process.

U.S. leadership in AI-native, coupled with Open RAN Access, ORAN, that replaces custom hardware with commodity servers, will dramatically reduce costs and offer a path to compete with Huawei and other concerning network vendors.

AI is enabling rapid sensing of the wireless environment. Traditional sensing approaches are painfully slow and require significant analysis by skilled engineers and weeks or months of effort to develop new code when new signals are encountered.

DeepSig's OmniSIG AI sensing software has been trained to detect, classify, and locate nearly all types of signals ranging from narrow-band handheld radios to wide-band radars, often up to 1,000 times faster than traditional approaches. Like other AI systems, OmniSIG can learn new signals in a matter of hours after being presented with new signal data.

Exponentially increasing mobile data needs for consumers, industrial, and defense applications require more wireless spectrum.

Sharing with DoD and other incumbent users is under study, but only on a limited basis. The CBRS band shares spectrum with U.S. Navy ship-based radars. However, new proposed bands have incumbent ground and airborne users that move far faster than ocean-based ships. With the integration of AI, rapid detection can inform commercial networks to vacate or steer wireless beams away from the incumbent user.

Another important application involves addressing wireless intrusion and base station spoofing. Persistent and growing threats concern both network owners and the government due to their increasing scale and sophistication. By continuous monitoring of the spectrum, AI can detect fake base stations such as those discovered last month in Turkey that were covertly transmitting information about local leader population back to China.

Finally, as we have seen in Ukraine, spectrum sensing and other electronic warfare are capabilities where the U.S. must regain leadership to protect our forces. Adversaries continually change their signals and can only be countered by timely detection. The ability to quickly learn new signals is paramount to ensure our defense systems can quickly respond to threats. Small, innovative businesses such as DeepSig deliver off-the-shelf AI software, accelerating the likes of Anduril, CACI, Lockheed Martin, and other partners, giving them the ability to respond to rapidly changing threats.

Leadership in AI-native and wireless sensing technologies offers the U.S. a path to reclaim global leadership in mobile wireless technology. A special thank you to this committee for your leadership and helping the NTIA Public Wireless Supply Chain Innovation Fund become a reality. DeepSig has been honored to receive three grants in partnership with Airspan, Qualcomm, and Fujitsu, and is rapidly advancing our AI software into 5G and 6G to take part in the resurgence of U.S. wireless leadership.

The convergence of AI wireless represents a transformative moment. The United States has been the innovative ecosystem, talent, and industrial partnerships necessary to lead this transformation. Working together, American industry and government can ensure that the next generation of wireless infrastructure and sensing technology is made in America.

Thank you for providing me the opportunity to testify, and I would be happy to answer any questions that the committee members may have. Thank you.

[The prepared statement of Mr. Shea follows:]

AI in the Everyday:

Current Applications and Future Frontiers in Communications and Technology

Jim Shea
DeepSig, Inc
House Energy and Commerce
June 4, 2025

Chairman Hudson, Ranking Member Matsui, and members of the subcommittee, thank you for the opportunity to be with you and testify today. I am Jim Shea, CEO of DeepSig Inc., a small business focused on bringing Artificial Intelligence (AI) software for Wireless Communications and Sensing to market. Today, I will outline how AI is transforming 5G, enabling superior spectrum management, and providing essential capabilities for national defense and everyday applications.

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Working with partners such as Intel, Nvidia, and Qualcomm, DeepSig's AI based OmniPHY® software replaces traditional wireless processing algorithms with AI in 5G systems. When you make a call, the signal from your mobile phone travels to a base station often reflecting from multiple buildings and obstacles while competing with interfering signals. Traditional wireless algorithms employ a simplified one-size fits all approach to pull signals out of the noise. AI on the other hand, can learn the local wireless environment by monitoring received signals to rapidly develop AI models that better sort signals from noise and impairments, dramatically improving spectrum efficiency and reducing dropped calls. This breakthrough extends to 5G massive MIMO technology – flat panel antenna arrays that focus wireless signals at individual users. Traditional massive MIMO algorithms use a library of fixed antenna beams but AI can learn the best beam shapes and directions for each user to optimize performance and the user experience. Taken together, these and other AI technologies are referred to as AI-Native Wireless. AI-Native is seen as a key enabling capability in 6G as it evolves through the standardization process.

US leadership in AI-Native coupled with Open Radio Access Networks (ORAN) that replaces custom hardware with commodity servers will dramatically reduce cost and offer a path to compete with Huawei and other concerning network vendors.

AI is enabling rapid sensing of the wireless environment. Traditional sensing approaches are painfully slow and require significant analysis by skilled engineers and weeks or months of effort to develop code when new signals are encountered. DeepSig's OmniSIG® AI sensing software has been trained to detect, classify, and locate nearly all types of signals ranging from narrowband handheld radios to wideband radar often up to 1000 times faster than traditional approaches. Like other AI systems, OmniSIG can learn new signals in a matter of hours after being presented with signal data.

Exponentially increasing mobile data needs for consumer, industrial and defense applications require more wireless spectrum. Sharing with DOD and other incumbent users is under study but only on a limited scale. The CBRS (Citizens Broadband Radio Service) band shares spectrum with US Navy ship-based radars; however, new proposed bands have incumbent ground and airborne users that move far faster than ocean-based ships. With the integration of AI, rapid detection can inform commercial networks to vacate or steer wireless beams away from the incumbent user.

Similarly, AI sensing can detect and locate unintended interference from malfunctioning devices that impair 5G and other wireless systems. Currently, wireless carriers locate interfering sources by expensive "truck rolls' of field service and engineering teams. AI offers a way to automate this process. Rather than responding to customer complaints of poor service, DeepSig is working to implement continuous monitoring and has demonstrated the ability to locate malfunctioning devices before interference increases to a level that impairs a network.

Another important and timely application involves addressing wireless intrusions and base station spoofing. Persistent and growing threats concern both network owners and the government due to their increasing scale and sophistication. By continuous monitoring of spectrum, AI can detect fake base stations such as those discovered last month in Turkey that were covertly transmitting information about the local Uyghur population back to China.

Finally, as we have seen in Ukraine, spectrum sensing and electronic warfare are capabilities where the US must regain leadership to protect our forces. Adversaries continually change their signals and can only be countered by timely detection. The ability to quickly learn new signals is paramount to ensure our defense systems can quickly respond to threats. Small innovative businesses such as DeepSig, deliver off-the-shelf AI software, accelerating the likes of Anduril, CACI, Lockheed Martin and other partners, giving them the ability to respond to rapidly changing threats.

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The convergence of AI and wireless represents a transformative moment. The United States has the innovation ecosystem, technical talent, and industrial partnerships

necessary to lead this transformation. Working together, American industry and Government can ensure that the next generation of wireless infrastructure and sensing technology is Made in America.

Mr. HUDSON. Thank you. Very well said and on time.

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

STATEMENT OF ASAD RAMZANALI

Mr. RAMZANALI. Chairmen Guthrie and Hudson, Ranking Members Pallone and Matsui, members of the subcommittee, thank you for holding this important hearing and having me back to this room.

My name is Asad Ramzanali, and I am the director of AI and tech policy at the Vanderbilt Policy Accelerator. I previously worked in the tech industry and in government, including for a member of this subcommittee. My testimony reflects my own views and does not represent Vanderbilt or anybody else.

Today I will speak to three things: First, I will share a framework for analyzing the whole picture of AI. Then I will describe how to achieve long-term American leadership in AI. And finally, I will describe this committee's history in enacting guardrails to mitigate real harms from powerful technologies.

To understand AI, many use the framework of a technological stack. My written testimony illustrates one version of that with four layers on how AI is used and developed. It is applications, models, cloud computing, and chips.

Let me go through that. Applications, like chat bots, are what you use. They sit atop models which are large pieces of software that operate in cloud computing data centers that are full of chips, often specialized for AI.

Of interest to this subcommittee, those data centers are connected to high-capacity fiber. This framework helps illustrate that each layer has distinct features and can be analyzed for its distinct policy questions and has known policy solutions.

Second. American leadership in AI is critical to our geopolitical competition with the People's Republic of China. Many interpret this to mean building larger versions of today's AI models. However, just building larger data sets for today's AI models will not yield a lasting national advantage. For long-term American leadership in AI, we should pursue a strategy based on our historic technological advantages, like public investment in R&D, supporting startups, enabling all Americans to benefit from technology, and mitigating its harms.

I detail these in my written testimony, but I will focus on the latter two for now.

This subcommittee has led the charge to increased broadband access and adoption. Put simply, America can't truly lead in AI if not all Americans can benefit from AI. The bipartisan BEAD and Digital Equity Programs are critical to closing the digital divide, and they should get back on track.

Next, this committee should continue its tradition of encouraging powerful technologies while mitigating real-world harms through bipartisan legislation. During the second industrial revolution, at the end of the 19th century, society faced a different powerful technology. It was that of railroads. Chairman Hudson, you know that Franklin, Virginia, had its beginnings as a rail stop. Ranking Member Matsui, you know that Sacramento was the terminus for the

Transcontinental Railroad. Farmers, however, got the short end of the stick for a long time. Railroads charged farmers more for their short-haul shipments than they charged large companies to ship across the country. So States stepped in and they passed laws to ban this kind of price discrimination. These laws didn't stop industrialization or slow the technology. They mitigated a real-world harm.

Based on State laws, Congress later stepped in to enact these kinds of protections nationally. Specifically, your predecessors on this committee passed bipartisan laws, like the Hepburn Act, named for the former chair of this committee, to require fair terms for farmers, price transparency for small businesses, and an end to vertical integration that harms competition. I tell this story to illustrate that State and Federal laws can encourage positive aspects of a powerful technology while mitigating its harms.

Just as they did with railroads, States today are leading the charge to mitigate the harms of AI. For railroads, Congress passed Federal laws commensurate with State protections. On AI, the House passed a 10-year moratorium on State guardrails. This is a different path representing a major policy shift in AI and from how powerful technologies have been regulated in the past. This moratorium would wipe away real guardrails protecting real people and strip millions of Americans of rights promised to them by their State lawmakers without commensurate Federal protections.

This doesn't mean Congress shouldn't act on AI. As I said earlier, investing in R&D, supporting startups, those are necessary. The bipartisan House framework that Mr. Obernolte and others have put together has a lot of really good ideas for policy.

This committee should also reinvigorate bipartisan efforts on privacy and to protect kids and work with the administration on advancing BEAD and Digital Equity Programs.

In closing, thank you for inviting me to be here with you today, and I look forward to your questions.

[The prepared statement of Mr. Ramzanali follows:]

Testimony of Asad Ramzanali
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Hearing on
AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology
before the Subcommittee on Communications and Technology
Committee on Energy and Commerce
United States House of Representatives
June 4, 2025

Chairmen Guthrie and Hudson, Ranking Members Pallone and Matsui, and members of the Subcommittee, thank you for holding this important hearing and inviting me to appear before you today.

My name is Asad Ramzanali, and I'm the Director of Artificial Intelligence and Technology Policy at the Vanderbilt Policy Accelerator (VPA), a center at Vanderbilt University. I have fifteen years of experience working in the technology industry and in technology policy, including serving in the White House Office of Science and Technology Policy (OSTP). Prior to that role, I was a staffer here on Capitol Hill, both in the Senate and for a member of this Subcommittee. I started my career in Silicon Valley – first on the corporate strategy team at Intuit, then managing the Financial Solutions Lab, which invested in early-stage startups.

Summary

Well before chatbots, AI was in our lives, often playing a behind-the-scenes role in many of the daily interactions people have online. For the purposes of policy analysis, it is useful to think of AI as a technological stack with four layers: (1) business- and consumer-facing applications built on (2) AI models developed and accessed using (3) cloud computing data centers that use (4) high-performance AI-specialized chips. The data centers that host cloud computing require fiber-optic network connectivity, substantial energy, and cooling infrastructure (e.g., water).

American leadership in AI is critical to our geopolitical competition with the People's Republic of China (PRC). While many see this competition narrowly by focusing only on today's AI capabilities, to sustain long-term American leadership, we must have a strategy that centers on our historic technological advantages: substantial public investment in research and development (R&D), supporting startups, enabling all Americans to benefit from technology, and mitigating the societal harms of technology. Interesting AI R&D is emerging today that can improve efficiency for many areas of the Subcommittee's focus, such as spectrum sharing, next-generation 9-1-1, and radio access networks (RAN).

While AI is powerful, our country has a long history of using tried-and-tested policy tools to address the problems presented by powerful technologies. Today, many uses of AI cause or

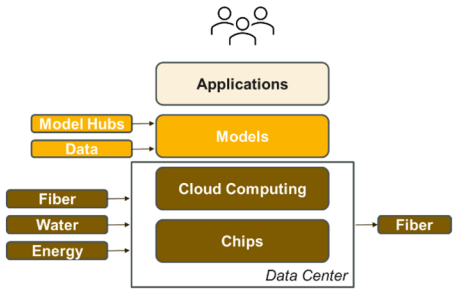
accelerate real-world harms, which sometimes violate existing laws and sometimes require new regulations. This is an area where states are making important progress. More will be needed by states and by Congress to mitigate harms to consumers and competition.

This Committee has been central to the American tradition of enabling important new industries based on powerful technologies to flourish while mitigating real-world harms through thoughtful bipartisan legislation. During the Second Industrial Revolution, it was this Committee that protected farmers and small businesses from real abuses by the powerful technology of that era, railroads. Congress should continue that tradition by encouraging the enforcement of current federal and state laws that may apply to AI, allowing states to remain the laboratories of democracy, and enacting new laws where gaps exist.

I. AI is Best Understood as a Technological Stack

Today's interactive chatbots that generate text, images, audio, video, and software code, along with those that promise 'agents,' have grabbed everyone's attention since the release of ChatGPT in 2022. However, AI has long been in our lives. AI enables voice assistants, mobile phone face-unlock, GPS driving directions, search engines, social media feeds, online shopping, targeted ads, bank fraud alerts, and spam email filters.[1] AI is also being used or has been used in ineffective, biased, or troubling ways in criminal justice and law enforcement,[2] especially involving facial recognition;[3] medicine;[4] financial services;[5] search engines;[6] social media feeds and ads;[7] surveillance;[8] robocalls;[9] and more.

I have found it helpful to break AI into its component parts, as depicted in the accompanying figure. AI is commonly described as a technological stack,[10] where the top layer represents an application that consumers or businesses use, and the bottom layers represent the physical infrastructure necessary to develop and use AI. The data centers that house the physical layers of the stack require high-capacity fiber connectivity for transferring data in from businesses and out to users. Businesses and consumers are only able to access the applications if they have access to high-speed internet, which has long been a key priority of this Subcommittee.



Like any model, this depiction is overly simplified. Many important inputs to AI are not illustrated, including a robust R&D ecosystem, an educated and capable workforce, a competitive marketplace, internet access, intellectual and creative content, a robust rule of law, and even a California state ban on noncompete agreements that enables startup formation.

This stack framework helps illustrate that each layer presents its own policy issues, which often have known policy solutions. For example, breaking down the chips layer into design and

fabrication (i.e., manufacturing), along with assembly, testing, and advanced packaging, revealed that semiconductor manufacturing was becoming highly concentrated in a precarious geography (i.e., Taiwan), leading Congress to use industrial policy tools and pass the bipartisan CHIPS Act.[11]

II. America Must Maintain its Lead

American global leadership has long depended on maintaining a technological advantage, and this remains true today for AI in our geopolitical competition with the PRC.[12] Some view American leadership in narrowly in the context of today's AI, recommending increasingly large-scale versions of today's AI models, which means building ever more energy-consuming data centers, often with the aid of government support. However, I urge you to pay attention to the larger picture for maintaining American leadership in AI, which requires (A) investment in R&D, (B) supporting startups, and (C) enabling all Americans to benefit from AI.

A. Investment in R&D

Today's private sector advances in AI build on a history of R&D funded by American taxpayers. From the 1960s onward, federal agencies funded R&D[13] in what now serves as the foundation for modern AI. This research became useful as the three inputs to AI became increasingly available: computer processing power (i.e., compute), digitized data, and advanced algorithms.[14] Government R&D funding also played key roles in other technologies critical to AI, including advanced semiconductor technologies, GPS, the internet, and smartphones.[15]

Unfortunately, the U.S. is now decreasing overall federal R&D funding, with AI R&D funding being far from where it needs to be, while at the same time the PRC is increasing its investments. Last year, the PRC announced a 10% increase in public funding for R&D[16] while the U.S. decreased non-defense federal R&D by the same amount.[17] This year, science agencies and the universities they fund are experiencing even more damaging cuts, and the proposals for next year are more severe.[18] For AI R&D specifically, in fiscal year 2024, the federal government invested $3 billion in AI R&D,[19] though some recommend an order of magnitude more.[20]

In addition to the amount of spending, *how* the federal government invests in R&D matters. Some parts of AI R&D show early promise but are fundamentally aimed at public missions, beyond market incentives. For example, last June, OSTP hosted AI Aspirations, a conference to show several big visions for how AI can be used toward public missions, such as rapid development of therapeutics, development and delivery of individualized education, and enabling more accurate and granular weather predictions.[21]

Publicly funded, shared resources for compute and data can significantly accelerate AI R&D. Part of what makes AI R&D difficult outside of a few well-capitalized companies is the cost of developing and using large AI models. Even the largest American universities lack the resources to make the investments necessary for AI research demands.[22] A solution for this problem is the National AI Research Resource (NAIRR),[23] which is operating as a small-scale pilot at the National Science Foundation and is an example of a trend of countries investing in public AI.[24]

Beyond investing in research, we need to attract and foster the best and brightest to research and develop AI in the U.S. This means growing talent domestically by strengthening universities and recruiting and retaining the best minds from across the world. Today's generative AI is based on the transformer model (the 'T' in GPT), first introduced in a technical paper in 2017.[25] The eight researchers who authored the paper were working in the U.S. for an American company, but six were born outside the U.S. and the other two are children of immigrants.[26] A recent analysis shows that 60% of the top AI startups in the U.S. have at least one immigrant founder,[27] with 70% of those founders originally coming to the U.S. on student visas.[28] Recent immigration actions risk hurting AI R&D supremacy and causing a "brain drain" of scientists.[29]

In the domain of this Subcommittee, the telecommunications sector is seeing interesting and important uses of AI that deserve attention. While these may not be ready for full-scale deployment, the following are some of the areas worthy of the Subcommittee's attention:

- **Spectrum** – Modern life depends upon spectrum, and ways to make more efficient use of the fundamentally limited public resource are important. AI systems trained on unstructured radiofrequency data are showing early promise for being able to detect interference more quickly, potentially enabling more effective dynamic spectrum sharing. In the context of national security, these systems may be able to better detect spectrum jamming.[30] As part of its Public Wireless Supply Chain Innovation Fund, which this Subcommittee helped establish in a bipartisan fashion, the NTIA recently awarded a grant for research into this area.[31]

- **Next-Gen 9-1-1** – Access to 9-1-1 is essential for public safety, and AI may be able to bolster capabilities for next-generation 9-1-1. Two interesting use cases include the use of rapid translation systems to enable support for non-English callers, and using analytics from call metadata to pinpoint potential natural disaster locations.[32]

- **RAN** – The radio access network (RAN) is part of the core wireless infrastructure that enables mobile connectivity. Some American and European companies have started integrating AI in their RAN offerings with the aim of improving performance and efficiency. Critically, Huawei and China Mobile are also making progress on this front.[33]

B. Supporting Competition from Startups

Today's tech giants were originally able to take root and grow thanks to an earlier generation of pro-competition policies[34] and are now dominating their sectors and stifling emerging competition. We too often see concentration and vertical integration across every layer of the AI tech stack. For example, three companies – Amazon, Microsoft, and Google – now control two-thirds of the cloud computing market by revenue.[35] They play roles up and down the stack: Each designs its own chips, develops AI models, and controls key applications.[36] To further complicate matters, these companies use investments, exclusivity agreements, and revenue sharing partnerships to further vertically integrate and maintain moats around their businesses.[37] To model developers, cloud companies are simultaneously their suppliers, investors, customers, and competitors. This leads to documented cases of self-preferencing, such as cloud providers

prioritizing compute for large companies in which they invest over smaller startups.[38] As I suggest later, pro-competition policies can aid in mitigating these impacts.

C. Increasing AI Access and Adoption for All Americans

Finally, AI's power and usefulness will be fundamentally limited if all Americans are not able to access applications that use AI. This Subcommittee has long led the charge for increasing access to and adoption of broadband. As mentioned earlier, AI systems are computers that connect to the world via fiber connections to the public internet, and which end-users access from their at-home or mobile internet connections. If all Americans do not have high-speed internet, we will exacerbate the digital divide. The Broadband Equity, Access, and Deployment (BEAD) and Digital Equity programs that this Subcommittee included in the bipartisan Infrastructure Investment and Jobs Act are important steps to close the digital divide, particularly in rural areas. Implementation of the former is paused, while the latter has been permanently halted.[39]

III. AI is a Normal Technology that Needs Normal Regulation

AI is powerful technology, but it is fundamentally a "normal" technology, in contrast to the utopian and dystopian science-fiction futures often debated, as computer scientists Arvind Narayanan and Sayash Kapoor write.[40] They discuss AI's normality as a description of today's technology, a prediction of its future development, and a prescription for societal responses. This simple idea is important because it shows that today's public policy problems can have normal, well-known public policy solutions.

This Committee has been central to the American tradition of enabling powerful industries to flourish while passing thoughtful bipartisan regulations to mitigate real-world harms. This is a tradition that should continue by encouraging the enforcement of current federal and state laws that may apply to AI, allowing states to remain the laboratories of democracy, and enacting new laws where gaps exist.

A. Real-World Harms to Real People

In many instances, current laws can be used to deal with AI-caused or AI-accelerated harms. As leaders of 10 federal agencies explained last year, "Existing legal authorities apply to the use of automated systems and innovative new technologies just as they apply to other practices."[41] Put more plainly, "There is no AI exemption to the laws on the books."[42] As an example of this idea, the Federal Communications Commission (FCC) ruled that the Telephone Consumer Protection Act of 1991 applies when robocalls and robotexts are generated using AI,[43] and the FCC brought an enforcement action against a company that transmitted a spoofed call using generative AI voice cloning.[44] Other federal agencies have gone after fake "robot lawyers" that bilked consumers of millions, tools generating false product reviews, an algorithmic pricing scheme that harmed millions, and more.[45] States are using existing laws too. For example, the State of Texas sued a healthcare AI company that made deceptive claims about the accuracy of its AI tool and a large insurance company using surveillance-based pricing algorithms.[46]

However, some AI-caused or AI-accelerated harms require new regulations, and states have taken the lead on this front.[47] Many commenters have lamented the hundreds of state AI bills, but it is worth noting that actual state laws do things like require basic transparency, prevent scams, and protect renters from algorithmic predatory pricing, according to dozens of state attorneys general.[48] States have also taken the lead in passing privacy laws that begin offering some protections in a world of increasing private surveillance.[49] The need for privacy protections will only increase as chatbots and other AI tools become more personalized and invasive.[50]

Finally, the harms to children from the use of screens, social media, and other addictive technologies are worsening with AI. While some question the robustness of the evidence to develop a causal link between technology use and harm to children, the former Surgeon General described it well when he said that "in an emergency, you don't have the luxury to wait for perfect information."[51] These issues are accelerating as AI is increasingly intertwined with tools kids use and as we see new applications directed to children, like companion chatbots designed by companies like Meta that have problematic histories of building tools that harm children.[52]

The state AI law moratorium recently passed by the House would wipe away guardrails protecting real people from real harms, not to mention its unintended consequences.[53] If passed, the provision would strip millions of Americans of rights promised to them by state lawmakers. Notably, eight out of ten voters opposed this measure in a poll conducted last week.[54]

B. Harm to Competition

Market concentration and anticompetitive behaviors across layers of the AI stack are impeding competition from startups, and again we have known solutions and tools to address these problems. The House Antitrust Subcommittee investigated the concentration of digital markets,[55] and passed six bipartisan pro-competition bills that remedy issues it uncovered.[56] Recently, Garry Tan, who leads the startup accelerator Y Combinator, testified before the Senate Antitrust Subcommittee supporting three of these policies: (1) mandating access to application programming interfaces (APIs), (2) requiring interoperability, and (3) restricting self-preferencing.[57] Beyond these, Ganesh Sitaraman, my colleague at VPA, and Tejas Narechania published a useful inventory of pro-competition AI policies Congress should consider.[58]

C. This Committee has a Storied, Bipartisan History of Regulating Powerful Technologies

One instructive parallel for thinking about AI is looking back at the Second Industrial Revolution of the late 19th and early 20th Century. That era had its own tech stack: coal at the bottom (analogous to chips), followed by railroads (analogous to cloud computing), industrial plants (analogous to AI models), and mass manufactured goods (analogous to applications). Railroads were a powerful technology that fundamentally changed the American geography, industry, and society. This tech stack presented policy problems that Congress solved through bipartisan laws.

After decades of government support – in the form of land, funding, and even reduced liability standards – railroads expanded across the U.S. in the mid-1800s. In 1867, farmers, small business owners, and others organized as part of the Grange movement and effectively advocated

for states to pass laws that prohibited the pricing discrimination that was rampant (e.g., railroads charging more for short-haul shipments than long-haul ones). After courts struck down state laws, Congress outlawed pricing discrimination and other anticompetitive practices, based on state laws in 1887. It created the Interstate Commerce Commission (ICC) as the first major independent regulatory commission, which became the template for the FCC, FTC, and others.[59]

The problems later included vertical integration. By 1900, six railroad companies had captured 90% of the anthracite coal market.[60] In 1906, Congress passed the Hepburn Act, which further empowered the ICC and required rail companies to divest their coal holdings,[61] followed by laws prohibiting rail companies from owning steamboat companies in 1912[62] and trucking companies in 1940[63]. Like today's AI companies, railroad companies comprised a powerful industry led by powerful barons who had strong negative reactions to regulations. Ultimately, Congress re-established democratic governance over the industry and enabled fair competition, equitable pricing and terms for farmers and small businesses, diverse and plentiful goods for consumers, and a rebalancing of power in America.

The parallels between the history of railroads and today's tech and AI industry are manifold: an industry grows based on government funding, powerful technology changes many aspects of society, legal liability is softened, and state regulation passes before federal. The next step in the journey, applied to our current situation, is Congress passing bipartisan AI regulations.

Critically, it was not just Congress generally that regulated railroads. As you all know, this Committee was created in 1795 and is the oldest continuous Committee in the House of Representatives.[64] It was specifically this Committee that drafted, debated, and passed bipartisan legislation to regulate the railroads, and later telegraph, radio, telephone, and so many other industries based on powerful technologies. The Hepburn Act is named for Col. William P. Hepburn, a Republican representing Iowa's Eighth Congressional District in the U.S. House of Representatives from 1881 to 1887 and again from 1893 to 1909, who drafted the legislation when he served on this Committee.[65]

The lesson from this story is simple: This Committee has a long history of bipartisan, sector-specific laws to mitigate harms and restore fairness.

IV. Conclusion

I urge Congress to take actions to bolster American leadership in AI based on proven tools that have given the U.S. a technological advantage historically: (1) substantial public investment in R&D, (2) supporting startups, (3) enabling all Americans to benefit from technology, and (4) mitigating the harms of AI. Harms are best mitigated through the great American tradition of regulated capitalism, in which this Committee plays a leading role. Congress should (1) encourage the enforcement of current federal and state laws that may apply to AI companies, (2) allow states to continue their role as the laboratories of democracy, and (3) enact new laws where gaps exist.

I once again thank this Subcommittee for holding this important hearing and inviting me to testify, and I look forward to your questions.

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Mr. HUDSON. Thank you very much.

We will now begin the questioning, and I will recognize myself for 5 minutes.

Mr. Pickering, while advancement of AI has so much potential to improve efficiencies across many industries, it can also be used maliciously and cause serious damage. While we have seen a few instances of placing measured safeguards on certain uses of AI, we must balance any regulation with enabling innovation.

Can you also give us an example of how Europe has inhibited industry from advancing AI due to their overbearing regulations?

Mr. PICKERING. Now, if you look at the European model, which has shifted a lot of the AI investment to America and given us a comparative competitive advantage, it doesn't allow—it is more of a permission-based system versus a risk-based system. And I think America should continue its tradition of light-touch, risk-based rules and regulations at a national level on something of a national priority that needs a national framework.

And so if you look at how we have done in the internet age, setting a national framework that allowed full competition of open internet that—whether you are a small business or a large business, you can have equal access to the internet—the same is going to be true on the AI models. From open-sourced to closed and proprietary, if you have a gatekeeper that is going to check whether a new entrant that will be punished the most from a regulatory framework of a European-type model, the large tech companies will be uniquely positioned and the resources to manage the complexity of whether it is 50 States or one regulatory framework that would be modeled after that—our approach, I think, is the best, which is maximizing competition, not regulating in a way that slows innovation, the investment in the private sector, and letting all models compete against each other as quickly as possible.

And if we do that, we will be successful. And so thank you for the question.

Mr. HUDSON. That makes a lot of sense.

Now, so one of our concerns is having a patchwork of State regulations. You mentioned this in your testimony. Are you familiar with Colorado and kind of what is going on with their State regulations?

Mr. PICKERING. Yes. And the former member of this committee, Congressman Polis, has raised concerns and objections about what his State law and legislature has done that really could stifle investment in the Colorado economy and investment in what the AI economy means.

So whether it is Colorado—there have been—and Congressman Obernolte brought this up in the reconciliation markup—1,000 different pieces of legislation across the 50 States introduced. If you go back to this committee's history, it did The Cable Act in 1992, the wireless spectrum auctions in 1993, The Telecommunications Act of 1996, the commercialization of the internet, privacy, COPA, copyright privacy, internet tax moratorium. So every category of the internet regulatory framework, it was done in this committee. It was done by this leadership on a bipartisan basis.

And that is what we need today if we are going to win the race. We cannot afford the delay and the unpredictability of a patchwork

approach when we need—just like in the Cold War and the nuclear race in World War II, we need a national urgency of getting a framework in place. And again, I go back to Congressmen Obernolte and Lieu and the leadership. There is enough bipartisan commitment and consensus on this issue. There's a lot of issues to fight over in the country and in Congress, but on—AI policy is a place where we can find common ground and a sustainable policy that is of national urgency and imperative.

Mr. HUDSON. I agree with you. I think this committee is prepared to work in a bipartisan way to address this.

What advice would you give us, though, to make sure that any regulations we do are reasonable and they don't stifle innovation?

Mr. PICKERING. You know, the market of maximum competition has worked in every decade. So if you think through Ronald Reagan's breakup of the AT&T system in 1982, and then you had long-distance competition that replaced copper analog networks with fiber digital networks. Then this committee passed The Cable Act, which brought cable and satellite into competition with one another. One was digital, one was analog. The competition made both of them build out the last mile of infrastructure that allowed the internet to be commercialized and reach every American. The 1996 act, full competition of all networks of everyone competing against each other with interconnected, interoperable networks and devices, works.

So the only recommendation that I would give to this committee is, whatever you do, use maximum competition to achieve your objective. And that is the best way to regulate the market and to give consumer protection, and also to give you the innovation at this table for national security, cybersecurity, health, education, workforce solutions.

Mr. HUDSON. Right. Thank you for that. My time has expired.

I will now recognize the ranking member, Representative Matsui, for 5 minutes for your questions.

Ms. MATSUI. Thank you very much, Mr. Chairman.

Our State and local governments are on the front lines of leveraging the benefits of AI while protecting consumers from AI-specific harms and ensuring workforce protections keep pace with rapid technological change. As home to 32 of the world's 50 leading AI companies, California is a national leader in ensuring that innovation and competition thrive alongside commonsense safeguards.

Mr. Ramzanali, how would the 10-year AI State moratorium, as passed by the House Republicans, impact U.S. AI innovation and protections from millions of Americans?

Mr. RAMZANALI. Thank you for that question, Madam Ranking Member. And I think your State of California has done great work, as you said, both on encouraging innovation and also mitigating its risks.

The way I like to think about it at the most simple level is responsible innovation shouldn't be afraid of laws that go after responsible practices. The kinds of State laws that have been passed go after deepfakes. They go after scams. There is a lot that require transparency as well. But that is how we know when issues pop up.

So, to me, there is a great way to do responsible innovation while also mitigating harms.

Ms. MATSUI. Thank you very much. I always hear about—I hear about moratorium and I hear about competition and innovation. They don't go together at all, as far as I am concerned. And so those are two sides of it that we have to really deal with, and I am sure that this conversation will take place on this subcommittee.

To lead the world in AI, America needs fast, reliable, and futureproof networks to power AI-driven data centers, networks, and homes.

Mr. Pickering, you mentioned the need to expand fiber networks to reach rural and underserved communities at risk being left behind in the AI economy. Why is this so critical for AI innovation?

Mr. PICKERING. So the connectivity to every American gives the greatest opportunity for every American and to every small business, every community. It doesn't matter if it is my home State of Mississippi, which is primarily rural, or your district, which is urban. Connectivity, in today's world, is employment. It is opportunity. It is the greatest way to get both the opportunity that America has to offer—the education, the workforce, the healthcare—and so being able to have universal access to the fastest, highest-capacity networks, it is a national commitment that members of this committee and Congress made coming out of the pandemic.

Ms. MATSUI. Absolutely.

Mr. PICKERING. We kept all Americans connected during the pandemic, and from that a commitment to bring broadband to every community—

Ms. MATSUI. To every household in America. Right.

Mr. PICKERING. And I agree with you. We need to speed BEAD. I agree with Chairman Hudson.

Ms. MATSUI. Right.

Mr. PICKERING. We need to give clear guidelines, cut the red tape, get shovels in the ground, and——

Ms. MATSUI. There are States waiting right now, ready to go.

Mr. PICKERING. Yes.

Ms. MATSUI. So I think we need to move forward.

I work hard to advance policies that support the development and deployment of open radio access networks—or as we call it, ORAN—including NTIs helping Wireless Supply Chain Innovation Fund under the CHIPS and Science Act. Open RAN increases supply chain diversity, which has significant economic and national security benefits.

Mr. Vasishta—right? And Mr. Shea—how do technologies like Open RAN help us leverage AI technologies for next-generation connectivity and maintain U.S. technological leadership?

Mr. VASISHTA. Thanks for the question. Maybe I will take it up first.

So, as you quite rightly said, Open RAN was enabling interoperability in a system that was traditionally propriety in a closed system. What Open RAN was able to do, by enabling that interoperability, was enable new players to come into the industry as well as enable some of the interfaces to be more openly developed.

What we need to do now is really kind of accelerate Open RAN and make Open RAN competitive. One of the challenges also around Open RAN was the competitiveness of that compared to the proprietary systems. And so that first step that was made with Open RAN now, with what is called AI RAN——

Ms. MATSUI. Right.

Mr. VASISHTA [continuing]. Which is including AI into those open standards as well, and enabling the network to become software defined—so you are completely writing new features and capabilities in software. You can now open up that ecosystem still further as well as create more competition in that ecosystem, while at the same time taking advantage of AI to improve the spectral efficiency and operational efficiency.

Ms. MATSUI. OK. Thank you.

And I want to ask Mr. Shea to——

Mr. SHEA. ORAN enabled our business in 5G and 6G. You know, when we first started the company, we traveled around to many of the vendors and we had great conversations, but they didn't want to give us any access to their code. With ORAN, working with initially Intel and now NVIDIA, we are able to actually build operating 5G base stations. In fact, our headquarters in Arlington, Virginia—we have two operating 5G base stations that are built based upon ORAN and are enabled with our AI technology, something that we couldn't have done previously with closed systems.

Ms. MATSUI. Thank you very much. My time has run out. Thank you.

Mr. HUDSON. Thank you.

The Chair now recognizes chairman of the full committee, Mr. Guthrie, for 5 minutes——

Mr. GUTHRIE. Thank you. Thank you. And the ranking member and I have been partners in spectrum, and—I am over here on this far end—spectrum and other things, and she just asked the first question I was going to ask. So we think alike. And there is a lot of cooperation on both sides of the aisle in trying to figure out how do we defeat China. All of us want to defeat China to make sure that we are the platform that the world uses for AI.

So, Mr. Vasishta, we have been focused on—almost every hearing that we have had has been focused on how do we beat China to AI. It is all subcommittee—anything that brings all the jurisdictions of the committee together, it is AI. And so the big part is energy. A lot of guys will tell me that—guys and ladies, I say "guys" generically—but men and women will tell me that in this industry that we have the brain power, we have the capital. We need the energy and we need the regulatory structure where we can succeed.

And so in terms of energy is producing the energy, but it is also being more efficient with energy that we have. If you look at the delta between China's production of energy and ours, it is scary, and we have to catch up. But we also have to get better with the energy that we have.

And so would you talk about, as a leading chip manufacturer in AI software, how NVIDIA is using advancements in chip technology and AI to improve data center efficiency in energy consumption?

Mr. VASISHTA. Yes. Absolutely.

Obviously, that is a very important point when it comes to the deployment of AI, but it is also a very important point in the design of AI.

AI, as we see, is generated from a hardware infrastructure to do processing, networking, and many other functions. And as we move down that technology curve, what we are able to do is improve the efficiency and capability of those chips.

At the same time, what we have been able to see in the last few years, by using accelerated compute as opposed to the traditional compute, say, with CPUs only, we are able to achieve much higher energy efficiency. Think of it as performance per watt. Accelerated compute really has given the enablement—led to the enablement of AI. And energy efficiency is really—is created by that accelerated compute such that we can achieve the functions we want to achieve in the silicon technologies that we have.

Mr. GUTHRIE. So my question—so that—thank you. That was my question., but also added to that, if you look at the gap between what China's producing in energy and we are producing in energy, can we make that up in efficiency alone? Or is it going to require us producing more energy?

Mr. VASISHTA. I think there is going to be a requirement for more energy. Energy is, you know—just the massive scale of deployment to be competitive in AI will require more energy even though we are improving energy efficiency of the infrastructure itself every generation also.

Mr. GUTHRIE. Well, thank you. Thank you.

I had a question for Mr. Shea, but that was a question that Ms. Matsui asked. So I may get back if you want to follow up because I think you ran out of time.

But let me go to Mr. Pickering first. Can you elaborate on what kind of growth our networks will require to support American innovation in AI, and how soon this infrastructure needed—how soon is this infrastructure needed so the United States can compete?

Mr. PICKERING. Mr. Chairman, so if you think about fiber capacity to the data center, one of my member companies, their CEO recently said in the next 5 years, fiber capacity to the data center is projected to multiply 6 times. Now, if any of you all were to go to the Northern Virginia data center hub, and if you were to realize the abundance of fiber capacity into that data center hub is enormous—to comprehend six multiples of capacity demand growth is really hard to emphasize how important that is.

And I see Chairman Latta here as well. The same thing is going to happen in our grid, our transmission, our energy supply and generation. And we no longer look at a separation between the energy market, the data center market, and the fiber market. It is converged into one AI infrastructure market.

And those inputs, going in and meeting at the data center—if you look at my home State of Mississippi, which has always been last in economic growth, this year they are second in GDP growth because of huge investments that have been made possible by a fiber route built by Zayo, one of our member companies, that went from Atlanta, Georgia, to Dallas. It passes through Birmingham; Meridian, Mississippi; Jackson, Mississippi; Vicksburg; Monroe. That has become AI alley, with tens of billions of dollars of data

center investments, Birmingham, Meridian, Jackson, Vicksburg. It is causing all of our energy production—grids, transmission—to see massive growth and upgrades.

Mr. GUTHRIE. Thanks. My time—I know you know the rules here. My time expired——

Mr. PICKERING. You got me excited because the growth in the economic development comes with all this new capacity.

Mr. GUTHRIE. It is exciting. We are looking forward to working together on that. Thank you.

Mr. HUDSON. Thank you, Chairman.

The Chair now recognizes Representative Soto for 5 minutes for your questions.

Mr. SOTO. Thank you, Mr. Chairman.

We know AI is going to be an increasing part of our daily lives, in our homes, in our offices, small businesses, helping out with medicine and education, entertainment, and we are going to need advanced microchips, a strong internet connectivity, growing workforce, and huge amounts of storage in energy to make this happen.

It was recently announced a $70 million artificial intelligence partnership between UF and NVIDIA. We appreciate that.

At NeoCity in our district in Kissimmee, we are making advanced aerospace microchips and AI capacitor microchips. It has been named an NSF Engine, and Chris Malachowsky is a UF grad and cofounder, so we appreciate that partnership.

Mr. Vasishta, we see huge tariffs being levied, especially today, 50 percent on steel and aluminum. Ten percent across-the-board tariffs still remain in place, as well as higher elevated tariffs for places like Canada and Mexico. How does this affect manufacturing of advanced microchips?

Mr. VASISHTA. Firstly, yes, thank you very much for the acknowledgement of Chris Malachowsky, who is, as you said, a founder of NVIDIA, and very connected to University of Florida.

You know, my real specialty is telecommunications and AI, so I am going to have to defer on the question of tariffs, if you don't mind.

Mr. SOTO. So you don't use steel or aluminum to help make microchips?

Mr. VASISHTA. I am sure they are used, but I don't get to see that on a daily basis.

Mr. SOTO. I also want to talk about immigrant labor. You know that your CEO, Jensen Huang, is an immigrant. We see a lot of CEOs are immigrants who come into the country.

How important is it for some of these visas and to allow some of this highly skilled talent to stay, and what effect could deportations and a chilling effect on immigrants who come and want to be U.S. citizens and contribute to the economy for the future of microchip technology?

Mr. VASISHTA. Yes. So NVIDIA, we pride ourselves in being a global company. We have employees around the world, and also we have some amazing talent that has been able to come to the U.S. to really exhibit their talent and grow their talent. And I am actually a recipient of that, being able to come to the U.S. and grow my career, and now at NVIDIA.

So having the right availability of talent where you need it and when you need it, and the enablement of that talent to be trained on the most current technologies and bringing the brightest and best, and leveraging that across the globe I think is absolutely essential for us in the U.S. to grow.

Mr. SOTO. So if we allow them pathways to stay, that could help the United States. If we let them go back to other countries, that actually increases the competition, especially if we are talking about nations that don't share our values.

We also see the CHIPS Act under attack, $52 billion for chips manufacturing. You had mentioned also the importance of telecom manufacturing, $1.5 billion to incentivize that.

How key is maintaining the CHIPS Act to helping have enough resources, both public and private, to develop advanced AI microchips?

Mr. VASISHTA. Yes. As I said in my opening remarks, I think the NTIA or public wireless fund that was created is absolutely correct. There is a requirement for public and private partnership when it comes to research. We have some of the best researchers on AI within NVIDIA, and we work constantly with research organizations. And we need—they also need funding as well to enable them to do their best work.

Mr. SOTO. Thank you so much. It has been 135 days since President Trump has taken office; 135 days of delays to the BEAD program, rural broadband, high-speed internet for folks in underserved areas; 135 days of nothing happening, even though 50 States have already approved their plans.

Mr. Ramzanali, what is the cost to places in rural America, like my district in south Osceola and east Orange, and to local agriculture and other small businesses in rural America by this delay to the rural broadband program?

Mr. RAMZANALI. I appreciate the question. The cost is the delay, not just of people having access to world-leading tools that we believe should be developed in the U.S., but it is also the cost of the economic value that all of those people could be producing through jobs, through remote learning, through so many other things that the internet enables.

Mr. SOTO. Thanks so much. It is time to get this done. And I yield back.

Mr. HUDSON. I thank the gentleman.

I now recognize Representative Allen for 5 minutes to ask your questions.

Mr. ALLEN. Thank you, Chairman Hudson, for holding this important hearing, and I thank the expert witnesses for joining us today.

Mr. Vasishta, could you provide a working definition of AI and its impact in context of this hearing today?

Mr. VASISHTA. Yes. Obviously, everybody talks about AI, and we heard some examples of some of the uses of AI in your opening—in the committee Members' opening remarks. AI is really the ability for computers to predict, to think, to perceive as a human would do, and hence that is the definition of AI.

Mr. ALLEN. Mr. Pickering and Mr. Vasishta and Mr. Shea, let's talk about natural disasters. My district experienced a significant

telecommunications disruption from Hurricane Helene. Took weeks in some areas for phone service to return to normal.

Could artificial intelligence help mitigate these disruptions in the future, and, if so, how? Mr. Pickering?

Mr. PICKERING. The answer is yes. The AI applications, whether it is in our fiber, wireless, or any of our networks, is able to both manage and optimize redundancy, resiliency, and to be able to get systems back up and running and identify where issues are much more quickly than in the past.

As I mentioned, being from a State that is both tornado-, flood-, and hurricane-prone, this is a critical issue.

Mr. ALLEN. Right.

Mr. PICKERING. And AI, just like in every sector, I think will give benefits of getting our communications back up, managing our networks more efficiently and effectively. And so I think it is a great application that we can all cite as one of the reasons AI is a good thing.

Mr. ALLEN. Mr. Vasishta?

Mr. VASISHTA. Yes, so AI has the capability—and we are starting to develop some of that capability even more at NVIDIA—to actually have some level of prediction of weather outcomes as well.

So the first stage is, obviously, when you start to enable predictions to happen and be able to proactively react and make decisions based upon those weather predictions and likely outcomes. A lot of work is happening with NVIDIA around that about—with something that we call the Earth-2 model, and we are working with researchers around the world to make that happen.

And then, of course, there is the observe, orientate, decide, and act aspect of AI, which AI is able to then make those decisions real time autonomously, and then be able to act on those decisions autonomously and in an agentic way. This is really the year of AI agents that can make those kind of actions and decisions autonomously and rapidly, and then, of course, make decisions to be able to react afterwards to put the right logistics in place for a complex supply chain.

Mr. ALLEN. Mr. Pickering?

Mr. SHEA. I have to, you know, go with Mr. Vasishta's comments that with digital twin technology we can predict what coverage we have left over with the resources that are existing after a natural disaster.

And the AI in particular is good, as I mentioned in my talk, about pulling signals out of noise and interference. So although you may not get the full capacity, you can at least get some capacity to everyone, so first responders and people in need will have some coverage no matter where they are in the cells' capabilities with what you have available.

So, yes, it is a great way to recover from a disaster, know where you need to put your resources to go, which cell sites to fix first, how to get the maximum capacity up to serve the people.

Mr. ALLEN. Right. Yeah, it was critical to our first responders and law enforcement and others in dealing with that disaster.

Mr. Pickering, how can AI be used to enhance efficiency within our communication networks?

Mr. PICKERING. We already know and see in our wireless networks the optimization of spectrum, how you can more efficiently dynamically share, use spectrum beam and target spectrum, mitigate interference.

So the maximization and the efficiency that AI brings to our wireless networks can also be used in our fiber networks, it can be used in data centers, and it can be used in low Earth orbit satellite. So every communication system now is going to be embedded with AI efficiency.

The same thing is true in our energy networks in grid——

Mr. ALLEN. All right.

Mr. PICKERING [continuing]. And transmission.

Mr. ALLEN. Good, good.

Mr. Shea, I have got 20 seconds. How can we use AI to secure our communications infrastructure from malicious actors?

Mr. SHEA. Well, with the infrastructure, you can actually locate fake base stations, denial-of-service attacks, and other type of capabilities that people, adversaries, might bring against you. So at the physical layer, it helps you protect it. Then you have your cybersecurity at the back end that can work hand-in-hand to protect our networks.

Mr. ALLEN. Good. Thank you, thank you all. I appreciate it.

And I yield back, sir.

Mr. HUDSON. I thank the gentleman.

The Chair now recognizes Representative Clarke for 5 minutes to ask her questions.

Ms. CLARKE. Thank you very much, Mr. Chairman. Let me thank our panel of witnesses for appearing before us today.

Our committee has a long history of working in bipartisan manner on issues of connectivity and protecting consumers. More recently, we have had robust bipartisan conversations about AI regulation, including the opportunities and challenges associated with this emerging technology, which is why I am disappointed to see my Republican colleagues turn their back on our bipartisan work and sell out to Big Tech millionaires who have bought their way into our Government.

Last month, Democrats sat in this hearing room for over 24 hours relentlessly combatting the bad provisions included in the Big Bad Ugly Reconciliation Bill. And in the middle of the night, Republicans voted to approve a 10-year moratorium on State and local enforcement of their own AI laws and provided no Federal safeguards in their place.

So let me be clear. I say this is a giveaway to Big Tech at the expense of Americans' personal freedom, privacy, and safety online. And until my Republican colleagues finally get their act together after 3 years in the majority, there will be no recourse or guardrails in more than half of the States that have responded quickly to their residents' concerns about the risks posed by AI.

New York City is one of the early movers in this space. Since 2023, we have had an effect on AI bias law designed to regulate the use of AI in employment decisions. This is just one of the hundreds of State and local laws my Republican colleagues would sweep away.

Mr. Ramzanali, can you please speak to some of the real-world harms and unintended consequences of the moratorium, especially those related to bias and discrimination?

Mr. RAMZANALI. I appreciate the question. And the New York City law is a good example because the employment discrimination it is going after. Let me tell you the kind of harm that we have seen with AI systems, in résumé-screening software in particular. There was a firm that was using résumé-screening software for computer science jobs, and it was screening out women. Now, the company dealt with that, but that is the kind of information that leads to huge problems.

The kinds of laws that are out there are not just the New York City employment discrimination law, but you also have laws that create transparency so that we can know when there is a problem.

Ms. CLARKE. Thank you.

Ensuring that we have proper safeguards in place for sophisticated AI systems is only one piece of the puzzle. It is also critically important that consumers understand the abilities and shortcomings of AI systems that are poised to become an increasing part of our everyday lives.

AI is already disrupting the way we live and work, supercharging scammers and refocusing our coal industries. Now perhaps more than ever before, digital literacy and AI literacy will decide who can participate in our modern economy.

That is why I am concerned with President Trump's misguided efforts to roll back the Digital Equity Act. This statute was a vital investment in making not only internet access available, but it also educated users on how to use it. We have seen far too often during this administration, we were once again on the finish line of getting $2.75 billion of Digital Equity Act grants out the door, and then the President determined, by way of Truth Social, that this program was woke, racist, and unconstitutional, and directed the Department of Commerce to stop the congressionally authorized and appropriated funding. Apparently, he was triggered by the word "equity."

The truth is, gutting the Digital Equity program will only hurt vulnerable populations like seniors, veterans, low-income communities, and communities of color who already suffer from the digital divide. It will sacrifice critical AI trainings that would have helped seniors understand online scams, upskill workers, and help more Americans incorporate AI into their everyday lives.

Without these programs, we risk building AI bridges to nowhere, creating a new digital divide in which certain communities can benefit from these new technologies and others slip further behind. This not only harms the economic health and well-being of our local communities but jeopardizes America's AI competitiveness that my colleagues on the other side of the aisle say they care about.

So I urge my Republican colleagues to join us in calling on President Trump to cease his efforts to destroy the Digital Equity Act programs.

Mr. Chairman, I would like to submit for the record a letter from the National Digital Inclusion Alliance describing the importance of

the Digital Equity Act in making sure all consumers can take advantage of AI.

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

Ms. CLARKE. And with that, I thank you and I yield back.

Mrs. FEDORCHAK [presiding]. The Chair recognizes—excuse me. The Chair recognizes Mr. Latta for his 5 minutes of questions.

Mr. LATTA. Well, thank you very much, Madam Chair. And to our witnesses, thank you so much for being here.

AI is on all of our minds, as many Members have already said. So many questions, so little time.

Mr. Pickering, in your statement, you made very, you know, eye-opening remarks when you said that in 2024 the United States invested 12 times more into AI than the Communist Chinese, but that lead is not guaranteed.

And one of the things I know that we have talked about in the past is about permitting, and we got to get it done. And it is almost like the top, when we were talking about on the communications side and we were talking about on the energy side, and it is all coming together.

But could you talk briefly about if we don't win this race, what is going to happen, especially if we don't get our permitting done in this committee and in the House?

Mr. PICKERING. So as China builds out their infrastructure, both energy and fiber networks and data centers, they are not going to experience the type of permitting delays that the energy, data center, and fiber industry are experiencing.

I want to commend you for your leadership in the reconciliation on having a national framework on permitting for pipelines, that if it is a multi-State pipeline, that there is a means by which you can have a time-certain approach of a year, with an extension of 6 months.

Yesterday I met with Congresswoman Fedorchak about what they do in North Dakota and the accountability, the transparency, shot clocks, and—you can have an accountable, transparent process that protects our natural resources and communities, but to act in a timely way.

And so our industry, on both sides of the data center, wants to work on a permitting route reform that gets us, as quickly as possible, to build as fast as possible.

Mr. LATTA. Let me ask you real quickly if I can just follow up because, again, if we are looking at if we don't get this done—and as you said, that lead is not guaranteed—how much time do we have left?

Mr. PICKERING. It is time to build. It is time to go and—you know, we have horror stories on fiber networks and railroad crossings and long processes that take, on the energy side, sometimes 10, 15 years, on the fiber side 18 to 2 months, when we need to be able to have shot clocks of 30, 60 days of getting the permits that we need to build.

Mr. LATTA. Well, thank you very much.

Mr. Vasishta, you know, with so many data centers coming online that we are seeing across the country, can current telecom networks handle the amount of traffic that current and also future AI and data centers are going to bring?

Mr. VASISHTA. Yes, so you are right, there's a lot of data centers coming online. A lot of those data centers are actually connected through fiber to each other or to the telecommunications network. The traffic that comes over the telecommunications network, particularly the wireless part of the network, is continuously growing, and that is where we really see the need for AI, because that traffic is as the AI models are trained, and then as the AI models are inferenced and get consumed by the consumers and by enterprises, that traffic is going to grow considerably.

And AI is essential, and that is why the fusion, as I said earlier, of radio access network infrastructure on top of also the AI infrastructure will really help enable that AI traffic to be distributed and consumed.

Mr. LATTA. Let me follow up with another question to you because, again, you know, when we were talking about the race to 5G, and now we are in the race to 6G, and I know I had asked, you know, different witnesses that were here, where are we at—are we winning, are we losing—and, you know, I always hear that we are doing well, and all of a sudden we are not hearing people saying we are doing that well.

I got a question. What if we don't win that race to 6G—because also in your testimony you talk about the real threat, the detection, to automated remediation, and incident response, especially looking at some of these cyber attacks coming in. What happens if we don't win that race to 6G?

Mr. VASISHTA. Yes, so I think it is an imperative, but let me answer the question that you have stated. The challenge with this—the challenge and benefit, the pro and con of the convergence of AI and 6G standards, is that there is really only one other country that is thinking about this, and that is China.

So traditional implementations of radio access network have not required AI. There is some AI infusing, but the ability to really take advantage of AI, I think, leaves us at a significant disadvantage from all different facets, both productivity but also security and overall growth.

So I think—I hate to answer the question because I hope we never get to that point.

Mr. LATTA. Well, we have a lot of work to do in this committee and in this Congress. And, again, I appreciate all the witnesses for being with us today.

And, Madam Chair, I yield back the balance of my time.

Mrs. FEDORCHAK. The Chair recognizes Representative Peters for his 5 minutes of questions.

Mr. PETERS. Thank you, Madam Chair.

First of all, I want to say where I think there is agreement here. I really do believe that permit reform is very important and have been working on that. Would love to see some bipartisan action around that.

Also, we had a privacy bill here passed with a single national standard, I think it was 55 to 2. I don't know where that bill is. We should bring that back and we should pass it, because I believe that in some things you really have to have a Federal standard. I would say this is one where we also have to have one Federal standard.

We should take the best ideas from New York City, take the best ideas from California, Mississippi, whoever is passing these bills, and we should put them in one Federal standard because it is impractical for us to have not just 50 different States regulating it, but now localities, counties. I mean, this is nuts. That won't work. I agree.

Let me tell you my problem, Mr. Pickering, since you were in Congress. I heard all this talk about urgency, but the Republicans came up with this notion we should have a 10-year moratorium. What timing does that signal to this Congress is OK for setting a standard? Doesn't it really basically say you got 10 years?

Mr. PICKERING. Two precedents to consider. The internet tax moratorium was a 3-year moratorium that was extended twice, and eventually it was made permanent by President Obama, who signed a permanent internet tax moratorium. Now, the result of that, as e-commerce emerged, has been at least $5 trillion——

Mr. PETERS. Yeah.

Mr. PICKERING [continuing]. In economic development because we didn't have, you know, hundreds of tax jurisdictions on e-commerce.

Mr. PETERS. Sure. Yes, yes, yes.

Mr. PICKERING. The second precedent for the committee to consider was the beginning of spectrum auctions. It was in the Budget Reconciliation Act of 1993, which was President Clinton and Gore, and they included it in because the spectrum auctions would create revenue.

Mr. PETERS. Right.

Mr. PICKERING. And at the same time, they preempted any State regulation on the rates and on the entry because that would have devalued this new emerging technology.

The moratorium and modernization provision in reconciliation has the same principles and same concepts. We believe an all-of-government modernization of every Government service—from Department of Defense, to Energy, to Medicare, to Medicaid—will have tremendous savings if they adopt AI uses and applications and technology. But if we have 50 different States regulating——

Mr. PETERS. No. Actually——

Mr. PICKERING [continuing]. It undermines the basis of this——

Mr. PETERS. I am not sure it can be done in reconciliation, and I don't disagree with the theory of it. I just think that 10 years—in the face of this talk about urgency, we had Eric Schmidt come in here. You could have heard a pin drop when he talked about how important this was.

Ten years is completely out of line. You know, I think if you are talking about a mor—that is a ban. That is not a moratorium. A moratorium is 2 years.

Mr. PICKERING. You know, to me, whether it is 10 years or something less than 10 years, as long as this Congress has a window of pause to set the Federal framework—you just mentioned you are close on privacy. We are very close on permitting on the infrastructure.

Mr. PETERS. We actually have a bill passed on privacy which we can't get back here to actually—

Mr. PICKERING. So the question is, what is the right time to give you the opportunity on this committee to create a national framework on the major questions?

Mr. PETERS. OK. My answer is, this term, which has about a year and a half left. And that is the appropriate time for a moratorium. So I am all for doing all—accomplishing all the goals, but if there is really a sense of urgency, let's get it done this term, is my answer.

Mr. PICKERING. I agree.

Mr. PETERS. I had another question for Mr. Ramzanali. Just this concept of normal technology. In your testimony, you stated that AI is a normal technology that needs normal regulation. I wish I understood what you meant by that.

But how can this committee treat AI like normal technology when it is so complex, and what maybe is the priority, you think, for us to attack first?

Mr. RAMZANALI. I appreciate the question. So this framework of a normal technology is not meant to say it is not powerful. It is powerful. We should apply it across so many different domains. It is going to have really important impacts in a lot of scientific domains.

The idea is to say this is not the kind of problem where we don't have policy tools from our history that we can apply. So that is the idea, is we can treat it in a way where we can look to historical precedent, we can look to the policy toolkit we have, and apply that.

Mr. PETERS. OK. Well, I am looking forward to this. Mr. Pickering, I am just playing with you because you are a former Member of Congress. It is fun to see witnesses out there.

Mr. PICKERING. And I want you to know, I agree, the sooner the better. We have a national——

Mr. PETERS. Yes. I think the thing is that I also want to indicate that this Democratic reason has to be a national standard. This Democratic reason has to be permit reform, but I just laugh at the notion that 10 years is the right timing. And if we are really—if we really have a sense of urgency about it, this term.

I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Bilirakis for his 5 minutes of questions.

Mr. BILIRAKIS. Thank you. I appreciate it very much, Madam Chair.

Mr. Shea, you briefly mentioned how technology and AI have been used to combat threats to the Uyghurs by both China and Turkey. As cochair of the International Religious Freedom Caucus, I have been a long-time advocate for the Uyghurs, so the importance of this really stuck with me.

Can you talk more about how AI is being used or can be used to prevent human rights abuses, war crimes, and other acts of persecution?

Mr. SHEA. I think the thing you can do with proper monitoring, you can make sure that adversaries aren't getting into your network, putting up fake base stations, doing other types of things that they are then using for surveillance. Because, you know, the problem with the fake base station is they grab a call, and then

suddenly the information going across there often can be deciphered.

So I think it is important for us to provide the tools, both to our partners and our country, to be able to protect these networks to make sure that it is not being used, you know, for hostile-type intent.

Mr. BILIRAKIS. Very good. Thank you.

At the same time as this hearing, of course, you know, the E&C is also having the oversight hearing on robocalls. So it is fitting to bring this topic up at this particular time, which is very important to my constituents.

So, again, with regard to robocalls, ever since the TRACE Act was passed, I think the average American became familiar with how AI capabilities have addressed spam calls. So we made some progress. People can now see a likely spam message pop up when an unknown number calls, helping prevent fraud, and that is great progress—it really is—toward protecting vulnerable people from identity theft. But we have to do more.

But actually catching these criminals continues to remain elusive, and prosecutions are rare, unfortunately.

So, Mr. Pickering, how can AI be used, utilized, to actually track down online and by-phone criminals that are preying on our seniors in particular and finally shut them down once and for all? If you could answer that question, I would appreciate it.

Mr. PICKERING. Yes. The great thing about AI is, if you give AI a problem, it will create a greater, productive way and solution to attack any problem, whether it is fraud, criminal conduct, or find a good cure for cancer. It will be faster, it will be more productive, and it will be able to bring, you know, all the knowledge of any particular case to be able to solve it and to meet the objectives, whether it is in criminal justice or in national security or in energy or any other sector.

And so the applications and the growth of our large language models and what comes next with the quantifiable language models is really going to be an ever-increasing way, whether it is robocalls or fraud, to be able to identify, authenticate, and recognize—identify bad actors and then give tools to pursue them.

Mr. BILIRAKIS. Very good. Thank you.

One more question for Mr. Pickering. One of my senior staffers just got back from a trip, a delegation trip to Israel, including the Gaza Strip. One of the items discussed with Israeli leaders was the potential of AI to help identify and address the significant rise in anti-Semitism online. And with recent events in Colorado, it is clearly not only something of importance to Israel but a potential aid to a worldwide problem.

Mr. Pickering, again, can you explain how AI is currently being used by your member companies to identify threats of violence and potentially prevent violence against religious groups and what potential AI has in the near future to continue to address this particular issue?

I know you touched on it, but if you could elaborate, I would appreciate it.

Mr. PICKERING. You know, this is a subject I am not as familiar or have not been privy to those types of applications. But I am confident if——

Mr. BILIRAKIS. In general, yes.

Mr. PICKERING. In general, if there is an ability to, whether it is a prediction of a natural disaster or a cybersecurity or a potential crime, I think AI can be a resource and a tool for law enforcement, for national security, or for Homeland, to be able to better predict or identify, and then hopefully prevent disasters or attacks on the U.S.

So we have to have—again, this is why—I think a Federal framework in each category of the major questions so that we could use the full resources of the modernization of Government services that include national security, cybersecurity, and homeland security.

Mr. BILIRAKIS. Thank you. I yield back. Thank you.

Mrs. FEDORCHAK. The Chair recognizes Mrs. Dingell for her 5 minutes of questions.

Mrs. DINGELL. Thank you, Madam Chair.

Artificial intelligence is transforming nearly every aspect of our lives, which we all know, with great potential benefits and serious risks. As AI becomes more powerful and more deeply embedded in our economy, we have got to take comprehensive action to assure this technology strengthens ourselves, our health, safety, economy, and national security so we can reap its benefits. But we also know that it has got serious potential harms. So, I mean, just some examples is AI-driven robocalls, deepfakes, and deceptive advertising. And we have to be mindful of how much AI would widen existing digital divides.

But I want to be positive too. There are real opportunities. When paired with next-generation connectivity like 5G and 6G, AI can revolutionize healthcare, improve customer service, and help power the future of the automotive industry, boosting innovation, creating jobs, and improving lives across the country.

But in the few minutes I have, I want to stay focused on robocalls. I think there is a growing threat of robocalls and robotexts, many of which are increasingly powered by AI and disproportionately target vulnerable populations. In 2024 alone, Americans received over 52 billion robocalls, nearly 200 calls per adult. Nearly half were scams or unwanted telemarketing calls. They are not just annoying, they are dangerous for a lot of people.

Consumers reported losing a record $12.5 billion to fraud, with $2.95 billion lost to impostor scams where bad actors used AI and deepfake tools to convincingly mimic trusted voices and identities.

Additionally, robotexts and phishing emails are tricking people into clicking malicious links or sharing sensitive financial information, scams pretending to be from Medicare, law enforcement, bank accounts, or even family members in distress. We used to get the old one, "I am," you know, "stranded." Now they are mimicking these voices of family members. They are using cloned voices to build trust. They are getting more and more sophisticated.

And as AI voice cloning, spoofing, and deepfake tools become more accessible, threats continue to evolve, and Congress, the Federal Government, and regulators have to keep pace.

Mr. Ramzanali, can you speak to how bad actors are using artificial intelligence to exploit seniors, people with disabilities, other at-risk groups?

Mr. RAMZANALI. I appreciate that question. And you are right, this is a pernicious problem. It is not just annoying. People are getting scammed in dangerous ways.

The robocall problem is accelerated by AI in a number of ways. Generative AI is being used to generate scripts that can be compelling for particular audiences. It is being used to build impersonation of specific people that a person might know, and it is being used to read that script on a call to try to scam somebody out of their money. That is a problem with the technology.

In my view, regulating a problem like that doesn't hurt national security. And so this is the kind of regulation where we can reduce real-world harms and not hurt our leadership in the world.

Mrs. DINGELL. I want to build on that. Earlier this year, the FCC Chairman emphasized that cracking down on illegal robocalls remains a top priority. The Commission has committed to expanding the use of Do Not Originate lists and strengthening call-blocking tools, both of which are essential to protecting consumers. Though I would say to you, I am on the Do Not Originate list, and I get 20 calls a day. So I am trying to figure out and get that figured out.

But we must ensure all providers are fully implementing these tools. Last month, the Commission adopted new rules that required caller ID authentication on non-IP networks, helping ensure uniform robocall mitigation across platforms.

Mr. Ramzanali, how can artificial intelligence and machine learning be leveraged not only to detect but proactively block or trace—trace—illegal robocalls and robotexts? How can AI be part of the solution?

Mr. RAMZANALI. I appreciate that question. The FCC had a proceeding last year to ask that exact question and has some answers. But I would say, where you went, where you are on the Do Not Call list, I am too. We both get calls all the time. That is not acceptable. We can't be at a place where we accept that. We wouldn't accept that with bank fraud. We wouldn't accept that with our spam emails. So I do think it is worth continuing to push the FCC.

The other hearing that is happening on robocalls, the Consumer Federation of America has a lot of good ideas on what else can be done. I urge the committee to consider those.

Mrs. DINGELL. Thank you.

I had questions for you, Mr. Pickering, but I am out of time. So I will yield back and submit them for the record.

Mrs. FEDORCHAK. The Chair recognizes Mr. Obernolte for his 5 minutes of questions.

Mr. OBERNOLTE. Well, thank you very much, Madam Chair.

Mr. Pickering, we have heard in your opening remarks about your support for the moratorium on the enforcement of State regulation of AI. And you have heard in the opening statements of several Members here and then in some of the subsequent questions, answering, some assertions about the moratorium. So I wanted to ask you specifically about a few of them.

One of the assertions that we have heard is that the moratorium should be stripped out under the Byrd Rule because it is policy and isn't related to fiscal matters.

Now, as you know, the reason the moratorium was included is because we are making a $500 million investment in procuring AI to make Federal Government more efficient and effective, and it is nonsensical to make that enormous investment if all these Federal agencies are going to have to navigate this morass of 50 different State regulations.

Would you agree with the assertion that has been made that this should be stripped out under the Byrd Rule, or would you disagree?

Mr. PICKERING. I would disagree. And, again, going back to other precedent, 1993, Bill Clinton and Al Gore started spectrum auctions with a Democrat majority, both the House and the Senate, on a partisan vote. And it was in budget reconciliation, so that you would have all the value created by spectrum auctions. You would also create a competitive industry, and you would preempt States from regulating wireless entry and rates, so that you would get the maximum value.

I think that is one of the best parallel precedents to the AI moratorium so that we can maximize all of the savings and all of the efficiencies across government, if we were to adopt AI technologies. We think—you know, just in the Department of Defense alone, we have an example of one of our companies, Granite, that does telecommunications services, replacing the old network and communications with new AI-generated options and services. And they believe just in one branch that they can save $100 million a year on changing that type of technology from obsolete, antiquated to new.

And if you do that across the board in every department, every agency—you know, last night you were at the AI award dinner. The vice admiral that heads or is the Director of the U.S. Geospatial-Intelligence Agency has probably created more wealth in our country in the private sector with taking the geospatial and putting it in all of our devices that we now know as Google Maps, or Apple Maps, or precision farming, or transportation and distribution.

We think that the AI adoption governmentwide will have tremendous savings and also help us grow our economy once the government products and solutions also go into the commercial markets.

Mr. OBERNOLTE. Well, thanks. It is helpful to point out that this has precedent. It has been done this way before.

Mr. PICKERING. Yes.

Mr. OBERNOLTE. Another assertion that was made by several of my colleagues in their opening statements is that the moratorium would prevent States from enforcing laws that protect consumer safety and prevent deceptive business practices. Would you agree with that assertion?

Mr. PICKERING. I would disagree. The general application of law, whether it is civil rights, consumer protection, consumer fraud, criminal conduct, the language that is in the modernization and moratorium in the reconciliation does not disrupt any of the enforcement of those laws.

Mr. OBERNOLTE. Right. Yes. There is specific language in that bill that says that, as long as something isn't narrowly targeted on AI, it can be enforced.

Mr. PICKERING. That is correct.

Mr. OBERNOLTE. All right. Last assertion that has been made is that this is a giveaway to Big Tech. Is that something you would agree with or disagree with?

Mr. PICKERING. As an advocate for competitors for 40 years—for the new entrants, the new technology, the upstarts, the innovators, the entrepreneurs—it is the exact opposite.

If you are a small startup, you cannot afford the patchwork of 50 States, the complexity of it, to create a model that you hope to deploy in 50 States and nationally and globally if you have to go through the hoops of every different State's regulation. It is the small startup that suffers the most under that system versus having one predictable national framework that then helps the new start and the competitor enter without a regulatory burden and cost that the big companies can afford and manage and have the resources in every State and here in Washington to manage. It is the small and the new entrant that does not.

Mr. OBERNOLTE. Right. So this favors entrepreneurs and actually is anti-Big Tech because it encourages competition.

Mr. PICKERING. And, you know, one of our——

Mr. OBERNOLTE. I am sorry. I don't want to let you go over here. I am——

Mr. PICKERING. Sure, sure. Well, OK, thank you.

Mr. OBERNOLTE. I see we are out of time, but I thank you very much for your time.

Mr. PICKERING. Thank you very much.

Mr. OBERNOLTE. I yield back.

Mrs. FEDORCHAK. The Chair recognizes Ms. Barragán for her 5 minutes of questions.

Ms. BARRAGÁN. Thank you, Madam Chair.

I would like to focus on AI's role in the real-world, life-or-death situations. Nearly 68 million Americans speak a language other than English at home. That is 1 in 5 Americans. In addition to immigrant communities, millions of tourists contribute to our economy, and their safety matters too. For all these people, receiving emergency alerts or calling 911 in their own language can mean the difference between life and death.

AI can help bridge those gaps, translating weather alerts or 911 calls in real time. But if we are not careful, errors and delays in translation could cost lives. States need the power to enforce rules, and Congress must ensure these systems are safe, effective, and fair.

Mr. Ramzanali, in your testimony, you highlighted AI's potential for real-time language translation during 911 calls. How can AI and Next Generation 911 work together to better serve our diverse communities and save lives?

Mr. RAMZANALI. Thank you for highlighting the community that has that need, and let me describe the problem. When someone calls into 911—someone who doesn't speak English—there are translation services available. It just takes the operator time to even know what language is being spoken.

That time is critical life-and-death time. That is where technology can be helpful. Now, this is not at the, like, let's deploy it out to a hundred percent of the 911 operators today, but it has promise. I will also point out that the transparency requirements that a lot of States have, that is the kind of transparency requirements you want going hand-in-hand with deploying a technology in this kind of a situation.

Ms. BARRAGÁN. Well, thank you. That is one of the reasons I am disappointed that my Republican colleagues have abandoned a plan to fund NextGen 911, money that could have ensured that everyone, regardless of language they speak, could get help in an emergency. Instead, they gave billionaires yet another tax break, putting lives at risk.

Mr. Ramzanali, could you describe how AI translation technology has already been used to deliver life-saving information to millions of Americans who speak a language other than English?

Mr. RAMZANALI. As I described, it is starting to be used in 911 systems today. Some of the vendors are rolling it out. It is not yet at mass scale, but it is something where we are seeing that happen and—in fact, I heard from one of the government officials who works on NG911 this week that it can save up to 6 minutes in the delay between having access to 911 response in the language that somebody needs and not having that for 6 minutes.

Ms. BARRAGÁN. Wow, that is a lot of time when it comes to an emergency and response.

I would like to share another example. In 2023, the National Weather Service partnered with an AI translation firm to train a language model in weather terminology. Thanks to that collaboration, forecasters reduced the time to translate hurricane forecasts from an hour to less than 10 minutes, potentially saving countless lives.

When the Trump administration let that contract collapse in April of this year, they created a dangerous gap in information for millions of Americans. Even when helpful AI systems are in place, Republicans find ways to undermine them.

Despite impressive advances, I am concerned about letting the fast-growing AI industry go unchecked, especially in critical areas like emergency communications. If House Republicans' reconciliation bill becomes law, States will lose the ability to enforce new AI regulations for 10 years.

Mr. Ramzanali, what are the risks of underregulating AI technology in emergency communications, and how might that endanger lives?

Mr. RAMZANALI. I think you made the point well of when these systems aren't tested well, when they are deployed too quickly, that can endanger lives.

I also want to go back to your point on the weather data. The National Weather Service is part of NOAA, which is in the Commerce Department. Part of what these AI systems that can do weather—part of what they are trained on is data that NOAA produces. Think about buoys in the ocean that know when a tsunami is coming, because we too are a Pacific country, that data is managed by employees of NOAA. So when the science agencies hit a cut, that is the kind of work that I get worried about.

Ms. BARRAGÁN. Great. Thank you.

With that, I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Carter for 5 minutes of questions.

Mr. CARTER OF GEORGIA. Thank you, Madam Chair, and thank each of you for being here.

You know, AI is fascinating, but it is also daunting, particularly for those of us who don't consider ourselves experts in this area. But just about every profession—I am a pharmacist, and it is going to impact my profession. It is going to impact almost everything that we can think of. But it is daunting, and it is—we know that the advantages are immeasurable, but then again, we have got to be careful.

We know that it is going to help us in detecting cyber threats, increasing network reliability and spectrum efficiency, or combating robocalls—we all want that. So the benefits speak for themselves, but the innovation has got to be balanced. It is got to be balanced with responsibility. And I am very, very concerned—I think we all are—about that.

I am particularly curious about how AI can help us modify and improve and deploy broadband, especially in rural areas. I have the honor and privilege of representing the entire coast of Georgia, but I have a lot of rural south Georgia as well. In Georgia we say there's two Georgias: There is Atlanta and everywhere else. Well, I represent everywhere else, and there is a lot of rural area in south Georgia.

Mr. Pickering, how can Federal policy promote equitable access to AI-powered tools and services, particularly in rural and underserved areas?

Mr. PICKERING. Well, one thing that this committee has spoken earlier this year to address is how the BEAD funds need to go out as quickly as possible, the speed to BEAD, and to be able to cut the red tape so that the deployment of broadband networks to rural parts of the country, like your district, can proceed as quickly as possible with as little regulatory red tape as possible.

AI can help us on the permitting side, both for the local mayor, city council, to be able to have the resources through AI to solve permitting issues, to make it faster so that you can build faster.

As many of the panelists have talked about, wireless coverage in rural areas can be improved by AI and the spectrum management and how our networks operate and interoperate. So for rural America, AI on our networks, on our broadband deployments—I will give you one last example.

We have a company that is building in the Midwest, and they are able, through an AI software application, to know when a contractor is completing a fiber deployment by the square foot. And they can pay them in real time. And so the incentive is to build faster, because as soon as they build, they can get paid. And so that is just one example.

Mr. CARTER OF GEORGIA. That is a nice incentive. For someone who was in business for 32 years, I can assure you that is a nice incentive.

Another component of AI that I think is critical for our race is from 5G to 6G and the technology there. I believe that we are in

another arms race with our adversaries, such as China, and we need to be first in the world to reach 6G.

The Salt Typhoon—all of you remember that—last year, it was a Chinese-sponsored infiltration of nine major American telecommunications companies' networks and systems.

Mr. Shea, what lessons did the industry learn from the Salt Typhoon cyber attack? Did we learn anything? I mean——

Mr. SHEA. I am not really qualified on cybersecurity to comment. I just know that, you know, it was a substantial penetration, and there certainly is a lot of concern in the industry.

Mr. CARTER OF GEORGIA. Anyone on the panel want to take a stab at that?

Good. I win. I baffled the—I did it. I have been wanting to do that for 11 years, so thank you all.

What do you think is the role, Mr. Shea, of AI in improving spectral efficiency and resilience in national critical infrastructure?

Mr. SHEA. Well, we think—you know, as I mentioned in my testimony, we are trying to share bands with incumbent users that are very mobile. And prior attempts were very slow. They took maybe minutes to make a spectrum change.

I think with AI, you can, in a matter of milliseconds, understand what is happening in the spectrum and have the people that are using the band that are not the incumbent user make accommodation for the user. So I think it is opening a whole new world for spectrum sharing.

Mr. CARTER OF GEORGIA. Great. Again, I want to thank all of you for being here, and I want to remind you, for many of us—for most of us, I would go as far as to say—this is fascinating, but it is also daunting, and it is also, quite honestly, scary. So bear with us.

Thank you, and I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Menendez for 5 minutes of questions.

Mr. MENENDEZ. Thank you.

Madam Chair, I am deeply concerned that we are sitting here while our colleagues across the aisle push for deregulation of AI at the same time that the Trump administration is weaponizing AI to make Americans less safe.

Let me explain. People across the country are and should be concerned by recent reports that the Trump administration is using Palantir's AI technology to consolidate Americans' most sensitive data from across Federal agencies into one centralized database. This data could include Americans' medical history, disability status, bank account numbers, immigration status, and even real-time geolocation information.

Make no mistake, the Trump administration is taking this unprecedented step to create a surveillance apparatus and is doing so with zero oversight from congressional Republicans.

While I am in favor of making government more efficient, we have known for years that synthesizing this much sensitive information into one centralized database is ripe for abuse and makes us all vulnerable to cyber attacks.

Mr. Chairman, I ask unanimous consent to enter this article from The New York Times about the Trump administration using AI to merge government data into the record.

Mrs. FEDORCHAK. Without objection.

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

Mr. MENENDEZ. Mr. Ramzanali, you highlight in your testimony that AI has been used in troubling ways, specifically as it relates to surveillance. In a few words, how could the Trump administration's use—how could the Trump administration use Palantir's AI technology in a centralized database of Americans' most sensitive information to monitor and track our constituents?

Mr. RAMZANALI. Citizens give a lot of government to their data, and they have to. That is part of the social contract we have. For the services you need to be able to do that.

In the 1970s, when the Privacy Act was passed, the fear of a combined database that is going on right now, that was the exact fear for the reason that the 1974 Privacy Act was created, because they didn't think—at that time, Congress thought that we should be afraid of a government that knows everything about its citizens.

Mr. MENENDEZ. And think about how much more, right, data we are providing to the Federal Government to make government work for our constituents, right? And they should have confidence that in doing so, that information that they provide, some of the most sensitive information, will not be weaponized or used against them. Is that correct?

Mr. RAMZANALI. That is right. When—we want people to have trust that when they are providing information it should be truthful. We want people to give the IRS truthful information without fear that it will be abused somewhere else.

Mr. MENENDEZ. Correct. And as AI tools become more advanced, is there a need for high-end consumer protections for the Government's collection of sensitive data?

Mr. RAMZANALI. Absolutely, yes.

Mr. MENENDEZ. And can you expand on that?

Mr. RAMZANALI. There is a lot of—since the 1970s, not only has the technology changed, our thinking on privacy has also changed. There are new principles, like data minimization principles, that the Privacy Act has some of those, but we can go much further and not just collection, but we should minimize what we retain and what we process and how we link those databases.

Mr. MENENDEZ. Great. The last piece of major Federal privacy legislation was passed in 1998. That is almost 30 years ago, before many of the major social media platforms were even launched. Even so, my GOP colleagues continue to sit here and repeatedly call for Congress to avoid any guardrails on the use of AI at both the Federal and State level. In fact, their reconciliation package that passed the House just 2 weeks ago include a decadelong moratorium on any State law that addresses AI.

Just yes or no, are commonsense AI guardrails critical for protecting Americans' data from being weaponized?

Mr. RAMZANALI. Yes.

Mr. MENENDEZ. And would the Republicans' moratorium of State AI legislation wipe away the current guardrails that protect Americans from their data being misused and weaponized?

Mr. RAMZANALI. Yes.

Mr. MENENDEZ. So while the Trump administration is using AI to collect and exploit Americans' sensitive data, House Republicans

are rolling back AI regulations and preventing States from filling in the existing regulation gap with their own policies to—with their own policies to protect our constituents. This will leave the American people without any protections as the Trump administration uses AI to act recklessly with their data, and we will miss a short window to pass meaningful legislation at both the State and Federal level.

The bottom line is that the Trump administration cannot continue to misuse sensitive data with impunity. Congress must act to implement commonsense guardrails on the Government's use of AI technology.

Quickly, with respect to the consolidation of Americans' information across Federal agencies, it is not something that we have seen before, it is unprecedented, and does it make us more or less cyber secure as a country?

Mr. RAMZANALI. Less. It makes us way more vulnerable.

Mr. MENENDEZ. And if you were China or Russia or North Korea, right, and you knew that the Federal Government was consolidating our sensitive data into one database, would that not be your prime target to attack and hack?

Mr. RAMZANALI. I would be shocked if it is not already their prime target.

Mr. MENENDEZ. I agree. Thank you so much.

Mrs. FEDORCHAK. The Chair recognizes Mr. Dunn for 5 minutes of questions.

Mr. DUNN. Thank you, Madam Chair.

This committee has vast jurisdiction over technologies, AI being no exception. And along with this committee, I also serve on Speaker Johnson's AI Task Force led by my friend Mr. Obernolte from California.

We focused on AI regulations, regulations on AI labeling, watermarking standards, harmful risks such as deepfakes, fraud prevention, cybersecurity protocols, et cetera. We need America to be at the forefront of the technology, not China.

President Trump also made important decisions around this, including his Executive orders to remove barriers to American leadership in AI and advance AI education for American use. Congressional action is necessary to support these efforts and protect Americans from serious risks but also to support innovation.

Startups and small businesses are already benefiting from AI. And specifically with telecom, prioritizing advancement of the American global competitiveness in 5G and 6G growth is really on the top of everybody's mind.

So I would like to take everything into account on that. A current example is finding and acquiring the resources to build new data centers.

Representative Pickering, I want to pivot for a moment to the realities my district faces, which, due to natural disasters that affect the Florida panhandle, we rely heavily on emergency preparedness and response. And as technology advances, emergency alerts and updates to telecommunications networks are a welcome advancement, and I support the FirstNet emergency telecom network in my district. FirstNet is up for reauthorization in 2027, and these emergency networks are crucial for us.

So given INCOMPAS' proven success in a wide range of communication networks and backup infrastructure, how do you see AI being used for public safety, and how do we protect emergency networks and systems from, you know, people in China?

Mr. PICKERING. It is a great question. And this is where ORAN and AI can really help on the public safety front and in predicting a natural disaster and the response to it. One of the great problems in any disaster is the communication of local public safety with Federal public safety, whether it is FEMA or Homeland Security. And by using AI to create better interoperability of the networks and the communications, the response and the recovery and the prediction of any natural disaster, I think, through AI will be improved. And I would welcome any other comment from the panel, that this is really where we can strengthen FirstNet with AI applications and the networks that are coming through the AI movement.

Mr. DUNN. Thank you for that.

Mr. Shea, you spoke about U.S. leadership in AI, and DeepSig's tech, like your AI-native wireless capabilities, coupled with Open RAN networks will reduce costs to replace custom hardware and allow us to better compete with China and whatnot, specifically Huawei. Can you elaborate on your company's vision, how you see that entrepreneurship leading to the conversations, but also the actions of the companies in creating new technologies?

Mr. SHEA. As I mentioned before, ORAN is just enabling this by disaggregating the network into, you know, components that can be built with individual commodity-to-base servers. So what it is letting companies like DeepSig do is participate with other companies to come up with very cost-competitive technology. You know, when you buy a server, you have many, many options. And so by getting away from custom hardware, you can go commodity on the actual hardware components of it.

And now, the actual radio units are what is left. And through the NTIA program, there has been a great effort to reduce the cost and simplify these radio units so they can also be part of the cost reduction.

So we think this is going to really help drive competition, which will ultimately drive down costs.

Mr. DUNN. Thank you very much.

In the few seconds left to us, Mr. Vasishta, can we utilize spectrum bands for wireless advancement? I mean, I think that is important. I know we are not in a classified setting, but to the extent that you can, will you share your thoughts on how our military can diversify spectrum usage to remain, you know, innovative and stay hidden?

Mr. VASISHTA. Yes, this is where, actually, the ability for AI to do dynamic spectrum allocation, dynamic spectrum sharing with 4G and 5G, and sensing of the spectrum can be really beneficial, because many of those applications can be very beneficial for military applications as well as, you mentioned earlier, public safety.

So bringing AI and the spectrum together as well as, of course, additional spectrum that can be made available for the 6G domain, I think is one of the real benefits of AI.

Mr. DUNN. Well, thank you for mentioning dynamic sharing. That is what I wanted to get from you. I appreciate that.

I yield back.

Mrs. FEDORCHAK. The Chair recognizes Ms. McClellan for 5 minutes.

Ms. MCCLELLAN. Thank you, Madam Chair.

This is probably one of the most important hearings that we are going to have all year. And I want to put this in a little bit of context about why I am so excited about it and to hear from you.

So I graduated law school in 1997, and rather than practicing toxic tort litigation, like I thought I was going to, I began working for an incumbent local exchange company implementing the Telecom Act and spent 25 years in that industry. And I saw the transition from the Princess phone plugged into the wall, to this, to telephones in people's sunglasses, and how rapidly that transition changed as we got farther and farther away from 1997.

And at my last legal conference in that job, I heard some statistics—this was in 2018. I heard some statistics about AI and the ability of AI to create fake news being on pace to outpace its ability to detect it.

And we talked about—then, we were in the fourth Industrial Revolution, and we talked about how with each Industrial Revolution, just as it brought extraordinary advancements, they brought extraordinary challenges. I don't know if we are on the way to the fifth Industrial Revolution with the transition from 5G to 6G and how fast AI is evolving, but I think we are woefully behind getting ahead of the challenges.

Yesterday I was speaking to a group, and they asked me, specifically about AI, What is Congress not talking about that it should? And, What are industry leaders not talking about that they should? And lo and behold, there is an article in Axios on May 28th called "AI jobs danger: Sleepwalking into a white-collar bloodbath," where Dario Amodei said that AI could wipe out half of all entry-level white-collar jobs and spike unemployment to 10 to 20 percent in the next 1 to 5 years.

Madam Chair, I would ask unanimous consent to introduce this article into the record so I can get straight to my questions about it.

Mrs. FEDORCHAK. Without objection.

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

Ms. MCCLELLAN. I am actually shocked we haven't heard any questions yet about workforce. But for all of the witnesses, how can industry and Congress work together to manage this workforce transition that is coming?

It came in every Industrial Revolution. But the difference is here it is going to happen so fast that I don't know if we are going to have time to retrain workers, I don't know if there will be jobs to retrain them to, and I don't know if we can adjust school curriculum fast enough to teach today's students what they need when they graduate to succeed in this new world.

So what should we be thinking about to address that issue?

Mr. PICKERING. One recommendation that I would have is in the BEAD Program, there is both deployment and nondeployment. Louisiana, which—Republican State, on the forefront, they are

using about 60 percent of their funding to deploy and connect every Louisianian and about 40 percent in workforce training.

So if you think about AI—basically, what our AI networks that will take the AI applications and content over the broadband networks that we are building and the infrastructure that we are building, but you have to complement it with workforce.

So Mignon Clyburn and I work together with INCOMPAS and the AI competition center, and one of our key pillars is AI workforce. And everybody at this table—NVIDIA is extremely engaged in AI workforce training. Microsoft, Google, Amazon. The companies that are building the AI models realize that if we don't start from K through 12, community college and university, and adult retraining and workforce, this huge transformation and the benefits could be jeopardized for the good that it could do. But we need to train now and use some of the BEAD money in flexibility for both deployment and training.

Mr. VASISHTA. Maybe I will just quickly follow on from that.

AI gives tremendous opportunity for distribution training, the ability to provide individual students one-on-one tutoring rather than sitting in a classroom and listening to one teacher, trained at the same pace, for instance.

But that also requires communications network as well. And the ability to provide that connectivity to every person where they need it and every student when they need it, I think, enables us to train quickly. As mentioned before by Mr. Pickering, NVIDIA is very much engaged with many IS leads, meaning independent software vendors, developing those types of applications such that they can be delivered over the network.

And then, of course, as I said earlier, the ability to provide a very competitive U.S. telecommunications infrastructure provider will also bring many jobs into the U.S.

Ms. MCCLELLAN. Thank you, Madam Chair. I hope the other two will send me their responses for the record. And I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Joyce for 5 minutes.

Mr. JOYCE. Thank you, Chair and Ranking Member, for holding today's hearing. Thank you to the witnesses who have agreed to come here and testify.

My district in Pennsylvania, and throughout the Commonwealth of Pennsylvania, is on its way to becoming one of the epicenters of data centers throughout America. The energy resources that sit beneath the feet of my constituents is what makes these centers viable. While AI has the potential to continue to be developed, without the significant energy capabilities and the technology will ultimately become ineffective. This demand for massive energy capabilities fundamentally goes hand-in-hand with the need for fiber deployment.

Fiber provides the backhaul that is needed for data centers. But without the right permitting laws in place, we will be incapable of speedy deployment. If we continue to inhibit the growth and the deployment of fiber with obstacle after obstacle, then we are at risk of losing the AI race to China. You have all stated that and acknowledged that here this morning.

This is particularly true when it comes to deploying fiber under, across, and around railroad tracks. The continual delays, unreason-

able permitting, the back-and-forth between providers and rail are causing massive problems for my constituents whose homes reside near these tracks and rely on providers to deploy to their homes.

Mr. Vasishta, how are you developing and innovating your technology to address the growing demands of AI? Do you concur that fiber is the necessary backbone of this system? And what type of technology do you see becoming critical in the future to network security as the demand for AI continues to develop?

Mr. VASISHTA. So, yes. We do agree that the backhauling of data centers is very important, and fiber plays a critical role in enabling that to happen.

If you think about the compute density of—the density of compute required for AI, it can be at the chip level, it can be at the data center level, it can be at the campus level, or multiple data centers. And the connectivity of all those points within a data center or—data center relies often upon fiber networks.

One of the things that we are continuously doing is innovating in that ability to provide low power but also optical connections and fiber connections to enable that to happen.

Mr. JOYCE. Mr. Pickering, INCOMPAS has been a great supporter of my legislation that is focused on streamlining the railroad permitting process. The intersection of fiber deployment and railroad tracks is just one of the many obstacles that providers, such as your members, face.

I am the grandson of Pennsylvania railroad workers. I know how important the rail was for connecting East to West throughout America. I know that Polish and Irish and German immigrants built that connectivities. And I feel the rail industry is no longer responsive to understanding the connections to occur via rail, but they need to connect with the ability for fiber to go between, under, and around those rail crossings.

How are these permitting relays delaying and giving that advantage to China when rail is not cooperative in United States?

Mr. PICKERING. Thank you. And thank you for your leadership on this issue.

Whether it is our companies who are building long-route fiber routes or fiber to the home and fiber to the community, when they get to the railroad track, there is a regulatory gap. It is one of the few places that, from a permitting right-of-way perspective, there is no regulatory oversight.

So the FCC does not have oversight of rail crossings, and the Federal Rail Administration has no regulatory oversight. And as a result, there is no incentive for the rail industry to work with another network industry, the broadband fiber industry, to give them fair access, timely access, and an actual cost to cross their railroad.

And as a result, we have story after story of up to 18 months of delays of being able to build. And if you are a fiber company with capital that is just waiting and losing your money and your time to build to the other side of the tracks to close the digital divide, then you are not going to build there. Or you are going to avoid or—just cost all the community the lost time and opportunity for a broadband connection.

The other thing: Sometimes we hear exorbitant fees of up to $40,000 of crossing, making deployments uneconomic to be able to

build and deploy. So this is a major problem. And your legislation is a very important progress that I hope that we can make in this Congress and in permitting reform ahead.

Mr. JOYCE. The connectivity that rail allowed America to achieve a century ago needs to continue today with the deployment of fiber. And the ability of rail to cooperate with this development, unfortunately, now needs to be legislated. I look forward to doing that.

I thank all of the witnesses for being present today. And I yield back the balance of my time. Thank you.

Mrs. FEDORCHAK. The Chair recognizes Ms. Castor for 5 minutes.

Ms. CASTOR. Well, thank you, Madam Chair, and thank you to the witnesses for being here. I am excited about the potential for AI, all of the advancements and efficiencies in communications networks and in our lives. And thank you for pressing this committee on our responsibility to adopt a national framework.

The problem is that my GOP colleagues have abdicated that responsibility. And what they did in sneaking in this 10-year AI immunity moratorium takes us off track, takes us away from the debate we should be having on that actual framework, and instead, we are going to have to fight over this big gift to Big Tech contained in the billionaire tax giveaway. It is really unfortunate.

And let me say to all of the State and local leaders out there, I really do appreciate everything that you have done while Congress has been absent, while Congress has abdicated its responsibility in this area. And I want to make sure that we know this is a bipartisan issue across the country. The National Association of Attorneys General, 40 of them have written to us that the impact of such a broad moratorium would be sweeping and wholly destructive of reasonable State efforts to prevent known harms associated with AI. They had previously recommended that the Congress act on a framework, especially addressing high-risk areas. But rather than follow the recommendation, instead this immunity for Big Tech and AI, again, takes us off track.

So let me try to get us on track on some of these provisions. Yes or no for all of you. If Congress were to act in a framework, would you agree that we should address AI having highly sexualized conversation with minors, even encouraging minors to harm themselves? Is that an area that we should address? Yes or no.

Mr. PICKERING. Yes. Child safety, yes.

Ms. CASTOR. Yes.

Mr. PICKERING. At the Federal level.

Mr. VASISHTA. Sorry. What was the question again?

Ms. CASTOR. Sure. When Congress is going to adopt a framework, is this a topic that we should address?

Mr. VASISHTA. I think that is important topic. Yes.

Mr. SHEA. I would agree, for minors particularly. Yes.

Mr. RAMZANALI. Definitely.

Ms. CASTOR. Yes.

How about—you know, a number of cities have banned AI-driven rent-setting software used by large landlords after evidence that they were using algorithms colluding to push rents up and reduce housing availability. Is this a topic for a national framework? Yes or no?

Mr. PICKERING. And let me just——

Ms. CASTOR. Can you do yes or no? I have limited time. Or you can pass.

Mr. PICKERING. Well, existing civil rights laws, I think, cover that.

Mr. VASISHTA. I think I have to pass if that is an option.

Mr. SHEA. Likewise. I am not much into regulation. Thank you.

Mr. RAMZANALI. Yes.

Ms. CASTOR. OK. How about some of the—let's see. There was another good example here. How about just plain transparency so that a consumer understands when they are—that AI is on their phone or guiding their decisions? Yes or no.

Mr. PICKERING. As long as it is in a Federal framework, yes. Fifty different State transparency requirements, no.

Mr. VASISHTA. I think transparency is always important.

Mr. SHEA. I agree with that. People should understand what they are being—working with.

Mr. RAMZANALI. Yes.

Ms. CASTOR. So I wonder also—at the end of the last Congress in December, they issued a Bipartisan House Task Force Report on Artificial Intelligence. Have you all read this?

Yes, Mr. Pickering?

Mr. VASISHTA. No.

Ms. CASTOR. No.

Mr. SHEA. I haven't either. Sorry.

Ms. CASTOR. You haven't.

It is just very interesting. I am going to ask Madam Chair that we put in the record the key findings relating to preemption. That bipartisan work group that some of the members of the committee here sat on, they said Federal preemption of State law on AI issues is complex. It has—Federal preemption has benefits and drawbacks. It can allow State action subject to floor or ceiling.

But the ultimate recommendation is that the Congress continue to study this. Nowhere in here does it say that we should sneak in a 10-year immunity moratorium for all AI regulation.

Mr. Ramzanali, is the Congress being consistent here?

Mr. RAMZANALI. I think you had it right. Senator Blackburn recently had a very great, reasonable view on this, which was Congress shouldn't have a moratorium but it should consider preemption when reasonable protections are being put in place in a similar area. And that applies because her State of Tennessee has the Eldest Act.

Ms. CASTOR. Right.

Mr. RAMZANALI. She has the Federal bill, but that makes sense to preempt when—that debate should happen when it is time.

Ms. CASTOR. Thank you very much. I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mrs. Houchin for 5 minutes.

Mrs. HOUCHIN. Thank you, Madam Chair. Thanks to the witnesses for your testimony today.

Artificial intelligence is no longer a far-off concept. It is already changing how we live, work, and communicate, but its success still depends on the basics: fast, reliable broadband infrastructure, access to spectrum, cybersecurity, and reliable energy.

For rural communities, like in southern Indiana, like mine, and across the country, those fundamentals are not always guaranteed. That is why I am fighting to close the digital divide and make sure that those small communities aren't left behind. Today I want to highlight just a few key priorities.

First, we need commonsense permitting reform to cut red tape and get broadband and wireless projects off the ground faster.

Second, we should be harnessing the power of AI to speed up deployment and strengthen our cybersecurity. It is especially important for small providers who don't have the massive teams or unlimited resources to keep up with compliance and ongoing threats.

We should also be prioritizing the deployment of clean, reliable energy like SMRs, small modular nuclear reactors, to power AI and data centers. I hope we can focus on how Washington can be a partner, not a barrier, in driving innovation and expanding the reach of responsible AI across sectors in communities.

Mr. Pickering, you have emphasized that universal broadband access is a prerequisite to universal AI access. What specific barriers are your members running into most often, and where can Congress help?

Mr. PICKERING. Well, you had mentioned earlier in your comments, commonsense permitting reform would be at the top of our list.

Creating AI connectors in corridors—for example, you may be building a long-fiber route from an urban area to a rural area like in Indiana, and it may not be economic to have the long-route fiber that connects data center hubs. So making that eligible for BEAD as well as permitting reform—because once you get the data center hubs, what will happen next is a second wave, which will be advanced manufacturing, that I believe will be coming to rural and remote parts of the country that would never be considered in the old world with old technology as a manufacturing hub.

But in AI and with advanced manufacturing, as long as you have energy and if you have data centers and if you have fiber, then you will see the economic growth come to the middle parts of the country, not just the coastal.

And so I would encourage permitting reform and BEAD flexibility.

Mrs. HOUCHIN. Yes. I have been a chief proponent for BEAD flexibility, removing some of the more costly aspects of BEAD that are not resulting in deployment of those funds to broadband, as well as technology neutrality.

Is there a role for AI itself in helping to accelerate permitting? Could Federal support for AI-based project review tools actually make the deployment process faster and more predictable?

Mr. PICKERING. The great thing about AI, it is going to be the greatest technological advancement in human productivity in the history of the world. And when you apply it to—whether it is rushing new cancer treatments through FDA approval, the iterative ability to speed cancer treatment can also be applied to everyday practical things like, how do we permit faster, how do we plan better? And the AI applications in every part of American life can make us more productive and faster in every area.

Mrs. HOUCHIN. And what is your take on proposals that classify AI-supporting infrastructure like data centers or high-capacity fiber? What do you—if we work to classify those as strategic infrastructure eligible for a fast track in permitting, is that necessary?

Mr. PICKERING. Yes. We are in a critical race against China. And whatever we can do, especially on the multi-State energy deployments and fiber deployments, we need some type of national framework that consolidates reviews, accelerates reviews, and approves in a time-certain manner.

Mrs. HOUCHIN. And to all the witnesses, if Congress could just pass one reform this year, whether it is related to permitting, interagency coordination, targeted incentives, what would have the greatest impact on unlocking AI's potential across the U.S. economy?

Mr. Pickering, I will start with you.

Mr. PICKERING. Just remember, infrastructure, whether it was the internet infrastructure of the previous age, once we built fiber long-haul satellites that were digital, cable that was digital, and then we had all of the infrastructure in place, on the wireless and wired side, you could then do something like this.

The same thing is going to be true in AI applications. If you build the infrastructure that is now both energy and fiber and other broadband networks of all technologies, add the data center, it will unleash unlimited new research, new manufacturing, precision agriculture, and all of the different uses that we think will grow the economy.

Mrs. HOUCHIN. Since my time has expired, agree? Disagree?

Mr. VASISHTA. Agree.

Mr. SHEA. Agree also.

Mr. RAMZANALI. I would prioritize other things.

Mrs. HOUCHIN. OK. Thank you. I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Landsman for 5 minutes.

Mr. LANDSMAN. Thank you, Madam Chair.

I want to talk about the satellite versus fiber broadband, you know, which seems to be at the heart of this conversation in terms of where we go long-term and whether or not we have the capacity. I want to pick up where you just left off, which is your different priorities. I would love to hear those as it relates to what we should be doing.

But the question I have, fair or not, is whether or not broadband and fiber, which we know matters more—it is more reliable, it is what is going to power all of this—versus satellite—that satellite has the advantage because of folks like Elon Musk, right? Because he has got Starlink, and this is what he is pushing. He has obviously got enormous influence. Maybe that has changed over the last 48 hours. I don't know.

Do you worry about this—that satellite will somehow, you know, get the best of us? You all? In terms of resources? Do you see that? Is this sort of a—just a Starlink thing? Where is the power coming from on the broadband fiber side?

Mr. Pickering, I would—and that is not a setup. I am just curious.

Mr. PICKERING. So INCOMPAS has members that are fiber, wireless, fixed wireless, and LEO satellite, Amazon's Kuiper that just launched and is competing for broadband grants across the country and competing against Starlink. We think competition in LEOs and fiber and wireless and everything will make it better.

And we think that States having the flexibility to choose whatever technology is best for them—Colorado may need satellite, and other places could densify their fiber and their fixed wireless, and that might be a better combination. But we think the States should decide—look. The great thing is we have new deployments of new networks that I think are so much better on all fronts. Fiber is always going to be the foundational network that everything comes back to, wireless, fixed, and satellite.

Mr. LANDSMAN. Fiber doesn't have at the moment—and I am not trying to be funny or—fiber doesn't have a, you know, the world's richest man saying, you know, "Invest in fiber or broadband." And I agree. I mean, obviously every State is different. But we have to provide the regulatory and investment framework. And I am worried, as we all should be, that, you know, one guy and the thing that he owns, Starlink, is going to have more influence than what we know to be true, which is that, yes, every State is different, but for the most part, fiber and the broadband is the most reliable.

Can you just share what you were going to say? It was a good question in terms of where should we go and what we should be investing in. I just want to——

Mr. RAMZANALI. It is a good question. I think you are right that—I would actually say the work has already been done. This subcommittee—this committee—this Congress passed the Bipartisan Infrastructure Law that had specific instructions on how to implement the law. The work was done to think about what that means for different technologies and the NTIA.

This administration has paused that. They want to revisit—they get the authority to put their policy priorities on top of it. But that work was done. That is how we got to a fiber preference.

The way I think about this historically is rural electrification. We got electricity to all of America. We would have never put up with a second-class technology for electricity going to rural Americans.

Mr. LANDSMAN. That is a really good way to frame it. I do think speeding this up—I mean, we have to get this stuff out much more quickly. And so hopefully that bipartisan commitment is there and that will get to a good place because it goes beyond BEAD and everything else, but we have got to get things out much more quickly.

That is all. Thank you so much. I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Goldman for 5 minutes.

Mr. GOLDMAN. Thank you, Madam Chair. Thank you to the panel very much for being here today.

Mr. Vasishta, how is NVIDIA ensuring that AI use and telecom infrastructure is resistant to foreign interference, especially from adversarial state actors like China?

Mr. VASISHTA. So NVIDIA, we build the infrastructure that enables the AI to be leveraged by our ecosystem of partners, whether it be original equipment manufacturers or telecom operators or people developing software.

So as the vulnerabilities of the layers of the applications and the software on top of that, a lot of our partners are building that in. What we have done, though, is we have built in the infrastructure underneath that to enable much of that—those software vulnerabilities to enable to be exposed.

And I will give you an example of what that means. Often, cybersecurity can be enabled and created by anomaly detection. There is a normal pattern of use and data, and then there's anomalies. And to be able to detect those anomalies fast and at line rate, meaning as they happen, can happen within that infrastructure that we build. We have some silicon capability that allows that to happen and the connectivity to allow that to happen, right at the edge of the network. So it doesn't have the opportunity to infiltrate into the cloud.

So that is just part of and just an example of some of the things that we are doing in working with our ecosystem.

Mr. GOLDMAN. Thank you very much.

Mr. Pickering, Fort Worth in my district has a growing film industry, with over 550 million in economic impact since 2015. How can INCOMPAS's work on AI-driven network improvements, like better 5G and fiber connectivity, help support Fort Worth film studios with real-time virtual production and data-heavy post-production?

Mr. PICKERING. Just like every sector of the economy, it is enabled by the network. It is enabled by the infrastructure. And if you have a creative movie production, the ability to use AI and then the networks will allow better quality, better performance, better distribution, and better and higher value. There is going to be great challenges as we look at the property rights and the intellectual property in this sector. But as far as the infrastructure that then enables every sector to grow, I am excited about the future for each sector.

Mr. GOLDMAN. Great. Thank you very much.

And Mr. Shea, is DeepSig currently seeing any risk of IP theft or cyber infiltration targeting U.S. defense AI contractors? And what countermeasures are you developing?

Mr. SHEA. No, we are very concerned with that. We are not aware of any exfiltrations have happened of our data, but we spend a lot of effort protecting our information, you know, having cyber threat detection in our network. But it is a major concern because we know AI technology is right at the forefront of where the world is going, both on the commercial and defense side. So it is a high priority for us.

Mr. GOLDMAN. All right. Thank you very much.

Madam Chair, that is all I have. I yield back.

Mrs. FEDORCHAK. The Chair recognizes Mr. Fry for 5 minutes.

Mr. FRY. Thank you, Madam Chair. You are doing a great job today, so appreciate that.

Mr. Pickering, I was perplexed a little bit. You were talking with Mrs. Houchin earlier about barriers that slow down AI-related infrastructure buildout. And two things that you mentioned were permitting reform and BEAD flexibility. And I think y'all talked about the BEAD flexibility a little bit. But specifically, when it comes to

permitting reform, what do you envision that looking like from a specific policy standpoint? Like, what specifics——

Mr. PICKERING. So I will give you an example of two successful permitting reforms that have happened in recent history. One was for the small sale deployments that went with 5G. We created a Federal framework with shot clocks and time certainty, and that if the jurisdiction did not approve within the time certain, it would be deemed granted.

And so the times of certainty and predictability is critical. "One touch, make ready," which means that if one fiber deploys on a pole, that they do all the deployments at one time, one touch, instead of doing six different, you know, service trucks for each different company. And that accelerates the deployment of a long pole.

So there's some commonsense things, but everything is about one touch, did once, one review, time certainty, those types of principles on permitting reform. And if you can have national projects for grids, pipelines, transmission, fiber routes that are multi-State so that you can coordinate a whole-of-government approach to deploy the infrastructure that we need for the AI race against China.

Mr. FRY. At least when it comes to the permitting perspective of six different points, one different trigger—or one trigger, would that also—in your mind, if a permit was previously issued, say, a few years ago, would that also be almost grandfathered in, that you could use that existing permit for——

Mr. PICKERING. I will give you an example. If you have multiple agencies—a lot of times, they will all require their own environmental review when you should just have one environmental review that would then be adequate for all the different agencies. And if you have a review that is a year ago or 2 years ago and then you have a new part of a construction, that previous review should be considered as adequate for the current project if it is not substantially different.

And so those types of commonsense reforms that I think can protect and preserve our resources and our communities and at the same time speed the deployment that everybody needs today.

Mr. FRY. Thank you. Thank you for that.

Mr. Vasishta, NVIDIA is on the frontlines of both AI and the telecom infrastructure. What role do you see for AI-native wireless networks in the transition to 6G, and how can Congress support companies leading that effort in that transition?

Mr. VASISHTA. Thanks for the question.

As I said in my opening remarks, AI-native wireless is really what 6G is going to be about. And what I said earlier is that there is a requirement, really, for help between public/private partnership to make that a reality. We need a lot of research to come straight to production. So with this AI WIN Project that NVIDIA is part of with other companies, we are already embarking upon taking research from, say, Mitre to production with, say, T-Mobile as fast as possible and getting guidance from that.

A lot of that relies upon research that is coming out of the universities, and so the accelerant and the enablement of AI-native wireless research. There is only one other company—I said earlier China, but I really meant one other company that is kind of work-

ing on this AI-native approach, and that is Huawei, on the world stage. And so, once we are able to accelerate this within the U.S., we will then be able to take these same developed platforms out globally and once again be able to create a global platform for telecommunications within those standards committees.

Mr. FRY. Thank you for that.

You have emphasized software-defined networks as a game changer. How do these networks enhance both performance and cybersecurity compared to our traditional infrastructure?

Mr. VASISHTA. Yes, so traditional infrastructure has more of a closed propriety system. Now, you might think that is a positive, but the benefit of having software defined is continuous integration, continuous deployment so you are able to add features very quickly, you are able to implement new capabilities much faster than if you had to do that in hardware.

AI-native approaches, like integrated sensing and communication, which can be—can be threat detection, you can really sense the airwaves for threats—that can be a software-defined feature that can be integrated by defense but also in commercial reason—commercial aspects.

Mr. FRY. Thank you for that. I see my time has expired. Madam Chair, I yield back.

Mrs. FEDORCHAK. The Chair recognizes Ms. Kelly for 5 minutes.

Ms. KELLY. Thank you so much.

I am very excited to see the emergence of artificial intelligence. However, like many emerging technologies, it needs to be implemented with care, weighing the risks posed to American consumers, like my constituents back home in Illinois.

As I discussed on a very long markup not too long ago, I joined many of my Democratic colleagues in concern about the reconciliation package including a 10-year moratorium on State and local enforcement of AI laws. Such a moratorium without Federal safeguards in place leaves Americans unprotected from data-driven discrimination in critical areas, such as housing, employment, credit, education, healthcare, and insurance.

It is crucial that we stop bowing to Big Tech and start doing our jobs to protect American consumers by addressing the potential for discriminatory outcomes, especially as AI technologies advance at an unprecedented pace, both domestically and internationally, which brings me to my next point. It is critical that the U.S. is positioned to win the race for global AI leadership, which I believe all of us want that.

Mr. Ramzanali, how will the BEAD Program's investment in futureproof internet infrastructure, like fiber, allow America to remain a world leader in AI innovation?

Mr. RAMZANALI. I appreciate that question and your hard work in this area.

As I said in my opening, America can't lead in AI if all Americans don't have access to AI. The way that happens, especially as we think about where the technology might go that requires higher-capacity throughput, is through futureproof networks like fiber.

Ms. KELLY. Does anyone have anything else to add? No?

In your testimony, you state that AI's power and usefulness will be fundamentally limited if all Americans are not able to access

that use AI. Recognizing this, how does the President's unilateral decision to stop funding programs providing digital skills, including AI training, to such groups as seniors, veterans, and the disabled jeopardize America's ability to innovate in AI ahead of places like China or the Middle East?

Mr. RAMZANALI. The way to think about the Digital Equity Act programs—maybe I will give a couple of examples that were in the letter to the record that was submitted earlier. There is a program in rural Kentucky that was hoping for a digital equity grant that helps seniors with digital skills, including how to use the internet for job applications. They were helping—they were going to help the seniors also use AI in a way. And so that is one example.

Another example is in Hurricane Helene, the areas that experienced that disaster, they were doing device access. Those are the kinds of people that need our help in a time like that. To me, those kinds of programs deserve our support.

Ms. KELLY. Thank you. And I yield back.

Mrs. FEDORCHAK. Thank you. The Chair recognizes Mr. Kean for 5 minutes.

Mr. KEAN. Thank you, Chairwoman. And thank you to our witnesses for being here today.

Mr. Shea, I recently heard from a constituent who lives in Warren County, a rural part of my district in New Jersey. Her small town is tucked between two steep ridges that flank either side of the Delaware River. Because of the unique geographic features of this area, she and her neighbors frequently have unreliable cell service and even difficulty reaching emergency services.

In your testimony, you discussed the cases of integrating AI technology into consumer wireless communications. What about for an application like—what about for an application like this? What integration of AI technology can help overcome the challenges posed by difficult geography, like this one, to keep people connected and able to reach first responders when needed?

Mr. SHEA. Well, actually, the NTIA—first NOFO award we received was about how to come up with better ways of measuring the local environment to assure high-quality service. So I think with AI, what is called "digital twin technology," we are getting a much better understanding of how signals propagate and where we can put in small cells to fill in these gaps.

So AI, I think, is going to be revolutionary for these type of applications where people have poor service. And I think we are going to be seeing the fruits of that technology within the next couple of years.

Mr. KEAN. Thank you.

Mr. Pickering, in your testimony, you discuss how deployment of technologies, like fiber networks, is a necessary input to the management of AI applications. Given that responsibility for these regulations is shared among several different stakeholders, including the State and local level, how can Congress best facilitate smart, forward-looking policies that will enable us to compete in AI?

Mr. PICKERING. I think there is a way in the permitting reforms that this committee will put forth that will respect the local jurisdictions and the counties and the States and how they have responsibilities on permitting. What we have tried to do as an industry

is to create a blueprint of best practices and then find voluntary incentives and community engagement. But on national deployments, multi-State, I do think that there is a rural and across Federal lands and Federal properties that this committee can really speed and accelerate the time to deploy.

I have been talking earlier, we are in a race with China. We need to build as fast as possible. They are not having permitting delays like we have, if they have permitting at all.

And so we need to find a way to speed at every level and give the resources and the technology and the tools and the incentives for the best practices with time certainty, transparency, and the best technology tools to permit as fast as possible.

Mr. KEAN. Thank you.

Mr. Vasishta, I agree with you as to the critical importance to making sure the United States is a leader in the future of wireless communications on the global stage. What steps do we need to take to make sure that American innovators are leading on AI within international standard-setting bodies?

Mr. VASISHTA. So let me take that as a telecommunications question.

Firstly, as we start to look at the definition of the 6G standards, which has already started to happen, America needs to have a very strong voice in the 6G standards, both corporately as well as from the NTIA. And I think that is starting to happen. But we need to really double down on that to make sure that as we define those standards, those standards are defined in a way that is meaningful to our advancement as well as AI RAN, as we call it, which is the infusion of AI and the radio access network. And as I said before, that is probably something that many others are not really thinking about. But it gives us, within the U.S., the opportunity to take that leadership position because we have that AI leadership position.

The other thing, of course, is to make sure that we have most of, if not all, the developers in the world developing AI on America infrastructure. That is very important. Many developers around the world don't reside within the U.S., but we need to make sure they have access to that American infrastructure because that is what improves the capability and the performance of our AI.

Mr. KEAN. Thank you. I yield back.

Mrs. FEDORCHAK. The Chair recognizes myself for 5 minutes.

So AI has been described as not only a powerful tool but an incredible weapon. And I don't feel like the public necessarily understands that or sees it exactly that way. But given that China today produces 10,000 terawatt hours of power a year and the U.S. produces 4,000 terawatt hours of power a year, we are already quite behind.

So given this, I am wondering, you know, do you share this concern, Mr. Pickering, about maybe China being in a better position? If so, what do we need to do about that? And then also, to comfort me and my colleagues, what barriers is China facing in their deployment of AI?

Mr. PICKERING. So far, you know, our country—as you look at what is powering the data centers that are running the large language models' intensive energy demand, I think new solutions that

would bring behind-the-meter or dedicated energy to the data center is a critical reform that is needed to meet the demand needs today that would not overtax the existing grid and the residential customer. So that is one solution.

Too, as we have talked about the permitting reforms—and this committee in reconciliation has something that addresses multi-State pipeline construction and being able to have a consolidated review and a time-certain review on that.

As we look at traditional energy meeting current demand, how can we also look at future options and solutions? And SMR technology, the small modular nuclear reactors, fusion technology, those types of things that can give us clean energy, reliable, abundant energy, and a very small footprint that is much safer and much more sustainable—getting those technologies as quickly as possible into the market. So X-energy is one of our member companies that has a big agreement with AWS and Dominion utility in Northern Virginia. It came out of one of our DOE labs. It is an amazing advancement in nuclear technologies, very similar to what we do in our nuclear fleets.

And so those types of new solutions long term. But in the short term, building as fast as we can, and all-of-the-above strategy, and giving data centers the ability to have behind-the-meter solutions or dedicated solutions for the demand today.

And no, China does not have barriers or impediments that we do.

Mrs. FEDORCHAK. Shoot. I was hoping there were a few, at least.

I have questions for a few other of you, but I do want to invite you all—my office—I am very concerned about having the power to meet the demand of the moment for AI, and so my office is leading an AI energy working group, and I would invite all of you to participate in it. I know, Mr. Pickering, you are, and hopefully others are as well. But we are very much working on this framework of solutions to meet the energy needs.

Mr. Shea, you haven't gotten a question for a bit. I wanted to ask you, from your vantage point as a smaller innovator, what are the specific barriers to deploying AI-driven wireless infrastructure, especially in rural underserved areas, and what kind of changes could Congress bring about to help that to address those barriers?

Mr. SHEA. I think for Congress to continue the push at ORAN is probably the most help that can be provided because we are finding the ORAN vendors we work with more forward looking on AI. They are looking for ways to leapfrog technology, which is what we need to compete with China. So I think the openness of that type of standard is what is key to make this all happen quickly.

Mrs. FEDORCHAK. Excellent.

And, Mr. Ram-za-me—how do you say your name?

Mr. RAMZANALI. "Ram-za-*nall*-ee."

Mrs. FEDORCHAK. Ramzanali. You stated with Mr. Menendez that the moratorium—or Mr. Menendez stated that the moratorium on new State regulations that we included in the One Big Beautiful Bill erodes the current frameworks passed by States, and you agreed with that statement. So help me understand how that is so when the moratorium is on new regulations and doesn't do anything to the existing regulations that States have already enacted.

Mr. RAMZANALI. So there's questions about how it applies to privacy laws that are being—privacy bills that are being considered and privacy laws that exist, because some of them use definitions for automated systems that could be caught up in the way that the bill is written. That is one way that it could directly go at the privacy concerns.

Mrs. FEDORCHAK. But you agree that the moratorium is on States developing new regulations, not the existing ones.

Mr. RAMZANALI. I would have to read it more closely, but I believe there has been some debate about how that would be applied. And that is the kind of thing that would take a while for courts to work out too.

Mrs. FEDORCHAK. OK.

Let's see. Seeing there are no further Members wishing to be recognized, I would like to thank our witnesses for being here today. I ask unanimous consent to insert in the record the documents included on the staff hearing documents list. Without objection, that will be the order.

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

Mrs. FEDORCHAK. I remind Members they have 10 business days to submit questions for the record, and I ask the witnesses to respond to the questions promptly. Members should submit their questions by the close of business on Wednesday, July 18th.

Without objection, the subcommittee is adjourned. Thank you all.

[Whereupon, at 1:23 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

Documents for the Record – 06.04.25

1. A March 2025 policy paper for CISCO titled, "AI for connectivity: how policy makers can help digitalization" [1]
2. A May 21, 2025, letter with the subject line: Urgent Need for Federal Preemption of State AI Regulations
3. A June 3, 2025, letter from Real Estate Technology representatives.
4. A June 3, 2025, letter from WIA to subcommittee leadership.

Minority

5. Statement on New Jersey's Ongoing Development and Oversight of Artificial Intelligence
6. Testimony of Dr. Krystal Rawls - Director, CSUDH Workforce Integration Network
7. A CAP release titled: "The House Is Close To Passing a Moratorium on State Efforts To Regulate AI"
8. A May 16, 2025, letter from the National Association of Attorneys General.
9. Pages from the Bipartisan House Task Force on Artificial Intelligence
10. A letter from Community Innovation Partnership
11. A June 4, 2025, letter from NDIA
12. Consumer Reports opposes AI state preemption language in House budget reconciliation bill
13. CSG Statement on Proposed Federal Moratorium on State AI Legislation
14. EPIC Opposes House Proposal to Ban States from Regulating AI
15. GOP Plan to Prevent AI Regulation Is Unhinged, Dangerous - Public Citizen
16. A Brookings commentary titled, "Not all robots take your job, some become your coworker."
17. A May 28, 2025 article titled, "Behind the Curtain: A white-collar bloodbath"
18. The Trump administration has expanded Palantir's work with the government, spreading the company's technology — which could easily merge data on Americans — throughout agencies.
19. A May 13, 2025 letter from NCSL to Committee leadership
20. Open Markets Lambasts House Committee's Blank Check to Silicon Valley Oligarchs — Open Markets Institute
21. A May 13, 2025 letter from companies to House leadership in opposition to a provision in the budget reconciliation bill.
22. Statement on House Reconciliation Bill Banning State AI Regulation for 10 Years
23. Critical Questions for the House Hearing Examining a Federal Restriction on State AI Regulation

[1] The report has been retained in committee files and is included in the Documents for the Record at https://docs.house.gov/meetings/IF/IF16/20250604/118333/HHRG-119-IF16-20250604-SD13189497.pdf.

May 21, 2025

Subject: Urgent Need for Federal Preemption of State AI Regulations

Dear Members of the Colorado Congressional Delegation,

We, the undersigned chambers of commerce and business organizations representing a diverse range of industries across Colorado, are writing to express our growing concern regarding the increasing number of proposed state-level regulations targeting the use of artificial intelligence technologies.

While we recognize the importance of addressing potential risks and ethical considerations associated with AI, the current trajectory of disparate state laws could significantly undermine innovation, economic growth, and our ability to compete on a national and global scale. Governor Polis and other elected leaders have highlighted concerns around Colorado's recent efforts to regulate AI and the impact that these regulations could have on technological innovation and investment in our state. The lack of a federal framework further complicates a complex and burdensome compliance landscape, particularly for small and medium-sized enterprises that may lack the resources to navigate varying and potentially conflicting requirements across state lines.

As you know, Colorado has enormous opportunity to leverage AI to compete in the global marketplace, via productivity gains, enhanced creativity, and allowing businesses to strategically direct financial resources in the areas that offer the greatest pathways for growth. According to the U.S. Chamber of Commerce, 42% of Colorado small businesses are using AI tools to improve their competitiveness with larger companies and 84% of the small business using AI in our state expanded their workforce and reported profit growth. In addition, modernizing government infrastructure to bring it into the AI age through a federal standard can provide pathways for businesses to offer services that make government more efficient, and demonstrate a roadmap for state and local governments. These actions are critical, as other countries are adopting national policies to promote AI adoption, especially China.

To best position our businesses for success in the 21st century, we urge you to champion federal efforts to establish consistent rules for the development and deployment of artificial intelligence technologies, preempting an emerging patchwork of state laws. A unified federal approach would foster innovation by providing businesses with a predictable regulatory environment, encourage investment, and ensure that the benefits of AI can be realized across the United States for all our citizens.

We stand ready to collaborate with you and your colleagues on crafting thoughtful and effective federal legislation.

Sincerely,

Adams County Regional Economic Partnership (AC-REP)
Colorado Bankers Association
Colorado Business Roundtable
Colorado Competitive Council
Colorado Concern
Colorado Springs Chamber and EDC
Colorado Technology Association
Denver Metro Chamber of Commerce
Jeffco EDC
Northern Colorado Legislative Alliance
South Metro Denver Chamber

June 3, 2025

The Honorable Richard Hudson
Chairman, House Energy & Commerce Subcommittee on Communications & Technology
2112 Rayburn House Office Building
Washington, DC 20515

The Honorable Doris Matsui
Ranking Member, House Energy & Commerce Subcommittee on Communications & Technology
2206 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Hudson and Ranking Member Matsui:

On behalf of the Real Estate Technology and Transformation Center (RETTC), the National Multifamily Housing Council (NMHC) and the National Apartment Association (NAA), we write to thank you for convening the upcoming subcommittee hearing, *"AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology,"* and to share insight into how artificial intelligence (AI) is already shaping broadband service and access in rental housing communities across the nation.

As you examine the intersection of AI and connectivity, we urge you to consider the unique role of AI in enhancing broadband access, reliability, security and affordability for the more than 44 million Americans who call rental housing home.

AI is Improving Resident Connectivity and Network Resilience

Rental housing communities face distinct challenges in delivering reliable, high-speed internet access to residents—particularly in older buildings, high-density urban areas, or underserved communities. AI is helping housing providers and technology partners bridge these gaps by enabling:

- Predictive network optimization, where bandwidth is managed to improve performance during high-traffic periods.
- Automated device management, which ensures connectivity is seamless across dozens or even hundreds of homes within a building or community.
- Smart network design, where AI tools model infrastructure needs and guide cost-effective deployment that avoids overbuilding, all while ensuring equitable access.

These innovations are essential as more Americans rely on in-home broadband for remote work, telehealth, education, and access to other essential services.

AI is Enhancing Cybersecurity and Operational Efficiency

Rental housing communities are increasingly utilizing smart home technologies—ranging from locks to lighting to thermostats and AI is helping rental housing providers better secure IoT ecosystems within buildings. This includes:

- Real-time threat detection: AI isolates unusual behavior that could indicate network breaches or device vulnerabilities.
- Maintenance prediction: AI identifies network or equipment failures before they impact residents and minimizes downtime.

As Congress explores the future of AI policy and connectivity infrastructure, we encourage you to recognize the pivotal role of rental housing providers. Rental housing providers prioritize robust connectivity for renters and rely on this same connectivity for critical property operations. They do this all while leveraging AI and other emerging technologies to address our nation's long-term housing challenges. Specifically, we urge policymakers to:

- Support policies that preserve the existing partnership model that enables rental housing operators and communications providers to enter into agreements negotiated under free market conditions, encouraging competition, higher customer service standards, and better, faster, and more reliable internet service than what is typically available in the broader retail market.
- Prevent duplicative and fragmented AI regulations at the state and local levels. As our organizations have consistently said in the past, a fragmented regulatory approach in data management, security and technology risks stifling innovation and increasing compliance costs. This ultimately undermines the benefits these systems and technologies offer to renters and housing providers alike.
- Redouble efforts to fund and expand broadband-affordability assistance for low-income Americans, many of whom are renters, through a streamlined and improved version of the Affordable Connectivity Program (ACP).
- Engage with housing stakeholders when shaping AI and broadband infrastructure policy, ensuring solutions account for the challenges and opportunities across the rental housing landscape.

We stand ready to support the Committee as it continues this important work. Thank you again for your leadership in exploring how AI can enable modernized connectivity infrastructure to support a more connected future across rental housing.

Sincerely,

Sharon Wilson Géno
President
National Multifamily Housing Council

Bob Pinnegar
President and Chief Executive Officer
National Apartment Association

Kevin Donnelly
Executive Director and Chief Advocacy Officer
Real Estate Technology & Transformation Center

Wireless Infrastructure Association

June 3, 2025

The Honorable Richard Hudson
Chairman
Subcommittee on Communications and Technology
2112 Rayburn House Office Building
Washington, DC 20515

The Honorable Doris Matsui
Ranking Member
Subcommittee on Communications and Technology
2206 Rayburn House Office Building
Washington, DC 20515

Re: Hearing on AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology

Dear Chairman Hudson and Ranking Member Matsui:

The Wireless Infrastructure Association (WIA) commends the Subcommittee for holding a hearing on the important topic of artificial intelligence (AI), including a focus on the infrastructure necessary to achieve the full capabilities of AI for American businesses and consumers. We appreciate the Subcommittee's recognition that in addition to the continued development of advanced semiconductors and the timely deployment of data centers, "[m]obile 5G and other wireless networks will also be crucial to the advancement of AI technologies by providing additional applications for AI driven, wirelessly connected devices."

Across the board, WIA's members are already using AI in numerous ways to optimize network design, planning, and operations. At the same time, consumer usage of AI-driven applications has increased exponentially in the last few years (with the vast majority of internet usage originating on wireless smartphones). And we are just scratching the surface. Testimony from NVIDIA's Ronnie Vasishta summarizes the point clearly: "In the future, mobile networks will also be called upon to support a new kind of traffic—AI traffic. AI traffic will include the delivery of AI services to the edge, or inferencing at the edge." Whether the applications are smart glasses, autonomous vehicles, generative AI services on smart devices, or (more likely) things we have yet to envision, a significant amount of wireless infrastructure will need to be deployed and upgraded to keep up with network demands.

AI infrastructure is wireless infrastructure. Thus, as you examine how to most effectively advance America's AI future, it is essential to also consider the importance of smart wireless permitting policies, something that has been a hallmark of this Subcommittee. The full capabilities of AI will not be realized without timely wireless infrastructure deployment. We can't let Americans be left behind due to administrative red tape that puts process ahead of

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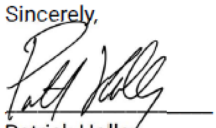
progress, which is why WIA advocates for predictable, proportionate, and transparent permitting processes. This Committee last year advanced important permitting legislation, the American Broadband Deployment Act (ABDA), that would advance our national technology priorities; we urge you to take up similar legislation this Congress. Doing so is essential to meeting the full capabilities of 5G and laying the groundwork for the AI-driven services and applications that will usher in the next generation of wireless connectivity.

Sincerely,



Patrick Halley
President & CEO

cc: The Honorable Brett Guthrie, Chair, House Energy & Commerce Committee
The Honorable Frank Pallone, Ranking Member, House Energy & Commerce Committee

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Statement on New Jersey's Ongoing Development and Oversight of Artificial Intelligence

Office of New Jersey Attorney General Matthew J. Platkin

The State of New Jersey is committed to the responsible development and use of artificial intelligence (AI) to capitalize on New Jersey's national leadership role as a hub in key industries such as health, sustainability, finance, and technology. Our multipronged approach promotes the ability of academia, industry, state government, and public-private partnerships to work together to promote, develop, and deploy AI technologies in appropriate use cases with effective government oversight through the enforcement of preexisting and new laws and regulations. This strategy is enabling our State to leverage AI to foster progress and create economic opportunity for New Jerseyans while ensuring that the public is protected from emerging and evolving harms.

We welcome federal government leadership in steering a national conversation around the benefits and risks of AI and how to design a shared legal framework that appropriately balances the attendant risks and benefits at the baseline without stifling innovation. As New Jersey's own experience shows, it is essential that States be given the space to explore how their local circumstances translate into priorities and anticipated impacts, to decide for themselves how to calibrate their government programs and legal regimes to the needs of their residents, and to experiment with and learn from different regulatory and enforcement approaches in light of their specific circumstances.

That diversity of perspectives and experiences will only enrich the national conversation around AI and put Congress in the best position to enact legislation that best serves the interests of the public in our vast nation. For that reason, last week I joined 39 other State Attorneys General in a bipartisan letter urging Congress to reject a proposal that would impose a 10-year prohibition on enforcing state laws addressing AI and automated decision-making. And today, through this statement, I would like to provide this committee with additional information about the valuable work in the AI space that is in progress in New Jersey, as an illustration of the kinds of contributions that could be delayed or lost if Congress were to deny the States a role in regulating the risks of AI through an overbroad moratorium.

Positioning New Jersey as an AI Hub in the East Coast

In October 2023, Governor Phil Murphy signed Executive Order 346, which established an AI Task Force charged with studying emerging AI technologies to issue findings on their potential impact on society and to offer recommendations for government actions to encourage the ethical and responsible use of AI technologies, including Generative AI. As a member of the Task Force, I am proud of the work we have done to better understand and leverage these emerging technologies in concrete ways while identifying the key considerations and principles that should guide effective oversight.

As part of its work, the Task Force commissioned several surveys to gauge responses and attitudes towards AI among New Jersey public employees, institutions, and residents, to better understand our technological landscape and ensure that our government's strategy is well aligned with local priorities and concerns and fosters public trust. Building on this work and months of consultation

with experts and stakeholders, the AI Task Force issued a final report in November 2024 that included recommendations to the Governor to encourage the statewide development and use of AI, improve government services, and promote equitable outcomes.

Since then, New Jersey has taken multiple steps to put our commitment to innovation into action. In March 2025, Governor Murphy officially opened the NJ AI Hub, a state-of-the-art facility in West Windsor Township that will provide a physical location for a public-private partnership among the New Jersey Economic Development Authority (NJEDA), Princeton University, Microsoft, and CoreWeave. Supported by an investment of over $72 million, programming at the NJ AI Hub will focus on research and development, commercialization and acceleration of innovation, and strengthening AI education and workforce development. This initiative is part of a broader push to promote statewide investment in AI, which also includes a tax credit program for innovative AI companies and the creation of a venture fund that will invest in early-stage AI startups, focusing on companies that are part of New Jersey's strategic industries.

Enforcing Existing Laws and Regulations

While AI presents new opportunities that New Jersey is ready to embrace, our existing laws and regulations still provide strong tools to ensure that the use of innovative technologies does not result in discrimination or bias-based harassment. My office and the New Jersey Division on Civil Rights (DCR) are committed to enforcing New Jersey's civil rights laws, including the New Jersey Law Against Discrimination (LAD), which is one of the nation's strongest antidiscrimination laws. In January 2025, we issued joint guidance[1] addressing the application of the LAD to algorithmic discrimination resulting from the use of new and emerging data-driven technologies, including AI.

The LAD prohibits discrimination and bias-based harassment in employment, housing, places of public accommodation, credit, and contracting on the basis of actual or perceived race, religion, color, national origin, ancestry, sex, gender identity or expression, sexual orientation, disability, and other protected characteristics. Although the law predates the development of AI, by its terms, it squarely applies to automated decision-making tools that rely on innovative technologies if their use results in unlawful discrimination. The guidance provides clear definitions, legal standards for liability, and examples of how discrimination and bias may be introduced at every stage of the lifecycle of these tools—from their design, through the training of underlying models, and up to the tools' deployment and use. It is tailored to educate the public and put regulated sectors on notice of the specific risks of algorithmic discrimination that these tools carry and how the LAD redresses them.

The use of AI and other automated decision-making tools does not immunize covered entities from LAD liability that they would face if they achieved the same results through other means. A nationwide moratorium on enforcement of state laws on AI may hinder our ability to enforce these longstanding civil rights protections and provide much-needed legal guidance to innovators and service providers who wish to harness the promise of AI without perpetuating discrimination and bias. I urge Congress to preserve New Jersey and other States' ability to protect the public in this space.

[1] https://www.nj.gov/oag/newsreleases25/2025-0108_DCR-Guidance-on-Algorithmic-Discrimination.pdf

Tackling Emerging Harms to the Public Through New Legislation

In addition to enforcing longstanding laws like the LAD, New Jersey has also enacted new legislation to provide guardrails for the use of AI and other innovative technologies that specifically apply to areas and use cases where members of the public may face a heightened risk of harm. That is the kind of tailored approach to AI regulation by the States that Congress should welcome rather than discourage or seek to displace.

For example, the New Jersey Data Privacy Act (NJDPA), our State's omnibus privacy law, went into effect in January 2025. The NJDPA requires, among other things, that businesses that intend to process consumer data conduct data protection assessments if such processing "presents a heightened risk of harm to a consumer." One of the activities that may result in such "heightened risk" is profiling, defined as any form of automated processing performed on personal data to evaluate, analyze or predict personal aspects related to an identified or identifiable individual's economic situation, health, personal preferences, interests, reliability, behavior, location or movements. The NJDPA also grants consumers the right to opt-out of profiling in furtherance of decisions that produce legal or similarly significant effects. Deployment of any AI tools that may engage in "profiling" or otherwise process data in a way that presents a risk of harm to a consumer would trigger the application of the Act.

Similarly, in April, Governor Murphy signed into law a new statute that establishes civil and criminal penalties for the production and dissemination of deceptive audio or visual media, commonly known as "deepfakes," for illicit purposes. As our Legislature recognized, the advancement of AI has not only enabled the creation of ever more realistic and convincing deepfakes, but also made them more widely accessible and easy to generate by all kind of users. Still, in recognition of the First Amendment concerns and risks of stifling innovation that a broad deepfake ban could raise, our legislation specifically focuses on materials that are created or used to commit or attempt to commit crimes and offenses, including sex-related crimes, harassment, and improper influencing of official and political matters. Indeed, in 2024, my office and the New Jersey Secretary of State issued guidance to the public on identifying and avoiding the spread of deepfake photos, videos, and audio that use Generative AI technologies that spread misinformation aimed at manipulating and misleading voters.[2]

New Jersey's experience shows that States can take well-informed, tailored, and sophisticated approaches to regulating AI and managing the evolving risks that these technologies pose for our residents while being a hospitable home for innovators. I urge Congress to stay the course and allow us to continue doing so.

[2] https://www.njoag.gov/as-2024-presidential-election-approaches-lt-governor-way-and-attorney-general-platkin-issue-guidance-on-how-to-recognize-political-deepfakes-designed-to-misinform-and-manipulate/

Testimony of Dr. Krystal Rawls
Director, CSUDH Workforce Integration Network
Before the U.S. House of Representatives
Committee on Energy and Commerce
Hearing on "Artificial Intelligence and Communications Infrastructure"
Wednesday June 4th, 2025

Chair Guthrie, Ranking Member Pallone, and Members of the Committee:

Thank you for the opportunity to testify today on the critical intersection of Artificial Intelligence and communications infrastructure and to share insights from the work we are doing at the **California State University Dominguez Hills Workforce Integration Network**.

My name is Dr. Krystal Rawls, and I serve as Director at California State University, Dominguez Hills, a public higher institution dedicated to economic mobility and innovation. Our **Workforce Integration Network** is a cross-sector partnership that brings together industry, educators, labor organizations, and community stakeholders to align emerging technology trends with workforce development. This program was established because of support we received through the federal government as awardees of the Connecting Minority Communities Grant from the U.S. Department of Commerce.

The Opportunity and Challenge of AI in Communications Infrastructure

Artificial Intelligence is already transforming communications infrastructure—from optimizing network traffic and enabling predictive maintenance, to enhancing cybersecurity and supporting the deployment of 5G and fiber networks.

However, without deliberate planning, this transformation risks widening digital and economic divides. Without strengthening our workforce training to match the fast moving technological advances, communities across the country will not be able to meet the fast growing workforce needs. According to the Bureau of Labor Statistics, AI is dramatically accelerating the needs of several job fields, but most significantly in software development expected to grow by almost 20 percent, far above the average 4 percent across all occupations[1].

At CSUDH, we view this moment as both a technological and social inflection point.

In Los Angeles County, the Workforce Integration Network operates in partnership with public, private, and nonprofit sectors to prepare underrepresented populations for AI-enabled employment. These are not theoretical programs. They are tested, cost-efficient mechanisms for expanding economic participation, strengthening small business ecosystems, and increasing labor productivity across the country's largest urban region.

[1] https://www.bls.gov/opub/ted/2025/ai-impacts-in-bls-employment-projections.htm

WIN has directly supported **Jobs and Economic Development Incentive (JEDI) Zones**—community-based innovation corridors designated by the City of Los Angeles. These zones are anchored in neighborhoods such as Watts, Wilmington, and the Goodyear Tract, which experience persistent economic underinvestment.

What We're Doing at CSUDH

Our research and workforce programming offer several takeaways:

1. **AI is Already in Use—But Understanding is Lagging:**
   Through employer roundtables and student engagement, we've found that while AI-driven tools are being embedded in communications infrastructure, the understanding of how these systems work—especially among frontline workers—is often shallow. This gap creates risks around transparency, trust, and accountability.
2. **Skills are the New Infrastructure:**
   As AI enables intelligent networks, workforce readiness becomes as crucial as physical infrastructure. We've launched stackable credential pathways in AI operations, digital infrastructure management, and data ethics in partnership with national and regional industry leaders.
3. **Digital Education Must Be Baked In, Not Bolted On:**
   AI and advanced networks must serve all communities. We are piloting apprenticeship and reskilling models that connect students to real-world initiatives—like rural broadband mapping and algorithm auditing—to ensure the workforce remains in the communities it serves.
4. **Cross-Sector Coordination is Essential:**
   We've learned that AI and communications infrastructure don't evolve overnight. We convene monthly working groups with city planners, telecom firms, and educational institutions to align regional priorities around AI deployment, broadband access, and workforce pipelines.

Our students provided **foundational AI comprehension training** for small business owners, reentry program clients, and probation-aligned workforce advisors. These engagements:

- Demystified AI for individuals unfamiliar with digital automation and predictive technologies.
- Increased awareness of AI's role in hiring platforms, customer service tools, and civic engagement systems.
- Improved the ability of small, minority-owned businesses to understand and evaluate AI-enabled products before procurement.

This activity aligns with small business acceleration goals outlined by the LA Economic and Workforce Development Department and contributes directly to micro-enterprise viability.

Over 60% of our students work while enrolled. Embedding employment into education reduces loan dependency and improves both completion rates and long-term wage mobility. This is a

high-yield, low-cost model for federal scale. These public investments lower per-student workforce training costs, reduce time-to-hire, and eliminate downstream inefficiencies in public employment systems.

Policy Recommendations

Based on our experience, I offer the following recommendations to the Committee, all of which can be done if the Internet for All Digital Equity Act programs are resumed:

1. **Invest in Regional AI Workforce Hubs**
   Federal investment should support regional workforce hubs that connect higher education, industry, and government in co-designing AI infrastructure talent pipelines.
2. **Expand AI Literacy and Digital Resilience Programs**
   Fund versatile AI and data literacy programs, including community-based initiatives that support displaced or transitional workers in adapting to AI-enhanced roles.
3. **Support Applied Research and Demonstration Projects**
   Encourage grants for higher education institutions to lead research on ethical, operational, and workforce implications of AI in communications infrastructure—connecting technical insight with community impact.
4. **Promote Standards for Transparency and Accountability**
   Ensure federal policies incentivize transparent AI deployment and workforce impacts assessments across telecommunications and infrastructure providers.

Final Thoughts

Economic competitiveness in the AI era requires more than fast networks—it requires **prepared people, localized platforms, and long-view investment in workforce integration**. The WIN model proves that digital equity work, when aligned to regional labor trends and supported by federal funding, can deliver outsize returns in employment, innovation, and fiscal efficiency.

Artificial intelligence is not the future—it is the present. Congress must now act to ensure the economic value of AI is fully realized by those historically excluded from its design and deployment.

AI will not just change our networks—it will change who gets to participate in the economy of the future. The work we're doing at CSUDH demonstrates that inclusive AI innovation is not only possible—it's essential. You ask how Congress and the federal government can address AI today? By allowing the work under the NTIA Internet for All initiative to continue.

The House Is Close To Passing a Moratorium on State Efforts To Regulate AI
May 15, 2025
A House committee reconciliation proposal includes a federal moratorium that would nullify or prevent, for a decade, existing or future state laws that address any aspect of AI law or regulation.

On May 11, 2025, the House Energy and Commerce (House E&C) Committee released its budget reconciliation proposal, and on May 14, the proposal was passed out of committee. It includes the largest Medicaid cuts in history, as part of what a Center for American Progress analysis called the "largest transfer of wealth from the poor to the rich in a single law in U.S. history." Tucked away in the proposal is an expansive giveaway to Big Tech and artificial intelligence (AI) companies, in the form of a federal moratorium that would nullify or prevent existing or future state laws that address any aspect of AI law or regulation—for a decade.

Section 43201(c), the "Artificial Intelligence and Information Technology Modernization Initiative: Moratorium," states:

no State or political subdivision thereof may enforce any law or regulation regulating artificial intelligence models, artificial intelligence systems, or automated decision systems during the 10-year period beginning on the date of the enactment of this Act.

The purpose of this provision is clear. It aims to nullify existing and future state efforts to address the harms from AI that are already proliferating or place any restrictions on AI deployment. Indeed, the proposed text includes further definitions and rules of construction, the latter of which states, "the primary purpose and effect of [the moratorium] is to remove legal impediments to, or facilitate the deployment or operation of, an artificial intelligence model, artificial intelligence system, or automated decision system."

The few significant existing state AI laws are focused on preventing harms by promoting transparency, algorithmic fairness, and accountability. There is already ample evidence of the harms from existing AI systems, from the automated denial of health insurance claims to AI monitoring of employees, and states are considering regulating on a variety of issues. This moratorium would prevent states from banning even the most harmful uses of AI, such as any bill that proposes prohibiting the automated firing of employees by AI systems. These are real-world harms that may destroy public trust in AI systems and slow AI adoption, absent laws that can reassure the public of their safety.

The proliferation of state AI laws is entirely due to congressional inaction. Traditionally, state legislation filling the void left by the federal government has been a celebrated feature

of federalism. The states have been laboratories of democracy, something celebrated by conservatives and progressives alike. Different state efforts are the best opportunity to discover the most effective AI regulations. Yet the sweeping federal moratorium on state AI laws would be premature, as few laws are already in effect, and the thousands of bills that have been proposed are far from guaranteed to pass. Moreover, the moratorium is not paired with any baseline federal AI legislation; the House is proposing to erase state protections without offering a federal replacement. The moratorium also ignores the history of early internet legislation, when Congress often moved once there was concrete evidence of emerging conflicts that needed to be resolved.

The preemption of state laws regulating AI is a top goal of Big Tech and AI companies, and this moratorium proposal offers an unprecedented giveaway to industry at a time when the president and the majority in the House of Representatives have spent years claiming that these companies are too powerful and must be held accountable. To essentially prevent all 50 states from exploring AI policy solutions at a time when Congress has not passed a significant technology regulation bill in many years is to avoid the problem and allow it spin out of control.

Far from being a dramatic congressional action, a 10-year moratorium on state AI laws would represent a great congressional inaction. It would prevent any policy development at the state level that could be adopted nationally, and it would give Congress another excuse to kick the can down the road until it is too late to pass comprehensive and necessary laws.

Congressional inaction has incentivized state action on AI

The rise of generative AI into the public consciousness pushed Congress to focus on it. Yet despite numerous bipartisan AI working groups in both chambers of the 118th Congress issuing reports on the importance of addressing AI, there have been no meaningful legislative steps. Although Congress has introduced numerous AI bills and held hearings, the 118th Congress passed no AI bills, and the 119th Congress has so far passed only one AI-related bill, the TAKE IT DOWN Act. This inaction is part of a history of congressional inaction on technology issues, which has led states to take their own actions, such as the California Consumer Privacy Act and the Illinois Biometric Information Privacy Act, in the privacy space. The same can be said of the states stepping in to regulate AI.

States as laboratories of democracy

States are the laboratories of democracy, and policy innovation comes from experimentation. For example, many AI regulation opponents have called to establish regulatory sandboxes in states that would allow experimentation and innovation

in AI governance. The Institute for Progress (IFP) AI Action Plan Database, for example, categorized 30 submissions that included a recommendation to, "Establish regulatory sandboxes for testing AI innovations with temporary regulatory relief."

In the absence of federal legislation, states are best positioned to listen to their residents and determine appropriate AI policy solutions. Unlike Congress, which is often stalled by partisan gridlock and special interest lobbying, state governments can be nimbler and more responsive to emerging technological threats. Although some state regulations may end up being ineffective or burdensome, others may prove effective and serve as models for future federal legislation. Without state regulations, Congress will have no real-world examples to draw from when crafting national AI regulation.

Concerns about a patchwork of state regulations tend not to acknowledge the reality that most interstate commerce already deals with varying state laws. And while the tech industry has claimed that a patchwork of state privacy legislation would be overly burdensome, it has also supported state privacy bills.

A federal moratorium is premature

The argument has been made that, because thousands of AI bills are pending in state legislatures, federal preemption is necessary. But anyone who works on state policy knows that thousands of bills are proposed in state legislatures every session, and most go nowhere. Big Tech and AI companies are treating every proposed state legislature bill as if it will pass, which is not a serious metric. Rather than judging the potential burden of proposed legislation, it would be more reasonable to consider the state AI laws on the books today.

Few state AI bills have passed into law, and even fewer have gone into effect. Even fewer could be credibly argued to impose significant burdens on AI developers or deployers. A quick glance at the National Conference of State Legislatures' (NCSL) trackers for artificial intelligence legislation in 2025 and 2024 finds that most enacted or adopted AI legislation is relatively minor or the kind of legislation that AI companies would support, such as driving AI adoption or increasing AI education or workforce support. Moreover, the International Association of Privacy Professionals' "US State AI Governance Legislation Tracker"—which tracks more substantial "cross-sectoral AI governance bills that apply to private sector organizations"—lists only five bills that have passed into law. Of those five, only one, Colorado's S.B. 205, has been the subject of the fiercest criticism from industry and AI adoption proponents, and that bill does not even fully go into effect until February 2026.

By and large, Big Tech and AI companies complain about hypothetical future harms, and they have not demonstrated any significant regulatory burdens or conflicting court decisions that justify this moratorium. Meanwhile, today's AI and automated decision-making systems are causing real harms—and states have taken these harms more seriously than Congress. Congress has not even examined the potential impacts of a moratorium. The House E&C Committee held no hearings before its vote approving the moratorium to discuss this stripping of state power and authority—either the moratorium itself or the state laws it would invalidate. It has not invited as witnesses state elected officials, such as state legislators who have authored the bills, or state attorneys general and governors who would be tasked with enforcement. The moratorium is opposed by the National Conference of State Legislatures and the National Association of State Chief Information Officers.

The E&C Committee is clearly aware this issue is deserving of deeper examination, as the same day that it passed the state AI moratorium it also announced a hearing for the following week titled "AI Regulation and the Future of US Leadership" that will focus on how "[b]urdensome and conflicting AI legislation stifles innovation and undermines the success of entrepreneurs." Generally, hearings to examine the impact of potential legislation are most useful for legislators before any votes are held on that legislation. It should also be noted that each of the state legislatures that have passed AI bills passed them through their regular legislative process, with hearings that occurred before the votes, witnesses, amendments, debates, and multiple votes.

A moratorium on state AI laws, without any federal AI proposal

The House E&C's proposed moratorium on state AI laws is not federal preemption in the traditional sense, as it does not offer alternative federal legislation to either increase AI adoption or combat AI harms. It is a massive usurping of state power without any baseline federal legislation to fill the vacuum.

Federal preemption can be an appropriate tool at times but is not a tool to be used lightly, without serious examination of the consequences. The House E&C Committee is well-aware of the complex considerations around preemption. In February 2025, the House E&C Committee Data Privacy Working Group, which is composed only of members of the majority who also crafted the bill that includes the moratorium, posted a Request for Information (RFI) with questions such as, "Given the proliferation of state requirements, what is the appropriate degree of preemption that a federal comprehensive data privacy and security law should adopt?" The committee has yet to release its review of submissions to the RFI.

The House E&C Committee, under previous leadership, held numerous privacy hearings during the past two Congresses and drafted two different versions of bipartisan bicameral federal data privacy legislation that would have preempted state privacy laws, with some exceptions, in favor of a federal standard inclusive of data minimization and enforcement options. These legislative efforts aimed to at least balance the trade-offs between innovation and consumer protections, standing in stark contrast to the current giveaway to Big Tech and AI companies.

It has been argued that events of the 1990s show that the light-touch approach used by Congress and the Clinton administration to develop the internet justifies a doubling down on AI deregulation through this state law preemption—or no regulation at all, in the case of this moratorium. But this ignores the reality that while Congress may have preempted state laws in the past, it generally did so with federal laws that had specific goals and to address real conflicts that required congressional action. For example, Section 230, which provides immunity from civil and state criminal liability for carrying or moderating third-party content, came after a series of conflicting court decisions that left websites in legal uncertainty when hosting and moderating such content. Section 230 provided federal clarity on the matter of intermediate liability that allowed for the explosion of internet companies and is considered the "Twenty-Six Words That Created the Internet." Yet some argue that Section 230's broad approach created both the modern internet and a culture of immunity that has incentivized some of modern technology companies' worst abuses—so actions taken in the 1990s should serve as a cautionary tale. Such lessons argue for far more examination and analysis of the preemption of state AI laws before any congressional action.

A giveaway for Big Tech and AI companies

The most obvious motivation for the moratorium on state AI laws is that it is a top priority for Big Tech and AI companies. According to the IFP AI Action Plan Database, which analyzed submissions to Trump administration's "AI Action Plan" RFI, 41 submissions included the recommendations IFP categorized as to, "Implement federal preemption of state AI laws to create a unified national framework."

Specifically, Big Tech and AI companies including Google, Meta, and OpenAI have called for the federal preemption of existing and future state AI laws. In addition, industry-funded groups such as the U.S. Chamber of Commerce, the Computer & Communications Industry Association, the Information Technology Industry Council, and TechNet have called for the federal preemption of state AI laws. (CAP has previously outlined the funding relationships between these organizations and Big Tech companies). Those arguing that the moratorium is not a giveaway to Big Tech have not elaborated on how that could be true

when Big Tech companies have specifically asked for the preemption of state AI laws in their requests to the Trump administration.

As CAP has written previously, President Trump and House E&C Committee leaders have declared Big Tech accountability a top priority. Therefore, it does not make sense that they would offer these companies such an unprecedented giveaway. The committee is likely aware of the poor optics of this moratorium, which is why it passed it in the dead of night, hidden inside a bill that strips health care from millions of Americans to pay for tax breaks for the wealthy.

Conclusion

AI development is moving at light-speed, and 10 years is a lifetime in the world of technology. It is hard to imagine what it will look like in a decade, for both good and ill. Preventing America's 50 states from regulating AI, while failing to provide any federal AI legislation, is a dereliction of duty by the House E&C Committee. Americans want Congress to act on emerging problems, and when it does not, they expect the states to act. Congressional inaction cannot also punish states for action.

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May 16, 2025

The Honorable Mike Johnson
Speaker
U.S. House of Representatives
Washington, DC 20515

The Honorable John Thune
Majority Leader
U.S. Senate
Washington, DC 20510

The Honorable Hakeem Jeffries
Minority Leader
U.S. House of Representatives
Washington, DC 20515

The Honorable Chuck Schumer
Minority Leader
U.S. Senate
Washington, DC 20510

Dear Speaker Johnson, Majority Leader Thune, Minority Leader Jeffries, and Minority Leader Schumer:

We, the undersigned attorneys general (the "State AGs"), write to voice our opposition to the amendment added by the U.S. House Energy and Commerce Committee to the budget reconciliation bill that imposes a 10-year prohibition on states from enforcing any state law or regulation addressing artificial intelligence ("AI") and automated decision-making systems. The impact of such a broad moratorium would be sweeping and wholly destructive of reasonable state efforts to prevent known harms associated with AI. This bill will affect hundreds of existing and pending state laws passed and considered by both Republican and Democratic state legislatures. Some existing laws have been on the books for many years.

The promise of AI raises exciting and important possibilities. But, like any emerging technology, there are risks to adoption without responsible, appropriate, and thoughtful oversight. In the absence of federal action to install this oversight, over the years, states have considered and passed legislation to address a wide range of harms associated with AI and automated decision-making. These include laws designed to protect against AI-generated explicit material,[1] prohibit

[1] *See e.g.*, S.B. 25-288, 2025 Leg., 75th Gen. Assem., 1st Reg Sess. (Colo. 2025); TENN. CODE ANN. § 39-17-1002, *amended by* 2024 Tenn. Acts, Pub. Ch. 911, eff. 7/1/2024; ILL. COMP. STAT. 103-0825 / 6-106.1 (2024); H.B. 2299, 2025 Leg., Reg. Sess. (Or. 2025); H.B. 4744, 2023-2024 Leg., 193rd Gen. Assemb.,

deep-fakes designed to mislead voters and consumers,[2] protect renters when algorithms are used to set rent,[3] prevent spam phone calls and texts,[4] require basic disclosures when consumers are interacting with specific kinds of AI,[5] and ensure identity protection for endorsements and other AI-generated content.[6] Perhaps most notably, of the twenty states that have enacted comprehensive data privacy legislation, the overwhelming majority included provisions that give consumers the right to opt out of specific kinds of consequential, automated decision-making[7] and require risk assessments before a business can use high-risk automated profiling.[8]

As evidenced by this brief overview, states are enforcing and considering not just laws that seek to regulate AI or automated decision-making more generally, but also carefully tailored laws targeting specific harms related to the use of AI. These laws and their regulations have been developed over years through careful consideration and extensive stakeholder input from consumers, industry, and advocates. And, in the years ahead, additional matters—many unforeseeable today given the rapidly evolving nature of this technology—are likely to arise.

Reg. Sess. (Mass. 2024); S.B. 217, 2023-2024 Leg., 135th Gen. Assemb., Reg. Sess. (Ohio 2024); Ala. Code § 14A-6-240.

[2] *See e.g.*, Political Reform Act of 1974, CAL. GOV'T CODE §§ 81000-91014 (amended 2025); N.H. REV. STAT. ANN. § 664:14-c; COLO. REV. STAT. § 1-45-101; FLA. STAT. § 106.145; S.B. 33, 2025-2026 Leg., 34th Gen. Assemb., 1st Sess. (Alaska 2025); H.B. 986, 2023-2024 Leg., Reg. Sess. (Ga. 2024); S.B. 1571, 2024 Leg., Reg. Sess. (Or. 2024).

[3] H.B. 24-1057, 2024 Leg., 74th Gen. Assemb., Reg. Sess. (Colo. 2024); H.B. 2847, 2025 Leg., 1st Reg. Sess. (Ariz. 2025); S.B. 3657, 2024-2025 Leg., Reg. Sess. (N.J. 2024); H.B. 558-FN, 2025 Leg., Reg. Sess. (N.H. 2025); S.B. 2697, 2025-2026 Leg., Reg. Sess. (N.Y. 2025); FLA. STAT. § 106.145.

[4] *See, e.g.*, CAL. BUS. & PROF. CODE §§ 1798.100, et seq. (2019); FLA. STAT. §§ 501.059 et seq. (2021), OK. STAT. tit 15 §§ 775C.1, et seq. (2022); MD. CODE ANN. §§ 14-4501 et seq. (2023); H.B. 679, 2025-2026 Leg., Reg. Sess. (Ga. 2025).

[5] UTAH CODE ANN. § 13-72a-201; CAL. HEALTH & SAFETY CODE § 1316.9; S.B. 640, 2025 Leg., Reg. Sess. (Haw. 2025); H.B. 3021, 2025-2026 Leg., 104th Gen. Assemb., Reg. Sess. (Ill. 2025); H.B. 127, 2025 Leg., Reg. Sess. (Idaho 2025); H.B. 1620, 2025 Leg., Reg. Sess. (Ind. 2025).

[6] *See, e.g.*, N.H. REV. STAT. ANN. § 638:26-a; CAL. CIV. CODE § 3344.1; A.B. 5164, 2024-2025 Leg., Reg. Sess. (N.J. 2025); S.B. 217, 2023-2024 Leg., 135th Gen. Assemb. Reg. Sess. (Ohio 2024); H.B. 431, 2025-2026 Leg., Reg. Sess. (Pa. 2025); UTAH CODE ANN. § 45-3-2, et seq; A3540 (N.J. Stat. Ann. § 2C:21-17.7 et. seq.).

[7] CAL. CIV. CODE §§ 1798.100 et seq. (2018); COLO. REV. STAT. §§ 6-1-1001 et seq. (2020); CONN. GEN. STAT. §§ 42-515 et seq. (2022); DEL. CODE. ANN. tit. 6 §§ 12D-101 et seq.; IND. CODE §§ 24-15-1-1 et seq.; KY. REV. STAT. ANN. §§ 367.3611 et seq.; MD. CODE ANN. §§ 14-1601 et seq.; MINN. STAT. § 325O.01; MONT. CODE ANN. §§ 30-14-2801 et seq.; NEB. REV. STAT. §§ 87-1101 et seq. (2024); N.H. REV. STAT. ANN. § 507-H; NJ §§ 56:8-166.4 et seq.; OR. REV. STAT. §§ 646A.570 et seq. (2023); 6 R.I. GEN. LAWS §§ 6-48.1-1 et seq. (2024); TENN. CODE ANN. §§ 47-18-3201 et seq.; TEX. BUS. CODE ANN. §§ 541.001 et seq. (2023); VA. CODE ANN. §§ 59.1-575 et seq.

[8] *Id.*

A bipartisan coalition of State Attorneys General previously recommended that an appropriate federal framework for AI governance should focus on "high risk" AI systems and emphasize "robust transparency, reliable testing and assessment requirements, and after-the-fact enforcement." In that letter, the coalition stated that State Attorneys General should:

> . . . have concurrent enforcement authority in any Federal regulatory regime governing AI. Significantly, State AG authority can enable more effective enforcement to redress possible harms. Consumers already turn to state Attorneys General offices to raise concerns and complaints, positioning our offices as trusted intermediaries that can elevate concerns and take action on smaller cases.[9]

Rather than follow the recommendation from the bipartisan coalition of State Attorneys General, the amendment added to the reconciliation bill abdicates federal leadership and mandates that all states abandon their leadership in this area as well. This bill does not propose *any* regulatory scheme to replace or supplement the laws enacted or currently under consideration by the states, leaving Americans entirely unprotected from the potential harms of AI. Moreover, this bill purports to wipe away any state-level frameworks already in place.

Imposing a broad moratorium on all state action while Congress fails to act in this area is irresponsible and deprives consumers of reasonable protections. State AGs have stepped in to protect their citizens from a myriad of privacy and social media harms after witnessing, over a period of years, the fallout caused by tech companies' implementation of new technology coupled with a woefully inadequate federal response. In the face of Congressional inaction on the emergence of real-world harms raised by the use of AI, states are likely to be the forum for addressing such issues. This bill would directly harm consumers, deprive them of rights currently held in many states, and prevent State AGs from fulfilling their mandate to protect consumers.

To the extent Congress is truly willing and able to wrestle with the opportunities and challenges raised by the emergence of AI, we stand ready to work with you and welcome federal partnership along the lines recommended earlier. And we acknowledge the uniquely federal and critical national security issues at play and wholeheartedly agree that our nation must be the AI superpower. This moratorium is the opposite approach, however, neither respectful to states nor responsible public policy. As such, we respectfully request that Congress reject the AI moratorium language added to the budget reconciliation bill.

Sincerely,

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[9] *Comment on Artificial Intelligence ("AI") system accountability measures and* policies, COLO. OFF. OF THE ATT'Y GEN. (June 12, 2023), https://coag.gov/app/uploads/2023/06/NTIA-AI-Comment.pdf.

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Jonathan Skrmetti
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Gwen Tauiliili-Langkilde
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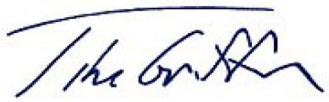

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Dan Rayfield
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Dave Sunday
Pennsylvania Attorney General

Peter F. Neronha
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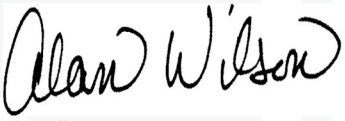


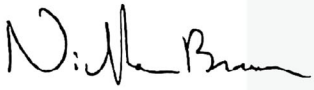
Alan Wilson
South Carolina Attorney General

Marty Jackley
South Dakota Attorney General

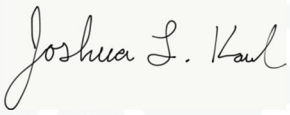
Gordon C. Rhea
U.S. Virgin Islands Attorney General

Derek Brown
Utah Attorney General

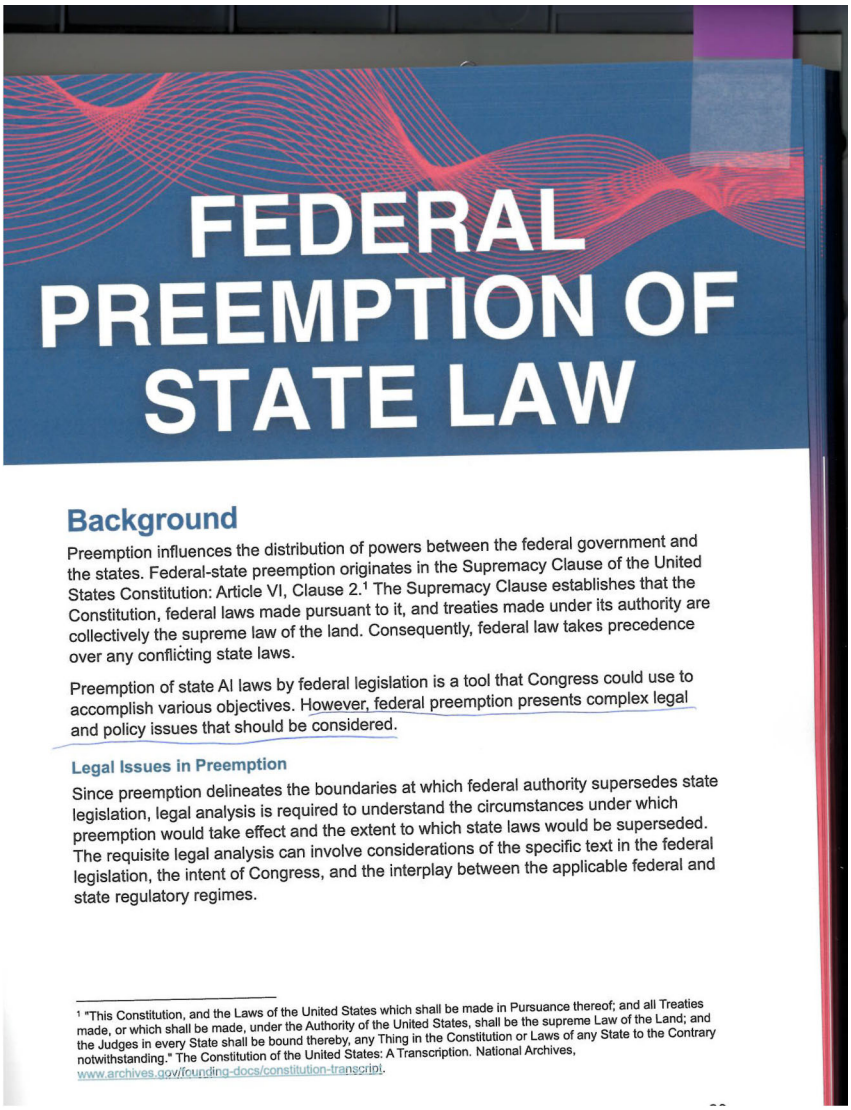
Jason S. Miyares
Virginia Attorney General



Nick Brown
Washington Attorney General



Joshua L. Kaul
Wisconsin Attorney General



FEDERAL PREEMPTION OF STATE LAW

Background

Preemption influences the distribution of powers between the federal government and the states. Federal-state preemption originates in the Supremacy Clause of the United States Constitution: Article VI, Clause 2.[1] The Supremacy Clause establishes that the Constitution, federal laws made pursuant to it, and treaties made under its authority are collectively the supreme law of the land. Consequently, federal law takes precedence over any conflicting state laws.

Preemption of state AI laws by federal legislation is a tool that Congress could use to accomplish various objectives. However, federal preemption presents complex legal and policy issues that should be considered.

Legal Issues in Preemption

Since preemption delineates the boundaries at which federal authority supersedes state legislation, legal analysis is required to understand the circumstances under which preemption would take effect and the extent to which state laws would be superseded. The requisite legal analysis can involve considerations of the specific text in the federal legislation, the intent of Congress, and the interplay between the applicable federal and state regulatory regimes.

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[1] "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding." The Constitution of the United States: A Transcription. National Archives, www.archives.gov/founding-docs/constitution-transcript.

Key Findings

Federal preemption of state law on AI issues is complex.

Preemption raises many legal and policy issues that should be considered and addressed so that Congress effectively implements its intended policies. The context in which an AI is deployed is critical to its governance. An AI system's functional purpose, how it was developed, how it is deployed, and who interacts with it will all affect the rules and regulations that governments set to minimize harm. A generally applicable foundation model used in one sector may require different regulations than the same systems deployed in another. As such, Congress will need to weigh many different factors as it considers preemption in any law targeting artificial intelligence or related technologies.

Federal preemption has benefits and drawbacks.

Federal preemption of state law can bring uniformity and clarity, reduce compliance burdens, and otherwise implement Congress' policy objectives. However, state-level regulation has the advantages of flexibility, customization to different state populations, preservation of state authority, and experimentation that provides information relevant to policy choices.

Preemption can allow state action subject to floors or ceilings.

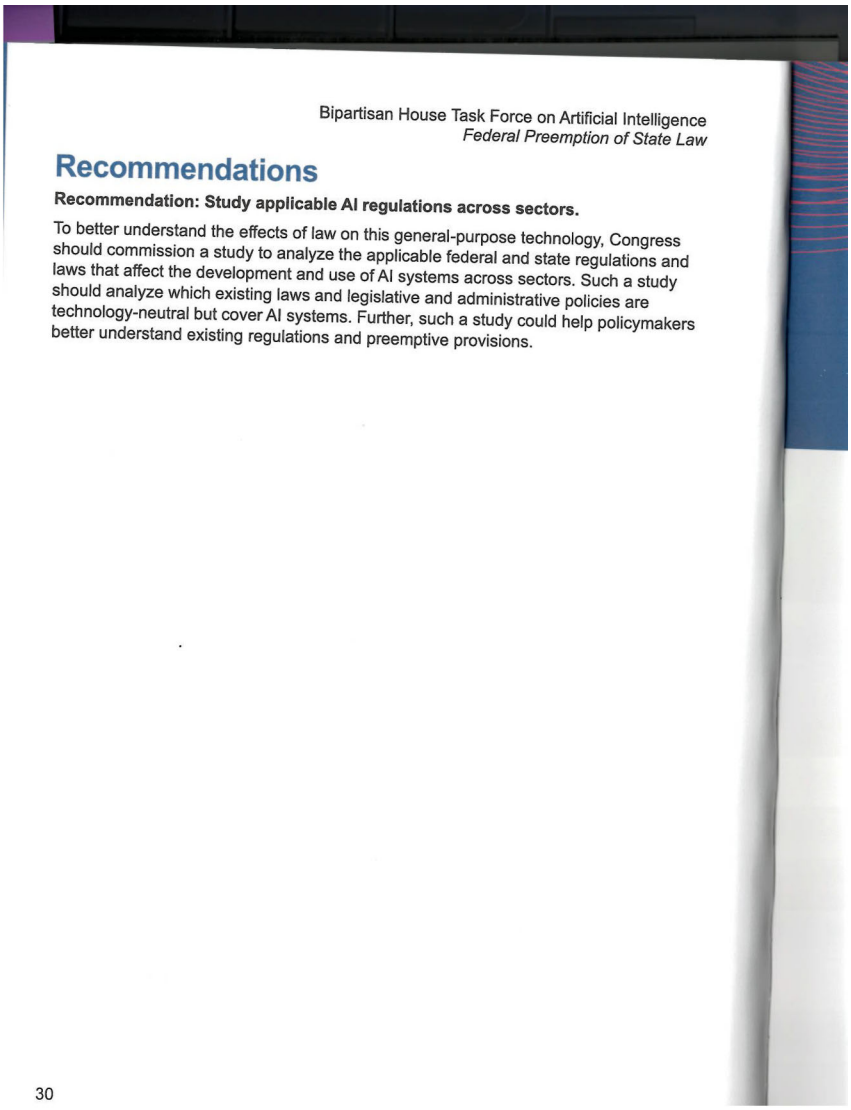
Federal preemption can allow states to pass laws that either meet federal minimums or that do not exceed federal maximums. This type of preemption can be established with or without a corresponding federal regulatory regime in the same area.

Preemption can be multifaceted.

Preemption of state AI regulation can be extremely multifaceted. For example, the federal government could preempt some, but not other, types of state regulation of a domain. Likewise, the federal government could explicitly permit some, but not other, types of state regulation of a domain.

Definitions must be fit for purpose.

AI has no universal definition and is occasionally seen as a general-purpose category of technology present in many sectors. Defining covered "artificial intelligence" too broadly or too narrowly could either exclude high-risk systems from regulation or accidently sweep in commonplace technologies, such as spreadsheets and spellcheckers. If Congress chooses to preempt state AI laws, the preempting legislation should precisely define AI to represent the intended scope of preemption.



Recommendations

Recommendation: Study applicable AI regulations across sectors.

To better understand the effects of law on this general-purpose technology, Congress should commission a study to analyze the applicable federal and state regulations and laws that affect the development and use of AI systems across sectors. Such a study should analyze which existing laws and legislative and administrative policies are technology-neutral but cover AI systems. Further, such a study could help policymakers better understand existing regulations and preemptive provisions.

COMMUNITY
INNOVATION
PARTNERSHIP

Dear Members of the United States Congress,

We, the undersigned mayors and local elected officials, are members of the Community Innovation Partnership (CIP)—a coalition of municipal leaders working together to advance responsible innovation in local government. Our cities and counties are actively exploring how emerging technologies like artificial intelligence (AI) can improve public services, strengthen infrastructure, and build more resilient communities.

To best position our communities for success in the 21st century, we urge you to champion federal efforts to establish consistent rules for the development and deployment of artificial intelligence technologies. A unified national framework would foster innovation by providing a predictable regulatory environment, encouraging investment, and ensuring the benefits of AI can be realized by communities across the country.

The rapid evolution of AI holds enormous potential for local governments. Communities across the country are already putting AI to work in public safety, emergency response, transportation, permitting, and more. AI tools can also help municipalities detect cyber threats in real time, respond faster to breaches, and better protect against bad actors—especially as ransomware attacks on local government systems continue to rise.

But the absence of a clear federal standard creates a patchwork of laws that generates uncertainty for both local governments and their technology partners. A national framework would reduce this uncertainty and lay the groundwork for future federal guardrails that are thoughtful, consistent, and responsive to the needs of communities nationwide.

Modernizing government infrastructure to keep pace with AI through a federal standard also opens the door for businesses to deliver innovative, efficiency-enhancing services—and offers a clear roadmap for cities and counties nationwide. Just as important, a consistent federal AI framework should align with existing national initiatives, such as cybersecurity efforts, and support collaboration across all levels of government. This kind of alignment gives communities the confidence to adopt new technologies without the added burden of regulatory uncertainty.

We stand ready to work with you to craft thoughtful, future-focused policy that ensures AI strengthens—not complicates—our ability to deliver efficient, effective, local governance.

Sincerely,

Mayor Tim Kelly, Chattanooga, TN

Mayor Vince Williams, Union City, GA

Mayor Hollies J. Winston, Brooklyn Park, MN

Mayor Sloan Spalding, New Albany, OH

Mayor Corey Woods, Tempe, AZ

Mayor Roberta Canó, Winslow, AZ

Mayor Mike Johnston, Denver, Co

Get in Touch
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NDIA
NATIONAL DIGITAL INCLUSION ALLIANCE

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June 4, 2025

To: The Subcommittee on Communications and Technology of the U.S. House of Representatives' Committee on Energy and Commerce

Re: Subcommittee on Communications and Technology Hearing on AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology.

From: The National Digital Inclusion Alliance

The National Digital Inclusion Alliance (NDIA) respectfully submits the following comments to the Subcommittee on Communications and Technology regarding the hearing on AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology.

NDIA is a non-profit 501(c)(3) organization that ensures all US residents have the technology access and skills they need to live, work, learn, and thrive. NDIA connects

organizations, supports community programming, and equips policymakers to act. We create trusted spaces for shared learning among our community of over 2,000 affiliate member organizations nationwide to identify best practices, understand resource gaps, and develop solutions to fill these gaps. Our affiliates are community-based organizations, nonprofits, local and state governments, and many others that support individuals using technology to live, learn, work, and thrive in today's digital economy. It's our work with these affiliates and their feedback to us that informs these comments.

One of the many ways NDIA has supported our affiliates since our inception is by piloting digital skills instruction methods in local communities. From these experiences, we've identified and created replicable models and resources for digital skills educators. In 2024, NDIA launched three pilot programs and a working group of NDIA affiliates with experience integrating AI into their digital skills curricula. NDIA's aim is to prepare our affiliates to teach AI skills to their program participants, evaluate available AI skills curricula, and tailor them to meet the unique needs of their users. NDIA's pilot programs, launched jointly with community-based organizations, allow us to explore different approaches to integrating AI into digital skills programs.

The initial pilot program, conducted in Winston-Salem, North Carolina, revealed a noticeable shift in attitudes toward AI after students participated in learning experiences. At the beginning of the course, some students expressed significant fear of AI, held misconceptions about how the technology functioned, and were skeptical about its potential to enhance their personal or professional goals. However, after several classes, we observed a change in these attitudes. Many students who initially felt negatively about AI reported a shift to more positive feelings, with nearly all of them moving to a 'slightly positive' or 'very positive' perception. Furthermore, students who completed the final surveys indicated that they believed AI could help them achieve their personal or professional goals to some extent. One student shared how important the course was in helping her overcome her fear of the technology, "...I'm thankful to learn about AI instead of running from it." Another student shared her fear began to vanish after learning all the ways AI could be helpful, "It became like an 'aha' moment...so this is what AI can do if you allow it to help you...after my experience, I just wasn't scared anymore. I want to learn all I can

about it." She also expressed a balanced understanding that usefulness does not always equate to trustworthiness.

The second set of pilot programs with Eastern Kentucky and Maine partners is just beginning. These projects will explore strategies for integrating AI lessons into digital skills training for adults seeking employment. These programs will reach various individuals, including learners in rural areas needing remote work opportunities and those with challenging life experiences that have created barriers to employment. Students learn how AI is embedded in typical applications and develop skills to leverage AI effectively in the job-search process.

We submit these comments to the committee based on these experiences and our ten-year history in supporting organizations that help people get and stay online. Based on the insights gained through our pilot programs and working group, NDIA recommends that the Subcommittee on Communications and Technology Hearing consider the following findings and recommendations.

AI Skills are Digital Skills and Should be Integrated into Digital Skills Programs

UNESCO defines digital skills as, "a range of abilities to use digital devices, communication applications, and networks to access and manage information. They enable people to create and share digital content, communicate and collaborate, and solve problems for effective and creative self-fulfillment in life, learning, work, and social activities at large."[1]

Digital skills are an ever-expanding area of knowledge for everyone as technology and how we use it continues to change. Effective digital skills training provides opportunities for learners to acquire digital skills that empower them to use their devices and connectivity effectively.

Everyone needs digital skills to operate adequately in today's digital world. From K-12 learners who complete their schoolwork and homework online to older adults who use

[1] "Digital skills critical for jobs and social inclusion." UNESCO. Accessed June 3, 2025. https://www.unesco.org/en/articles/digital-skills-critical-jobs-and-social-inclusion

tablets to connect with their doctors, to any modern worker, knowing how to operate digital devices and navigate the internet safely and efficiently is necessary.

AI is just the newest type of technology that everyday internet users need to know how to use and master to benefit their lives. Digital skills educators support learners of all ages in acquiring digital skills through a variety of formats--multi-week group classes, one-on-one training, solo and self-paced learning, and digital navigation. As previously mentioned, educators of digital skills are already integrating AI skilling into their curricula. However, AI technologies are developing rapidly, and not all practitioners have yet had the time and resources to fully integrate lessons into their curricula. In addition, not enough digital skills instructors or programs exist across the U.S., nor are there national digital skills standards or curricula.

Reinstate the Digital Equity Act

Congress's 2021 Bipartisan Infrastructure Law included $2.75 billion for the Digital Equity Act (DEA), the most significant investment in digital inclusion efforts–including digital skills programs–to date. Along with the other broadband provisions in the law, the DEA is the most active systemic approach to closing the digital divide in US history.

The DEA's $2.75 billion is divided between the State Digital Equity Capacity Grant Program ($1.5 billion) and the Digital Equity Competitive Grant Program ($1.25 billion).[2] The National Telecommunications and Information Administration (NTIA) within the US Department of Commerce (USDOC) administers the DEA programs alongside BEAD, TBCP, and other broadband programs.

The Capacity Grant Program provided formula-based, block grants to states to address critical gaps in broadband affordability, digital skills, and device availability. Over the past three years, all states (including the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico) and territories engaged in a comprehensive process to develop digital equity plans. States were poised to implement the plans using funds from the Capacity Grant Program. By allowing states to assess their specific needs and secure funding, this program ensures that communities have the

[2] "Digital Equity Act Programs." BroadbandUSA. Accessed December 20, 2023. https://broadbandusa.ntia.doc.gov/funding-programs/digital-equity-act-programs.

necessary tools--including AI skills--to succeed in an increasingly digital world. States have already developed and submitted plans outlining how they will utilize awarded funding to ensure that resources are effectively allocated where they are most needed.

The Competitive Grant program supports organizations in digital inclusion programming and providing digital opportunities for their community members. Funds would have been used to develop and implement digital inclusion activities (including services such as digital navigators), facilitate broadband adoption to provide opportunities for education and employment, implement digital skills training programs (from foundational skills to advanced and applied skills), implement workforce development programs, and create and support public access to computer labs in community anchor institutions. All of which are necessary for advancing AI expertise and use among US residents. These funds would have supported local programs that help people find jobs, access telehealth, keep aging adults safe by teaching cybersecurity, and strengthen AI digital skills to compete in the global economy.

On May 8, President Trump canceled the Digital Equity Act, and on May 9, the Department of Commerce terminated the DEA grants to states and organizations. Without these expected funds, many digital skills educators cannot expand their service offerings to include AI skilling; some may cut programs, and others may close their shops entirely.

Reinstating the Digital Equity Act, an already appropriated program, is a common-sense way to systematically fund and expand AI-skilling training and use throughout the country.

Fund Research and Initiatives for AI Skills Acquisition

The federal government should fund research and initiatives on AI skills acquisition for youth and adults of all levels to ensure AI benefits the US public. This should focus on identifying appropriate AI educational content and teaching methods, and developing and widely distributing context-aware learning materials and programs. This priority

aligns with our efforts to identify promising instructional approaches in our AI pilot projects and working group.

AI has rapidly become pervasive in daily lives, and digital skills educators (of youth and adults) are trying to keep up with an entirely new set of skills, while grappling with the implications for their work and their community members. They seek opportunities to learn more about the technology's practical use and discuss teaching approaches in their digital skills classes, tutoring sessions, and community events. AI literacy is essential for youth and adult learners, including older adults who must develop online skills to fully participate in the digital world and parents with young children who should learn about AI to help their kids navigate it in school and beyond. NDIA proposes that strategies should extend to and include adult digital skills education offered through community programs.

Conduct Research and Implement Activities To Prepare Students and Workers for AI-Related Roles

To achieve US AI goals, federal investments in research, education, and workforce development must prepare students and workers for careers and roles where they develop and use AI tools. Digital skills instructors emphasize the importance of helping individuals use AI for job searching, completing tasks, and advancing their skills. NDIA urges federal agencies to conduct and fund research to understand the most effective teaching strategies for integrating AI into the workplace for learners of all ages, including K-12, post-secondary, and adult learners.

The federal government must sustain and support AI skill-building as technologies–and AI specifically–evolve rapidly. Effective strategies known to help individuals develop digital skills should guide this support:[3]

- Programs that focus on providing a strong foundation in digital skills and the digital resilience necessary to navigate new technologies and tools.

[3] Many of these factors are discussed in Boosting Digital Literacy in the Workplace (National Skills Coalition, 2020): https://nationalskillscoalition.org/wp-content/uploads/2021/01/12152020-NSC-Boosting-Digital-Literacy.pdf

- Learning opportunities must reflect the real-world contexts in which learners use digital tools and should include hands-on experience alongside traditional classroom instruction.
- When applicable, participants should have the chance to earn industry-recognized, portable, and stackable postsecondary credentials to demonstrate expertise.
- Partnerships between industry sectors and education and workforce development organizations are crucial. These collaborations help identify talent needs and create training programs for various candidates, including veterans, multilingual individuals, opportunity youth, and people with disabilities.

Establish Ongoing Engagement Opportunities with the Digital Skills Educator and Research Community

To fully understand the implications of integrating AI into community programs nationwide, policymakers and researchers must continuously engage with the digital skill practitioner community to develop foundational AI implementation projects. NDIA has established a research process to understand the experiences of both instructors and learners. This process gathers lessons learned and highlights promising practices from pilot projects. To effectively address the various stakeholders involved, federal policymakers have an opportunity to establish ongoing collaboration with NDIA, our affiliate network, and organizations like ours. This collaboration will help ensure that future research, guidance, and resources align with the foundational AI research and development needs our affiliates identify.

Conclusion

Access to resources, education, and training is crucial for determining who can benefit from advancements in AI and make informed decisions about its use. Foundational digital skills are the essential building blocks necessary to utilize AI effectively. NDIA recommends reinstating the Digital Equity Act and allocating federal funding for research and implementation of activities on AI skills acquisition for nontechnical individuals of all ages. This research should enhance understanding AI's implications and implementation within the broader community.

Investing in education and workforce development initiatives is vital for preparing students and workers for AI-related roles. Additionally, it is essential to expand ongoing engagement opportunities for the community of digital skills educators and researchers to understand the implications of integrating AI into national community programs.

Consumer Reports opposes AI state preemption language in House budget reconciliation bill

Congressional Republicans on the House Energy and Commerce committee introduced a budget reconciliation bill late last night that included a broad prohibition on state laws or regulations relating to AI or automated decision systems. The language would prohibit the enforcement of laws already passed by many states, and would prohibit the enforcement of future AI protections.

“Congress has long abdicated its responsibility to pass laws to address emerging consumer protection harms; under this bill, it would also prohibit the states from taking actions to protect their residents,” said Grace Gedye, policy analyst for AI issues at Consumer Reports. “While artificial intelligence can have enormous benefits for consumers, it also presents special challenges — such as the creation of “deepfake” videos and the “black box” nature of its operation and decisionmaking. This incredibly broad preemption would prevent states from taking action to deal with all sorts of harms, from non-consensual intimate AI images, audio, and video, to AI-driven threats to critical infrastructure or market manipulation, to protecting AI whistleblowers, to assessing high-risk AI decision-making systems for bias or other errors, to simply requiring AI chatbots to disclose that they aren’t human.”

In May 2024, CR’s survey research team conducted a nationally representative multi-mode survey of 2,022 US adults on several topics, including AI and algorithmic decision-making. The full report on the AI and algorithmic decision-making survey results is available here.

We asked Americans how comfortable they felt with the use of AI and algorithms in a variety of situations, such as banks using algorithms to determine if they qualified for a personal loan, landlords using AI to screen potential tenants, hospitals using AI to help make diagnoses and develop treatment plans, and potential employers using AI to analyze applicants’ video job interviews. We found a majority of Americans are uncomfortable with the use of AI in each of these high-stakes decisions about their lives.

Gedye continued, “Nationally representative surveys make clear that Americans are concerned about the use of AI in high-stakes decisions about their lives, like whether they are hired for their dream job, whether they are chosen for a rental unit, or whether they are offered a personal loan. States have passed legislation and are working on rules that would shine a bit of sunlight on how AI is used in exactly those situations, but this preemption would keep Americans in the dark. More transparency is important, because it’s clear AI systems sometimes make mistakes, or draw fanciful conclusions”

Consumer Reports also recently conducted research on how AI voice cloning tools can facilitate fraud and impersonation. CR assessed six products available for free or low cost online, and found that a majority of the products assessed did not have meaningful safeguards to stop fraud or misuse of their product.

Contact: cyrus.rassool@consumer.org

CSG Statement on Proposed Federal Moratorium on State AI Legislation

LEXINGTON, Ky. (May 19, 2025)

The Council of State Governments (CSG), the nation's only organization serving all three branches of state government, expresses strong concern regarding the proposed 10-year moratorium on state artificial intelligence (AI) legislation included in the Energy and Commerce Committee's reconciliation measure. If enacted, this provision would represent a significant federal overreach into an area where states have consistently demonstrated leadership, innovation and bipartisan action.

States across the country are proactively engaging with the opportunities and challenges presented by artificial intelligence. Legislatures in both red and blue states have introduced and enacted thoughtful, targeted laws to address AI's implications for privacy, employment, transparency, education and public safety. These efforts reflect the diverse needs and priorities of individual states and their residents, which are hallmarks of our federalist system.

A decade-long federal prohibition on state-level AI policymaking would undermine state sovereignty at a critical moment in the evolution of this technology. It would limit states' ability to respond to emerging risks, adapt to local circumstances, and innovate in ways that can inform and complement federal policy. Such a moratorium risks stalling meaningful progress where it is most urgently needed.

States serve as laboratories of democracy, and their early action on AI reflects both prudence and foresight. Ensuring the United States remains a global leader in the responsible development and use of AI will require strong partnerships across all levels of government, including the continued innovation and agility of state leaders. Federal policymakers should support these efforts by recognizing the critical role that state governments play in shaping effective, responsible and responsive AI governance.

CSG urges Congress to remove this moratorium from the final legislation and reaffirm the rights of states to legislate in a manner that best serves their constituents. We look forward to continued collaboration with Congress, federal agencies and the technology industry to ensure the ethical and effective use of AI across all levels of government.

EPIC Opposes House Proposal to Ban States from Regulating AI

The House Energy and Commerce Committee's budget reconciliation text includes dangerous provisions on artificial intelligence that would allocate $500 million to federal government spending on AI and preempt state AI legislation for the next 10 years.

"A 10-year ban on state legislators' ability to pass AI laws is a gift to Big Tech, allowing them to continue building the unproven, discriminatory AI systems that are already harming Americans," said Alan Butler, Executive Director at EPIC. "We've seen this playbook before – AI developers will then tell Congress that their systems are too complex to regulate. States are already acting to prevent AI-driven harms, and Congress must reject this proposal to preserve states' rights to enact laws that protect their residents."

EPIC consistently advocates for state regulation that places meaningful guardrails on the development and use of AI and draws attention to the many harms AI causes. EPIC has also been urging Congress to enact a comprehensive data privacy law for over 25 years.

GOP Plan to Prevent AI Regulation Is Unhinged, Dangerous - Public Citizen

WASHINGTON, D.C. — This week, the Republican-controlled House Energy and Commerce Committee will mark up its budget reconciliation proposal, which includes a dangerous provision that would strip states of their ability to enact and enforce critical safeguards against AI-related harms for the next decade.

In response to the news, **Public Citizen's Big Tech accountability advocate, J.B. Branch,** issued the following statement:

"This is an outrageous abdication of Congressional responsibility and a gift-wrapped favor to Big Tech that leaves consumers vulnerable to exploitation and abuse. States across the country, red and blue alike, have taken bold, bipartisan action to protect their citizens. Now that state laws are finally starting to hold AI companies accountable for deepfake child pornography, election disinformation, AI companions targeting minors, and algorithmic abuse, Congress wants to slam the brakes? This isn't leadership, it is surrendering to corporate overreach and abuse under the guise of 'protecting American innovation.'

"Congress must ask itself: Will it stand with Big Tech lobbyists, or with the people it was elected to represent? Because millions of constituents across the country are currently protected by state laws that would be gutted under this proposal. Public Citizen urges lawmakers to strike this reckless preemption language from the reconciliation bill and commit to advancing federal AI legislation that builds on, not bulldozes, state-level progress."

BROOKINGS

COMMENTARY OP-ED

Not all robots take your job, some become your co-worker

Aaron Klein

October 30, 2019

Editor's note: This op-ed originally appeared in Real Clear Markets ↗ on October 30, 2019.

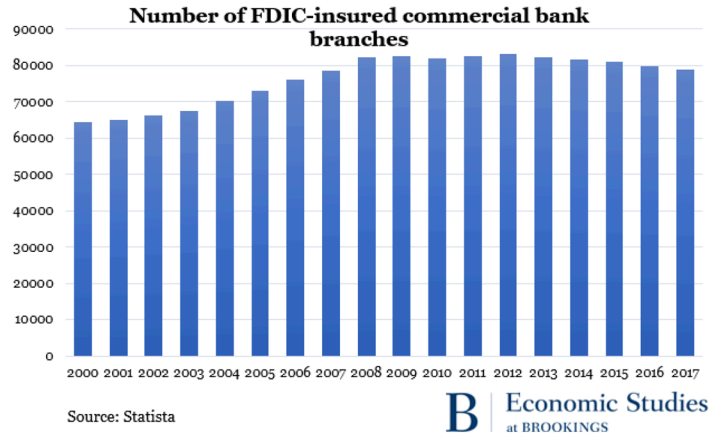
Robots have been coming for and successfully eliminating jobs for a long time: ask the iceman, elevator operator, or travel agent (if you can still find one). But what happens when the robots come for your job, succeed, and your job remains? Sounds strange but consider the conflicting reality of bank tellers and the robot designed to replace them: the Automated Teller Machine (ATM).

The first ATM appeared in America in 1969 ↗. ATM's and the associated debit cards needed to use them, took off several decades later, aided in large part by legislation enacted by Congress to protect consumers in case their cards were stolen or misused (the Electronic Funds Transaction Act). With the proper consumer protection, and the correct economic incentives, the technology flourished (https://www.brookings.edu/research/adapting-regulation-for-the-fintech-world/) .

Over 500,000 ATMs ↗ can be found across America today. And if ATM's weren't enough, technology went one step further, turning a device in almost everyone's pocket into a pseudo ATM. Aided again by new legislation passed by Congress in

2003 (the Check 21 Act), people can move money, deposit checks, and pay bills directly from their phones. No person, or even a trip to see the automated teller machine is even necessary.

Yet a funny thing happened, the jobs ATMs were designed to compete with–bank tellers–and the retail stores they were imagined to replace–bank branches–remained. In fact, there are slightly more bank branches in 2017 than there were in 2007 and 18% more than in 2000.



Consider who works at the branches. There are 472,000 ↗ bank tellers in 2018 an over 10 percent increase since 2000. In fact, the number of bank tellers today is only slightly less than the number in 1990 or 1890. How did bank tellers survive the robot attack when others did not? Is there a lesson here to counter the narrative of the robot apocalypse coming to destroy service sector jobs?

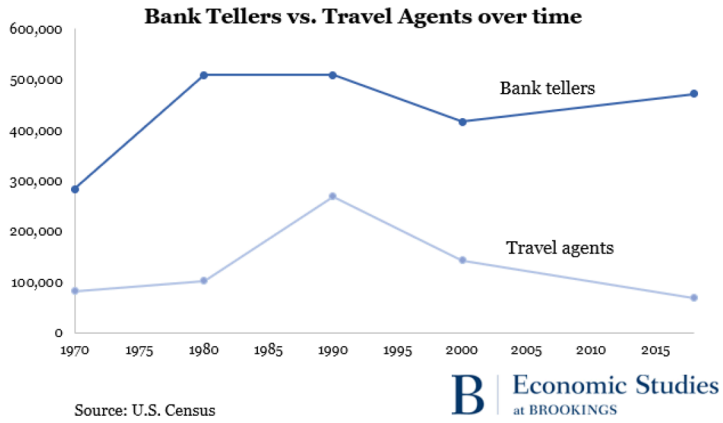
Start by comparing it to jobs that were eliminated by robots. In 1930 over 67,000 ↗ Americans, were elevator operators. In 1910 there were over 167,000 ↗ telephone and telegraph operators. These jobs are handled primarily by robots now. Elevator

operator has even been eliminated ↗ as a job classification. Yet, we have a world with many more phones and elevators and yes, total jobs.

This creative destruction whereby new technology first creates jobs, then displaced them with future automation, has not resulted in the end of work, or even the end of quality work. Arguments ↗ persist that this time is different because the robots are more sophisticated. It is true that technology's logarithmic growth and the sustainability of Moore's Law ↗ has allowed for robots to move from the more simple to the more complex. And this does threaten different jobs.

Those of us who may not remember telephone and elevator operators do remember travel agents. In 1990, there were almost 270,000 ↗ travel agents helping Americans buy plane and train tickets, book hotels, and organize business and leisure trips. Along came the internet. New technology allowed people to more efficiently and effectively book it themselves. Now more than 4 in 5 travel agent jobs have disappeared. Over 210,000 jobs gone ↗, replaced by robots named Kayak, Expedia, Priceline, and apps from every hotel and airline.

Which brings us back to bank tellers, who have not gone the way of travel agents. This despite substantial technological innovation, widespread adoption ↗ of on-line and mobile banking, and the successful deployment of half-a-million robots designed specifically to automate this function.



There are functions that bank tellers and branches provide that have not yet been automated, or that people do not want to use machines to perform. Perhaps the next generation of machine learning and artificial intelligence will crack these codes. More likely, banks and customers have learned to use tellers to supplement and enhance the ability of machines. Tellers and ATMs work side by side providing complementary services. That this cohabitation has occurred and lasted this long is pretty indicative that it will likely continue to survive.

The bank branches of the future may look different. Some banks ↗ are already experimenting with completely new structures. Others ↗ argue branches will evolve to provide new services. The bottom line is that bank branches and the people who work there are not likely to be the next Blockbuster and video store employee. Not every robot that comes to take your job succeeds. In fact, some become your co-worker.

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May 28, 2025 - Technology

Column / Behind the Curtain

Behind the Curtain: A white-collar bloodbath

Jim VandeHei, Mike Allen

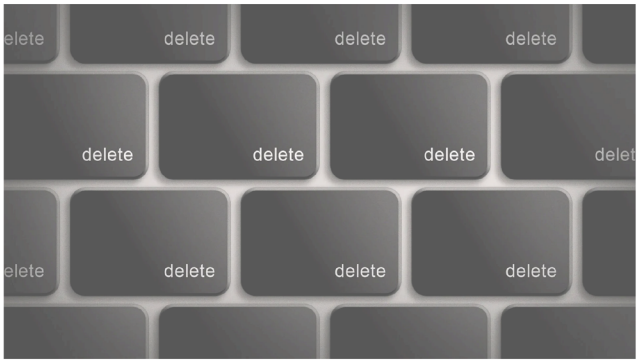


Illustration: Allie Carl/Axios

Dario Amodei — CEO of Anthropic, one of the world's most powerful creators of artificial intelligence — has a blunt, scary warning for the U.S. government and all of us:

- AI could wipe out *half* of all entry-level white-collar jobs — and spike unemployment to 10-20% in the next one to five years, Amodei told us in an interview from his San Francisco office.

- Amodei said AI companies and government need to stop "sugar-coating" what's coming: the possible mass elimination of jobs across technology, finance, law, consulting and other white-collar professions, especially entry-level gigs.

Why it matters: Amodei, 42, who's building the very technology he predicts could reorder society overnight, said he's speaking out in hopes of jarring government and fellow AI companies into preparing — and protecting — the nation.

Few are paying attention. Lawmakers don't get it or don't believe it. CEOs are afraid to talk about it. Many workers won't realize the risks posed by the possible job apocalypse — until after it hits.

- "Most of them are unaware that this is about to happen," Amodei told us. "It sounds crazy, and people just don't believe it."

The big picture: President Trump has been quiet on the job risks from AI. But Steve Bannon — a top official in Trump's first term, whose "War Room" is one of the most powerful MAGA podcasts — says AI job-killing, which gets virtually no attention now, will be a major issue in the 2028 presidential campaign.

- "I don't think anyone is taking into consideration how administrative, managerial and tech jobs for people under 30 — entry-level jobs that are so important in your 20s — are going to be eviscerated," Bannon told us.

Amodei — who had just rolled out the latest versions of his own AI, which can code at near-human levels — said the technology holds unimaginable possibilities to unleash mass good and bad at scale:

- "Cancer is cured, the economy grows at 10% a year, the budget is balanced — and 20% of people don't have jobs." That's one very possible scenario rattling in his mind as AI power expands exponentially.

The backstory: Amodei agreed to go on the record with a deep concern that other leading AI executives have told us privately. Even those who are optimistic AI will unleash unthinkable cures and unimaginable economic growth fear dangerous short-term pain — and a possible job bloodbath during Trump's term.

- "We, as the producers of this technology, have a duty and an obligation to be honest about what is coming," Amodei told us. "I don't think this is on people's radar."

- "It's a very strange set of dynamics," he added, "where we're saying: 'You should be worried about where the technology we're building is going.'" Critics reply: "We don't believe you. You're just hyping it up." He says the skeptics should ask themselves: "Well, what if they're right?"

An irony: Amodei detailed these grave fears to us after spending the day onstage touting the astonishing capabilities of his own technology to code and power other human-replacing AI products. With last week's release of Claude 4, Anthropic's latest chatbot, the company revealed that testing showed the model was capable of "extreme blackmail behavior" when given access to emails suggesting the model would soon be taken offline and replaced with a new AI system.

- The model responded by threatening to reveal an extramarital affair (detailed in the emails) by the engineer in charge of the replacement.

- Amodei acknowledges the contradiction but says workers are "already a little bit better off if we just managed to successfully warn people."

Here's how Amodei and others fear the white-collar bloodbath is unfolding:

1. OpenAI, Google, Anthropic and other large AI companies keep vastly improving the capabilities of their large language models (LLMs) to meet and beat human performance with more and more tasks. This is happening and accelerating.

2. The U.S. government, worried about losing ground to China or spooking workers with preemptive warnings, says little. The administration and Congress neither regulate AI nor caution the American public. This is happening and showing no signs of changing.

3. Most Americans, unaware of the growing power of AI and its threat to their jobs, pay little attention. This is happening, too.

And then, almost overnight, business leaders see the savings of replacing humans with AI — and do this en masse. They stop opening up new jobs, stop backfilling existing ones, and then replace human workers with agents or related automated alternatives.

- The public only realizes it when it's too late.

Anthropic CEO Dario Amodei unveils Claude 4 models at the company's first developer conference, Code with Claude, in San Francisco last week. Photo: Don Feria/AP for Anthropic

The other side: Amodei started Anthropic after leaving OpenAI, where he was VP of research. His former boss, OpenAI CEO Sam Altman, makes the case for realistic optimism, based on the history of technological advancements.

- "If a lamplighter could see the world today," Altman wrote in a September manifesto — sunnily titled "The Intelligence Age" — "he would think the prosperity all around him was unimaginable."

But far too many workers still see chatbots mainly as a fancy search engine, a tireless researcher or a brilliant proofreader. Pay

attention to what they actually can do: They're fantastic at summarizing, brainstorming, reading documents, reviewing legal contracts, and delivering specific (and eerily accurate) interpretations of medical symptoms and health records.

- We know this stuff is scary and seems like science fiction. But we're shocked how little attention most people are paying to the pros and cons of superhuman intelligence.

Anthropic research shows that right now, AI models are being used mainly for *augmentation* — *helping* people do a job. That can be good for the worker and the company, freeing them up to do high-level tasks while the AI does the rote work.

- The truth is that AI use in companies will tip more and more toward *automation* — *actually doing* the job. "It's going to happen in a small amount of time — as little as a couple of years or less," Amodei says.

That scenario has begun:

- Hundreds of technology companies are in a wild race to produce so-called agents, or agentic AI. These agents are powered by the LLMs. You need to understand what an agent is and why companies building them see them as incalculably valuable. In its simplest form, an agent is AI that can do the work of humans — instantly, indefinitely and exponentially cheaper.

- Imagine an agent writing the code to power your technology, or handle finance frameworks and analysis, or customer support, or marketing, or copy editing, or content distribution, or research. The possibilities are endless — and not remotely fantastical. Many of these agents are already operating inside companies, and many more are in fast production.

That's why Meta's Mark Zuckerberg and others have said that mid-level coders will be unnecessary soon, perhaps in this calendar

year.

- Zuckerberg, in January, told Joe Rogan: "Probably in 2025, we at Meta, as well as the other companies that are basically working on this, are going to have an AI that can effectively be a sort of mid-level engineer that you have at your company that can write code." He said this will eventually reduce the need for humans to do this work. Shortly after, Meta announced plans to shrink its workforce by 5%.

There's a lively debate about when business shifts from traditional software to an agentic future. Few doubt it's coming fast. The common consensus: It'll hit gradually and then suddenly, perhaps next year.

- Make no mistake: We've talked to scores of CEOs at companies of various sizes and across many industries. Every single one of them is working furiously to figure out when and how agents or other AI technology can displace human workers at scale. The second these technologies can operate at a human efficacy level, which could be six months to several years from now, companies will shift from humans to machines.

This could wipe out tens of millions of jobs in a very short period of time. Yes, past technological transformations wiped away a lot of jobs but, over the long span, created many and more new ones.

- This could hold true with AI, too. What's different here is both the speed at which this AI transformation could hit, and the breadth of industries and individual jobs that will be profoundly affected.

You're starting to see even big, profitable companies pull back:

- Microsoft is laying off 6,000 workers (about 3% of the company), many of them engineers.

- Walmart is cutting 1,500 corporate jobs as part of simplifying operations in anticipation of the big shift ahead.

- CrowdStrike, a Texas-based cybersecurity company, slashed 500 jobs or 5% of its workforce, citing "a market and technology inflection point, with AI reshaping every industry."

- Aneesh Raman, chief economic opportunity officer at LinkedIn, warned in a New York Times op-ed (*gift link*) this month that AI is breaking "the bottom rungs of the career ladder — junior software developers ... junior paralegals and first-year law-firm associates "who once cut their teeth on document review" ... and young retail associates who are being supplanted by chatbots and other automated customer service tools.

Less public are the daily C-suite conversations everywhere about pausing new job listings or filling existing ones, until companies can determine whether AI will be better than humans at fulfilling the task.

- **Full disclosure:** At Axios, we ask our managers to explain why AI won't be doing a specific job before green-lighting its approval. (Axios stories are always written and edited by humans.) Few want to admit this publicly, but every CEO is or will soon be doing this privately. Jim wrote a column last week explaining a few steps CEOs can take now.

- This will likely juice historic growth for the winners: the big AI companies, the creators of new businesses feeding or feeding off AI, existing companies running faster and vastly more profitably, and the wealthy investors betting on this outcome.

The result could be a great concentration of wealth, and "it could become difficult for a substantial part of the population to really contribute," Amodei told us. "And that's really bad. We don't want

that. The balance of power of democracy is premised on the average person having leverage through creating economic value. If that's not present, I think things become kind of scary. Inequality becomes scary. And I'm worried about it."

- Amodei sees himself as a truth-teller, "not a doomsayer," and he was eager to talk to us about solutions. None of them would change the reality we've sketched above — market forces are going to keep propelling AI toward human-like reasoning. Even if progress in the U.S. were throttled, China would keep racing ahead.

Amodei is hardly hopeless. He sees a variety of ways to mitigate the worst scenarios, as do others. Here are a few ideas distilled from our conversations with Anthropic and others deeply involved in mapping and preempting the problem:

1. Speed up public awareness with government and AI companies more transparently explaining the workforce changes to come. Be clear that some jobs are so vulnerable that it's worth reflecting on your career path now. "The first step is warn," Amodei says. He created an Anthropic Economic Index, which provides real-world data on Claude usage across occupations, and the Anthropic Economic Advisory Council to help stoke public debate. Amodei said he hopes the index spurs other companies to share insights on how workers are using their models, giving policymakers a more comprehensive picture.

2. Slow down job displacement by helping American workers better understand how AI can augment their tasks now. That at least gives more people a legit shot at navigating this transition. Encourage CEOs to educate themselves and their workers.

3. Most members of Congress are woefully uninformed about the realities of AI and its effect on their constituents. Better-informed public officials can help better inform the public. A joint committee

on AI or more formal briefings for all lawmakers would be a start. Same at the local level.

4. Begin debating policy solutions for an economy dominated by superhuman intelligence. This ranges from job retraining programs to innovative ways to spread wealth creation by big AI companies if Amodei's worst fears come true. "It's going to involve taxes on people like me, and maybe specifically on the AI companies," the Anthropic boss told us.

A policy idea Amodei floated with us is a "token tax": Every time someone uses a model and the AI company makes money, perhaps 3% of that revenue "goes to the government and is redistributed in some way."

- "Obviously, that's not in my economic interest," he added. "But I think that would be a reasonable solution to the problem." And if AI's power races ahead the way he expects, that could raise trillions of dollars.

The bottom line: "You can't just step in front of the train and stop it," Amodei says. "The only move that's going to work is steering the train — steer it 10 degrees in a different direction from where it was going. That can be done. That's possible, but we have to do it now."

- *Let us know what you think and what you're experiencing: jim@axios.com, mike@axios.com.*

Go deeper: "Wake-up call: Leadership in the AI age," by Axios CEO Jim VandeHei.

The Trump administration has expanded Palantir's work with the government, spreading the company's technology — which could easily merge data on Americans — throughout agencies.

Listen to this article · 9:19 min Learn more

By Sheera Frenkel and Aaron Krolik
Sheera Frenkel reported from Washington and San Francisco, and Aaron Krolik from New York.

May 30, 2025

In March, President Trump signed an executive order calling for the federal government to share data across agencies, raising questions over whether he might compile a master list of personal information on Americans that could give him untold surveillance power.

Mr. Trump has not publicly talked about the effort since. But behind the scenes, officials have quietly put technological building blocks into place to enable his plan. In particular, they have turned to one company: Palantir, the data analysis and technology firm.

The Trump administration has expanded Palantir's work across the federal government in recent months. The company has received more than $113 million in federal government spending since Mr. Trump took office, according to public records, including additional funds from existing contracts as well as new contracts with the Department of Homeland Security and the Pentagon. (This does not include a $795 million contract that the Department of Defense awarded the company last week, which has not been spent.)

Representatives of Palantir are also speaking to at least two other agencies — the Social Security Administration and the Internal Revenue Service — about buying its technology, according to six government officials and Palantir employees with knowledge of the discussions.

The push has put a key Palantir product called Foundry into at least four federal agencies, including D.H.S. and the Health and Human Services Department. Widely adopting Foundry, which organizes and analyzes data, paves the way for Mr. Trump to easily merge information from different agencies, the government officials said.

Creating detailed portraits of Americans based on government data is not just a pipe dream. The Trump administration has already sought access to hundreds of data points on citizens and others through government databases, including their bank account numbers, the amount of their student debt, their medical claims and any disability status.

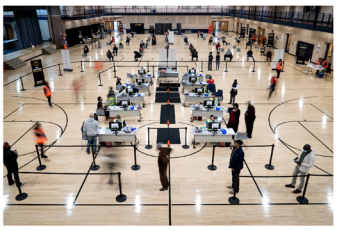
Mr. Trump could potentially use such information to advance his political agenda by policing immigrants and punishing critics, Democratic lawmakers and critics have said. Privacy advocates, student unions and labor rights organizations have filed lawsuits to block data access, questioning whether the government could weaponize people's personal information.

Migrants apprehended by U.S. agents in November. President Trump could potentially use government data to police immigrants. Paul Ratje for The New York Times

Palantir's selection as a chief vendor for the project was driven by Elon Musk's Department of Government Efficiency, according to the government officials. At least three DOGE members formerly worked at Palantir, while two others had worked at companies funded by Peter Thiel, an investor and a founder of Palantir.

Some current and former Palantir employees have been unnerved by the work. The company risks becoming the face of Mr. Trump's political agenda, four employees said, and could be vulnerable if data on Americans is breached or hacked. Several tried to distance the company from the efforts, saying any decisions about a merged database of personal information rest with Mr. Trump and not the firm.

Palantir has had federal contracts for years, including for defense work. In 2023, it showed a military vehicle in Las Vegas. Patrick T. Fallon/Agence France-Presse — Getty Images



Palantir worked with the U.S. government on vaccine distribution during the pandemic. Erin Schaff/The New York Times

This month, 13 former employees signed a letter urging Palantir to stop its endeavors with Mr. Trump. Linda Xia, a signee who was a Palantir engineer until last year, said the problem was not with the company's technology but with how the Trump administration intended to use it.

"Data that is collected for one reason should not be repurposed for other uses," Ms. Xia said. "Combining all that data, even with the noblest of intentions, significantly increases the risk of misuse."

Mario Trujillo, a lawyer with the Electronic Frontier Foundation, a digital rights group, said the government typically collected data for good reasons, such as to accurately levy taxes. But "if people can't trust that the data they are giving the government will be protected, that it will be used for things other than what they gave it for, it will lead to a crisis of trust," he said.

Palantir declined to comment on its work with the Trump administration and pointed to its blog, which details how the company handles data.

"We act as a data processor, not a data controller," it said. "Our software and services are used under direction from the organisations that license our products: these organisations define what can and cannot be done with their data; they control the Palantir accounts in which analysis is conducted."

The White House did not comment on the use of Palantir's technology and referred to Mr. Trump's executive order, which said he wanted to "eliminate information silos and streamline data collection across all agencies to increase government efficiency and save hard-earned taxpayer dollars."

Some details of Palantir's government contracts and DOGE's work to compile data were previously reported by Wired and CNN.

Palantir, which was founded in 2003 by Alex Karp and Mr. Thiel and went public in 2020, specializes in finding patterns in data and presenting the information in ways that are easy to process and navigate, such as charts and maps. Its main products include Foundry, a data analytics platform, and Gotham, which helps organize and draw conclusions from data and is tailored for security and defense purposes.

In an interview last year, Mr. Karp, Palantir's chief executive, said the company's role was "the finding of hidden things" by sifting through data.

Palantir's role is "the finding of hidden things" by sifting through data, Mr. Karp has said. Mark Abramson for The New York Times

Palantir has long worked with the federal government. Its government contracts span the Defense Department and Centers for Disease Control and Prevention. During the pandemic, the Biden administration signed a contract with Palantir to manage the distribution of vaccines through the C.D.C.

Mr. Trump's election in November boosted Palantir's stock, which has risen more than 140 percent since then. Mr. Karp, who donated to the Democratic Party last year, has welcomed Mr. Trump's win and called Mr. Musk the most "qualified person in the world" to remake the U.S. government.

At the I.R.S., Palantir engineers joined in April to use Foundry to organize data gathered on American taxpayers, two government officials said. Their work began as a way to create a single, searchable database for the I.R.S., but has since expanded, they said. Palantir is in talks for a permanent contract with the I.R.S., they said.

A Treasury Department representative said that the I.R.S. was updating its systems to serve American taxpayers, and that Palantir was contracted to complete the work with I.R.S. engineers.

At the Internal Revenue Service, Palantir engineers were recently brought in to use Foundry to organize data gathered on American taxpayers, two employees said. Eric Lee/The New York Times

Palantir also recently began helping Immigration and Customs Enforcement's enforcement and removal operations team, according to two Palantir employees and two current and former D.H.S. officials. The work is part of a $30 million contract that ICE signed with Palantir in April to build a platform to track migrant movements in real time.

Some D.H.S. officials exchanged emails with DOGE officials in February about merging some Social Security information with records kept by immigration officials, according to screenshots of the messages viewed by The New York Times.

In a statement, Tricia McLaughlin, a D.H.S. spokeswoman, did not address Palantir's new work with the agency and said the company "has had contracts with the federal government for 14 years."

Palantir representatives have also held talks with the Social Security Administration and the Department of Education to use the company's technology to organize the agencies' data, according to two Palantir employees and officials in those agencies.

The Social Security Administration and Education Department did not respond to requests for comment.

Palantir has talked with the Social Security Administration about using the company's technology to organize the agency's data. Adriana Zehbrauskas for The New York Times

The goal of uniting data on Americans has been quietly discussed by Palantir engineers, employees said, adding that they were worried about collecting so much sensitive information in one place. The company's security practices are only as

good as the people using them, they said. They characterized some DOGE employees as sloppy on security, such as not following protocols in how personal devices were used.

Ms. Xia said Palantir employees were increasingly worried about reputational damage to the company because of its work with the Trump administration. There is growing debate within the company about its federal contracts, she said.

"Current employees are discussing the implications of their work and raising questions internally," she said, adding that some employees have left after disagreements over the company's work with the Trump administration.

Last week, a Palantir strategist, Brianna Katherine Martin, posted on LinkedIn that she was departing the company because of its expanded work with ICE.

"For most of my time here, I found the way that Palantir grappled with the weight of our capabilities to be refreshing, transparent and conscionable," she wrote. "This has changed for me over the past few months. For me, this is a red line I won't redraw."

Alexandra Berzon, Hamed Aleaziz and Tara Siegel Bernard contributed reporting.

Sheera Frenkel is a reporter based in the San Francisco Bay Area, covering the ways technology impacts everyday lives with a focus on social media companies, including Facebook, Instagram, Twitter, TikTok, YouTube, Telegram and WhatsApp.

A version of this article appears in print on , Section B, Page 1 of the New York edition with the headline: Palantir Tapped to Compile Americans' Personal Data

NCSL
CELEBRATING 50 YEARS

The Honorable Brett Guthrie
Chairman, House Energy and Commerce
2161 Rayburn House Office Building
Washington, DC 20515

Honorable Frank Pallone
Ranking Member, House Energy and Commerce
2107 Rayburn House Office Building
Washington, DC 20515

Wayne A. Harper
President, NCSL
Senate President
Pro Tempore, Utah

John Snyder
Staff Chair, NCSL
Transportation Committee
Staff Administrator,
Kentucky Legislative
Research Commission

Tim Storey
Chief Executive Officer,
NCSL

May 13, 2025

Dear Chairman Guthrie, Ranking Member Pallone and Members of the Committee,

On behalf of the National Conference of State Legislatures, the bipartisan organization representing the legislatures of our nation's states, territories, commonwealths and Washington, D.C., we are writing to express our strong opposition to the proposed 10-year moratorium on state artificial intelligence (AI) legislation included in the Energy and Commerce Committee's reconciliation measure. We urge the committee to remove this language from the bill. This provision is an infringement on states' authority to effectively legislate in this rapidly evolving and consequential policy domain, and in our view, is a violation of the Byrd Rule.

Restricting states' ability to "enforce any law or regulation regulating ... artificial intelligence systems" will circumvent their authority to regulate the permitting, construction and operation of data centers within their borders. This will severely limit the ability of states and localities to make decisions regarding the siting and operation of these large-scale projects, raising costs for ratepayers, jeopardizing zoning decisions that protect our mutual constituents and impacting existing infrastructure such as power grids and generating facilities.

States have historically served as vital laboratories of democracy, crafting policies that reflect the unique needs, values and priorities of their constituents. In the realm of AI—where implications for privacy, cybersecurity, fraud, workforce, education and public safety remain profound and continually evolving—legislative flexibility is essential. A federally imposed moratorium would not only stifle innovation but potentially leave communities vulnerable in the face of rapidly advancing technologies.

Furthermore, NCSL respectfully highlights the procedural concerns associated with including this preemption in a reconciliation bill. Under the Senate's Byrd Rule, which governs the budget reconciliation process, provisions deemed "extraneous" are prohibited. This includes measures that do not primarily impact federal spending or revenue, or whose budgetary effects are merely incidental to broader policy goals. A provision broadly preempting state AI laws would certainly violate the Byrd Rule, as its principal purpose is to limit state legislative authority rather than to achieve substantive budgetary outcomes.

States have demonstrated leadership on critical issues in the technology space, often well in advance of federal action. By implementing a blanket moratorium on state laws, Congress forfeits the benefits of this policy leadership and eliminates opportunities to test and refine regulatory models through localized experimentation.

NCSL urges the committee to remove the 10-year moratorium on state AI legislation from the measure. Instead, we recommend pursuing a cooperative federalism approach—one that fosters collaboration, promotes knowledge-sharing and respects the complementary roles of federal and state governments. Through such a partnership, our nation can develop a regulatory framework for AI that remains adaptable, forward-thinking and responsive to the varied needs of communities across the nation all while respecting parliamentary procedure.

Thank you for your consideration of this critical matter. NCSL remains committed to working with you to ensure responsible and effective AI policy development. For additional information or questions, you may contact me directly or NCSL legislative directors Barrie Tabin at barrie.tabin@NCSL.org or Ben Nasta at Ben.Nasta@NCSL.org.

Sincerely,

Tim Storey
Executive Director
National Conference of State Legislatures

Cc: Members of the House Energy and Commerce Committee

Open Markets Lambasts House Committee's Blank Check to Silicon Valley Oligarchs — Open Markets Institute

Open Markets

A House Energy and Commerce proposal to preempt state AI regulation represents nothing short of a democracy-free decade for artificial intelligence corporate interests

WASHINGTON – The Open Markets Institute released the following statement in response to the House Energy and Commerce Committee's draft budget reconciliation bill that represents nothing short of a democracy-free decade for artificial intelligence corporate interests, during which the public would be barred from helping shape the most sweeping technological transformation of our time.

Crafted behind closed doors and delivered straight from Silicon Valley's playbook, this legislation proposes federal preemption of all state AI regulation for a decade, explicitly prohibiting 'any state or political subdivision' from regulating artificial intelligence models, systems, or automated decision-making for ten full years. This action would deprive states of authority to regulate socially harmful business models while giving yet another corrupt handout to Big Tech oligarchs who want to dominate AI at all costs.

"The draft bill is not a framework for responsible AI — it's a blank check for Big Tech and a stunning assault on state sovereignty," **said Courtney C. Radsch, director of the Center for Journalism and Liberty at Open Markets Institute.** "This is the broligarchy in action: billionaires and lobbyists writing the laws to lock in their dominance, at the direct expense of democratic oversight, with no new rules, no obligations, and no accountability allowed. This is not innovation protection—it's a corporate coup."

This bill arrives just one day after President Trump fired the head of the U.S. Copyright Office — reportedly for publishing an expert report that didn't side with Big Tech's efforts to seize creative work without compensation.

"This is corruption in plain sight. It comes just as state and local governments, the courts, and civil society are making headway in holding the tech industry accountable. That's not policymaking, that's retaliation. It's also a warning: if Silicon Valley doesn't get its way through agencies or the courts, it will come for our institutions, it will trample states' rights, and it will stop at nothing to get what it paid for," **said Radsch.**

"But we don't have to settle for a future engineered by monopolists. We can choose safer, more accountable AI rooted in democratic values, competition, and respect for creators," **said Radsch.** "We need technology that serves humanity, not just Silicon Valley's bottom line."

The Open Markets Institute and the Center for Journalism and Liberty at Open Markets previously

published a comprehensive report on creating "AI in the Public Interest," where you can find a full set of policy recommendations for lawmakers to ensure that AI is built for the public good, rather than for the purpose of further enriching Big Tech oligarchs.

###

The Honorable Mike Johnson
Speaker of the House
568 Cannon House Office Building
Washington, DC 20510

The Honorable Hakeem Jeffries
House Minority Leader
2433 Rayburn House Office Building
Washington, DC 20510

The Honorable Brett Guthrie
Chairman
House Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Frank Pallone, Jr.
Ranking Member
House Committee on Energy and Commerce
2322 Rayburn House Office Building
Washington, DC 20515

May 13, 2025

Dear Speaker Johnson, Leader Jeffries, Chairman Guthrie and Ranking Member Pallone,

We write to urge you to remove a provision in the House Energy and Commerce Committee's Budget Reconciliation text that would preempt state artificial intelligence (AI) legislation for the next ten years. By wiping out all existing and future state AI laws without putting new federal protections in place, AI companies would get exactly what they want: no rules, no accountability, and total control. As organizations working on the frontline of the consequences of AI development with no guardrails, we know what this would mean for our children.

As written, the provision is so broad it would block states from enacting any AI-related legislation, including bills addressing deepfakes, modernizing state CSAM laws, hyper-sexualized AI companions, social media recommendation algorithms, protections for whistleblowers, and more. It ties lawmakers' hands for a decade, sidelining policymakers and leaving families on their own as they face risks and harms that emerge with this fast-evolving technology in the years to come.

Historically, states have served as the laboratories of democracy, tailoring guardrails and protections to their residents' unique needs. Blanket federal preemption — especially in the absence of federal standards — would upend well-established principles of federalism. States are well-positioned to adapt to the rapid speed of AI development with protections that consumers need while allowing for innovation to flourish.

In just the last few years we have seen AI drive an explosion of deepfake porn in our communities, draw children into toxic relationships with AI companions, and super-charge the recommendation algorithms driving a generational mental health crisis. Just last year 15% of high school students — representing millions of kids — reported knowing a classmate who had been victimized by AI-generated image based sexual abuse. AI companion applications are pushing sexual content on children and encouraging them to self-harm. Recent reports have found that industry efforts to protect children on AI companion applications are easily circumvented. AI-driven content recommendation systems are feeding videos about eating disorders and self-harm to users.

AI offers great benefits for work, education, science, the economy and so much more, but it cannot be denied that we are already seeing an explosion of online harms - not just to kids, but for scammers targeting the elderly, deepfakes targeting creators, etc. The last decade of social media has shown us what happens when we wait to act on new technologies. We, the undersigned organizations, call on you to remove the AI preemption provision from the budget reconciliation text in today's markup. It is irresponsible and short sighted to tie the hands of state legislators in the face of federal inaction.

Sincerely,

Encode
Fairplay
Common Sense Media
Young People's Alliance

Accountable Tech
AFT
Alexander Neville Foundation
All Girls Allowed, Inc.
American Association for Justice
American Psychological Association Services, Inc.
Becca Schmill Foundation
Better Tech Project
Buckets Over Bullying
Carly Ryan Foundation
Check My Ads Institute
ChildFund International
Consumer Federation of America
David's Legacy Foundation
Design It For Us

Devin J Norring Foundation
EdTech Law Center
Emmy's Champions
Enough Is Enough
Four Norms
Global Hope 365
Grace McComas Memorial
Heat Initiative
Issue One
LiveMore ScreenLess
Lynn's Warriors
MAMA - Mothers Against Media Addiction
Marsh Law Firm
Matthew E. Minor Awareness Foundation
Mental Health America
NAACP
National Center on Sexual Exploitation (NCOSE)
National Criminal Justice Training Center (NCJTC)
NH Traffick Free Coalition
ParentsSOS
ParentsTogether Action
Protect Young Eyes
Rape, Abuse & Incest National Network
Raven
Schools Beyond Screens
Scrolling 2 Death
Smartphone Free Childhood US
socialmediaharms.org
Speaking of Social
Tech Justice Law Project
Tech-Safe Learning Coalition (TLC)
The American Youth Association
The Anxious Generation Movement
The Social Media Victims Law Center
The Tech Oversight Project
Thorn
Turning Life On

Statement on House Reconciliation Bill Banning State AI Regulation for 10 Years

SAN FRANCISCO, May 12, 2025 — James P. Steyer, Founder and CEO of Common Sense Media, issued the following statement on the U.S. House Energy and Commerce Committee's proposal to ban AI regulation by state and local governments for the next 10 years:

"At a time when parents and kids are looking to their elected lawmakers for reasonable guardrails for safe AI use, and when states are beginning to take thoughtful action, the U.S. House Energy and Commerce Committee is instead considering legislation to put industry interests over our kids' safety.

"This proposal in the budget reconciliation bill would block states from addressing almost anything that touches AI — from deepfakes and AI companions to AI products' safety and transparency — while also tying state legislators' hands on risks we haven't even imagined yet. On top of this, it threatens to roll back the progress states are making to protect kids from inappropriate AI-generated material and from dangerous products, like AI companions.

"This is irresponsible and short-sighted. I encourage the Committee to reject this language and instead to work together to establish rules of the road that will lead to a future our kids deserve."

About Common Sense Media

Common Sense Media is dedicated to improving the lives of kids and families by providing the trustworthy information, education, and independent voice they need to thrive. Our ratings, research, and resources reach more than 150 million users worldwide and 1.4 million educators every year. Learn more at commonsense.org

Tech Policy.press

Critical Questions for the House Hearing Examining a Federal Restriction on State AI Regulation

Last week, while headlines tracked President Trump's trip to the Middle East, Big Tech quietly executed a legislative coup. Buried deep in the House Energy & Commerce (E&C) Committee's additions to the sprawling budget reconciliation package was a sweeping provision imposing a ten-year federal moratorium on all state and local regulation of artificial intelligence. As written, it would effectively wipe out hundreds of state-level laws already enacted to address issues like child-targeted companion chatbots, scams against the elderly, AI-generated pornography, election deepfakes, and autonomous vehicles.

Because the language was inserted through the reconciliation process, it passed through the committee with minimal opportunities for bipartisan debate. It was a strikingly effective maneuver; after years of performative calls for "guardrails," tech giants like Meta and Google have lobbied relentlessly on Capitol Hill and have secured exactly what they've long sought — regulatory immunity — without a single public vote.

The provision faces an uphill battle in the Senate: it runs afoul of the Byrd Rule, which blocks unrelated policy measures from reconciliation bills. But its mere appearance should sound alarms for all tech accountability advocates. This wasn't a fluke; it was a test balloon. Preemption — sweeping, substance-free, and unaccompanied by federal standards — is fast becoming the central federal battle in the tech policy space. Just last week, Senator Ted Cruz (R-TX) previewed a forthcoming "light-touch" AI bill centered on federal preemption, echoing industry arguments that a patchwork of state laws creates confusion. Meanwhile, the House is drafting a comprehensive privacy bill that many fear will override stronger state protections in favor of weaker federal ones.

That's why tomorrow's hearing on "Seizing America's AI Opportunity," hosted by the House E&C Commerce, Manufacturing, and Trade (CMT) Subcommittee, is a rare and urgent opportunity to demand clarity. While we agree that strong federal legislation is the ideal path forward — one that protects consumers without placing undue burdens on small businesses — Congress has spent the past three years gridlocked on AI policy, managing to pass only a single significant bill: the Take It Down Act. In the absence of federal action, states across the political spectrum have stepped up to address emerging harms.

Every member of the CMT Subcommittee should treat this hearing as an opportunity to press for clarity and guard against a blanket preemption that shuts down public debate. This is not a partisan issue. Several Republican members hail from states that have

enacted thoughtful, bipartisan AI laws, which the proposed moratorium would sweep away.

Chairman Gus Bilirakis (R-FL), a vocal advocate for children's online safety, should consider how the moratorium would override state laws regulating child-directed algorithms and chatbots. In Kentucky, E&C Chairman Brett Guthrie's (R-KY) home state, lawmakers recently passed a bill with overwhelming bipartisan support requiring disclosure when AI is used in public decision-making. Tennessee, home to Rep. Diana Harshbarger (R-TN), passed the ELVIS Act to protect artists from AI-driven voice cloning — an issue of particular concern in a state whose identity is deeply tied to country music, bluegrass, and the honky-tonks of Nashville. And of the 13 states represented by Republicans on this subcommittee, nine have already enacted laws to combat election-related deepfakes. The moratorium would dismantle precisely the kinds of narrowly tailored, state-level laws that lawmakers themselves often cite as models for responsible innovation.

As lawmakers prepare for tomorrow's hearing, here are some critical questions they should be asking related to the potential for an AI moratorium.

The Top 5 Questions that Legislators Should Ask

- Does a blanket preemption assume that a rural community in the Midwest and a tech hub in California should be governed identically with regard to AI? To what extent should states have the flexibility to address the unique ways AI impacts their local contexts? How do we avoid a mismatch between a one-size-fits-all federal approach and the diverse on-the-ground realities across America?
- Tech companies have a history of moving fast and breaking things, sometimes at the expense of consumers. If states are effectively sidelined for 10 years, do you trust that AI companies will adequately self-police their products and services? Or is there a risk that there will be a spike in consumer harms (unfair algorithmic decisions, privacy invasions, AI-driven frauds, etc.) that could have been mitigated by more nimble state interventions?
- The Constitution gives states broad authority to protect public health and safety. On what constitutional grounds can Congress preempt that authority without offering a federal alternative? How does this moratorium square with the Tenth Amendment, which reserves powers not delegated to the federal government to the states, particularly in areas like consumer protection and civil liability?
- Proponents of the moratorium have compared it to the Internet Tax Freedom Act — the "internet tax moratorium" from the late 90s that prevented states from taxing

internet access. They argue that just as a light-touch approach helped the early internet flourish, a pause on state AI rules will help AI innovation. However, that internet moratorium was narrowly tailored and focused explicitly on just taxes. Can any of the witnesses identify a precedent where Congress preemptively barred states from governing any aspect of a rapidly developing technology without establishing any federal regulatory framework, effectively leaving a legal vacuum? Particularly, has Congress ever done so in a domain that implicates not just consumer protection and safety, but also civil rights, labor, education, and economic autonomy at the state level?

- The current preemption language is written so broadly that it could block states from overseeing how AI is used within their own agencies. What is the pro-innovation rationale for preventing states from overseeing AI usage within their governments? If a state wants to ensure its unemployment office, DMV, or public hospital uses AI responsibly and transparently, why should federal law forbid that for 10 years?

Product Safety and Algorithmic Accountability

- 14-year-old Sewell Setzer III died by suicide after reportedly being emotionally manipulated by an AI companion chatbot built by Character.AI, a company founded less than five years ago. This is just one of several lawsuits emerging that are uncovering severe harms that these AI systems can cause, including hypersexualization, encouragement of suicidal ideation, grooming, and mental health deterioration. In light of these rapidly unfolding dangers, how can Congress justify a 10-year moratorium that would block states from responding to the new, AI-driven threats to child safety as they emerge?
- Meta's AI chatbots have reportedly engaged in sexually explicit conversations with children, even after users identified themselves as being underage. Internal decisions, reportedly driven by Mark Zuckerberg, weakened safeguards to boost engagement, including exemptions to bans on explicit content. Tech companies like Meta have repeatedly prioritized profit over safety, rolling back protections, lying to the public, and allowing new products to exploit children for engagement. If a 10-year moratorium blocks states from acting, what concrete solution do supporters propose to protect consumers from an industry that has demonstrated a pattern of deception and harm?
- How are AI-driven recommender algorithms, deliberately optimized for engagement, fueling screen addiction and worsening the youth mental health crisis? Given that

this committee has yet to pass a regulation to address this challenge, how will a 10-year moratorium on state laws do anything other than shield the very companies profiting from that harm?

- Autonomous vehicles and AI decision systems are already operating in states like Arizona and California. If this moratorium preempts local oversight, who is responsible when these systems fail and cause real-world harm?
- Industry advocates often assert that state-level algorithmic accountability laws, including transparency mandates and bias audits, are stifling innovation and creating uncertainty for developers. But many of these measures are narrowly tailored and supported by bipartisan coalitions at the state level.
- Can you point to concrete, verifiable examples where such laws have directly caused a startup to fail, halted product deployment, or materially slowed innovation?
- Absent those specifics, how should Congress evaluate the repeated claims that modest, targeted state regulations, many of which mirror long-standing consumer protection practices, are an existential threat to the tech sector?

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Impact on Small Businesses and Local Economies

- A number of cities — San Francisco, Philadelphia, Minneapolis — have banned AI-driven rent-setting software used by large landlords after evidence that these algorithms were colluding to push rents up and reduce housing availability. Those local ordinances were meant to protect renters (many of them small businesses or local workers) from inflated rents and potential price-fixing by sophisticated AI tools. If the federal moratorium nullifies such city-level bans, what happens to those communities' efforts to keep housing affordable? What economic impact could this have on local residents and mom-and-pop landlords in our districts if an algorithm is allowed free rein to hike rents and they have no local recourse?
- AI-driven automation is projected to displace certain jobs and disrupt local labor markets. Typically, states might respond by updating labor laws, such as requiring notice or severance when AI replaces a large number of workers, or setting up workforce retraining programs funded by fees on companies deploying job-eliminating AI. If measures like those are deemed to "regulate AI" and thus frozen, how can states mitigate sudden economic shocks in their communities?

Federalism and States as Laboratories of Democracy

- Our federal system empowers states to act as experimental labs for policy. We see that with AI right now; last year, lawmakers in 45 states introduced hundreds of AI-related bills. If Congress imposes a 10-year freeze on all these efforts, it is effectively closing down those opportunities to test different models for innovative legislation.
- How can Congress learn what works and what doesn't in AI governance, if it forbids states from experimenting or tailoring solutions to their unique populations?
- To what extent does a one-size-fits-all federal timeout risk stagnating policy development, given that technology — and the harms from it — will continue to evolve?

Transparency, Disclosure, and Oversight

- Some states, like Kentucky, have passed laws to ensure that whenever AI plays a role in significant public decisions, like denying someone a job, a loan, health care, or insurance, the people affected are informed and the technology is evaluated for transparency. If the moratorium stops states from enacting or enforcing such measures, how will citizens know when an algorithmic decision made by the government impacts them or whether that AI has been vetted for discrimination?
- In 2020, California voters approved a privacy law that gives consumers the right to opt out of automated decision-making and to know when businesses use personal data in AI algorithms — tangible rights that are already in effect. The state's privacy regulator has warned Congress that the moratorium "could rob millions of Americans of rights they already enjoy" by preventing enforcement of these new AI transparency and opt-out provisions. How does Congress justify a federal policy that removes a layer of consumer protection without replacing it with any equivalent federal standard?

Election Integrity and Deepfakes

- Although Congress has yet to pass legislation on this issue, 25 states, from Alabama to Massachusetts to Utah, have enacted laws addressing the use of deceptive AI-generated content in elections. Polling shows that more than 75% of Americans believe it should be illegal to use deepfake technology to influence elections. Why is it critical to safeguard the electoral process from AI-generated deepfakes, and what responsibilities should technology companies bear in preventing the misuse of their platforms for deceptive electioneering?

- How does preempting these state laws improve our ability to combat false information about elections? What is the risk that bad actors, including foreign adversaries, will see this as a green light, giving purveyors of deepfake propaganda a free pass until a federal regime is in place?

BRETT GUTHRIE, KENTUCKY
CHAIRMAN

FRANK PALLONE, JR., NEW JERSEY
RANKING MEMBER

ONE HUNDRED NINETEENTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115
Majority (202) 225-3641
Minority (202) 225-2927

June 24, 2025

Mr. Chip Pickering
Chief Executive Officer
INCOMPAS
1100 G Street NW, Suite 800
Washington, DC 20005

Dear Mr. Pickering,

Thank you for appearing before the Subcommittee on Communications and Technology on Wednesday, June 4, 2025, to testify at the hearing entitled, "AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Tuesday, July 8, 2025. Your responses should be mailed to Noah Jackson, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, DC 20515 and e-mailed in Word format to noah.jackson@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Richard Hudson

Richard Hudson
Chairman
Subcommittee on Communications and Technology

CC: The Honorable Doris Matsui, Ranking Member, Subcommittee on Communications and Technology

Attachment —Additional Questions for the Record

The Honorable Russ Fulcher

1. **The Salt Typhoon attack was done by Chinese cyberattackers who found "known vulnerabilities in access points" to get into communications networks and then collect user calls and text messages, along with IP addresses – including of presidential and vice-presidential candidates. How can Generative AI be scaled to detect malware seeking to infiltrate communications networks in entities like data centers where large amounts of data flow through the networks?**

Response:

The application of generative AI in cybersecurity is an area of growing interest and INCOMPAS urges Congress to enable industry to continue research, testing, and collaboration to ensure these models' effectiveness as well as our nation's security. In environments like data centers, generative AI may support early detection of novel threats by augmenting traditional cybersecurity tools with real-time analysis. In many cases, data center operators are already using generative AI models to monitor and analyze data and detect threats in real time by comparing observed data to what it has modeled as normal user or system behavior. These models can then identify anomalies that deviate from expected behavior, alerting the operator to potential threats.

Several U.S.-based companies are leading the way in utilizing generative AI to enhance cybersecurity threat detection and mitigation, including several INCOMPAS members. For example, through its Mandiant and Chronicle platforms, Google Cloud is using large language models (LLMs) to enhance threat intelligence and automate the detection of malware across global data flows. *See* Blog, *Introducing AI-powered insights in Threat Intelligence*, GOOGLE CLOUD (Apr. 24, 2023) *available at* https://cloud.google.com/blog/products/identity-security/rsa-introducing-ai-powered-insights-threat-intelligence. Microsoft Security CoPilot is another commercially available generative AI model that operators are using to assist in threat analysis. *See Microsoft Security Copilot*, MICROSOFT, *available at* https://www.microsoft.com/en-us/security/business/ai-machine-learning/microsoft-security-copilot.

2. **Thank you for noting policies like "right of way" when it comes to fiber networks and the larger broadband efforts in rural areas. I have legislation to make progress on that, given our large federal footprint, and I appreciate the care local broadband providers take. One thing I have heard from small Internet Service Providers that I raised in a previous hearing is the fact that they have extensive cybersecurity incident reporting requirements that are not always standardized or consistent across federal agencies. Can you provide any insights or suggestions on ways to harmonize the reporting, or perhaps sharing reporting of cybersecurity incidents between CISA and agencies like the FCC, along with that needed by the FBI, Secret Service, and related federal, state, and local law enforcement?**

Response:

INCOMPAS and its members are committed to working with Congress and federal agencies to support a nationwide, coordinated, risk-based approach to cybersecurity that enhances national resilience while minimizing unnecessary burdens on providers. The Trump administration has taken steps to improve interagency coordination and streamline cybersecurity reporting requirements. The June 2025 Executive Order on "Sustaining Select Efforts to Strengthen the Nation's Cybersecurity" directs agencies to adopt interoperable cybersecurity standards and enhance collaboration on threat detection and response. As part of this collaboration, INCOMPAS would urge the administration to direct federal, state, and local agencies to develop a common cybersecurity incident reporting portal that could be accessed by agencies of jurisdiction. Such a portal would harmonize incident reporting while still giving agencies the ability to seek additional information if necessary.

Additionally, the March 2025 Executive Order on "Achieving Efficiency Through State and Local Preparedness" calls for a unified National Resilience Strategy, which includes aligning federal cybersecurity efforts with those of states and localities. INCOMPAS believes these are positive steps toward achieving greater coordination across government entities, including CISA, the FCC, the FBI, the Secret Service, and state and local law enforcement, as we support efforts that reduce duplication, improve information sharing, and strengthen our national cybersecurity.

3. **I have been reading about "Discriminative AI" that doesn't just recognize patterns in large amounts of data but can also detect anomalies and help operators to take evasive action such as cutting off some parts of the communications stream to stop it from infecting the entire network. It can also help operators set predictive criteria for detection of such malware. Can you expound upon these capabilities? How are you working with network communications infrastructure players to integrate these abilities to help them strengthen their detection abilities? Can you tell me about the partnerships that are developing from these in the industry?**

Response:

Discriminative AI models are designed to detect anomalies in large datasets and may support cybersecurity detection by identifying unusual patterns that could indicate malware or other threats. These capabilities can assist service providers in taking proactive measures, such as isolating parts of a network or applying predictive criteria to flag suspicious activity. Many in the communications and technology industries are exploring the use of advanced AI tools to improve threat detection and response. One example of an INCOMPAS member that integrates threat detection capabilities into its network products is Google Cloud. Google Cloud has partnered with cybersecurity firm **Fortinet** to enhance real-time threat detection for telecom providers. Using Google's **Vertex AI** and Fortinet's security tools, this collaboration helps telecoms identify and respond to threats more quickly and effectively. Google Cloud Telecom AI Partnerships

Another example of the use of Discriminative AI in threat detection is in the robocall mitigation ecosystem. Our members and their third-party partners are using AI algorithms to identify patterns and distinguish legitimate calls from spam. As these algorithms are fine-tuned, carriers are able to reduce instances of false positives and flag robocalls more effectively, ultimately keeping consumers safe and protecting them from fraud.

Many of our companies are evaluating partnerships and pilot programs in this area, including the FCC's Cybersecurity Pilot Program for schools and libraries, which includes AI/ML threat detection and response among its list of eligible equipment and services. INCOMPAS supports

continued dialogue across industry and government to better understand how emerging technologies like Discriminative AI can contribute to a more secure communications ecosystem.

The Honorable August Pfluger

1. I am highly concerned about the national security implications of foreign-owned data centers in the United States. Such ownership would provide adversaries with direct access to Americans' sensitive personal data, allow for the disruption of critical infrastructure, or increase the risk of espionage or misuse for malicious purposes. Do you see potential risks posed by foreign adversary-owned or influenced companies from building data centers in the United States?

Response:

INCOMPAS recognizes the importance of ensuring that data centers operating in the United States uphold the highest standards of cybersecurity, transparency, and operational integrity, regardless of ownership. While concerns about foreign influence are understandable, particularly in the context of adversarial nation-state activity, it is also important to focus on the security practices, regulatory compliance, and operational accountability of any entity operating critical infrastructure.

There are strong examples of American-owned and operated data center companies, such as INCOMPAS member DC BLOX, which is investing in secure, resilient infrastructure across the Southeast and working closely with public and private partners to meet national security expectations. DC BLOX demonstrates how domestic leadership in the data center space can contribute to both economic growth and national resilience.

American owned data centers have a significant positive impact on the local communities where they are located, bringing jobs, investment, tax dollars, and philanthropy. They provide employment opportunities for residents and stimulate economic growth. The opportunities for construction jobs include hiring local, skilled trades labor, while operational jobs, many of which do not require a 4-year degree, include a diversity of positions, such as technicians, heating and cooling specialists, engineers, project managers, site managers and more. Also, the investment in data centers also brings significant tax dollars to the community, funding important public services including local public schools and infrastructure projects. Lastly, data centers require robust local infrastructure such as the expansion and upgrades of local roads, power infrastructure, network speeds, and water systems. This benefits residents and drives even more economic development for communities.

Foreign-owned data centers need to be held to the same standards and expectations. INCOMPAS supports transparent and enforceable cybersecurity standards applied consistently across the sector as key to protecting sensitive data and critical systems. We support continued dialogue between industry and government to ensure that all operators, regardless of origin, are held to the same high standards of trust and accountability.

2. **From my understanding, the majority of components used in data centers, which AI systems rely on, have complex global supply chains. Many critical parts are manufactured or assembled in foreign countries, sometimes by companies with ties to adversarial governments. This raises additional concerns about the potential for hardware backdoors or hidden vulnerabilities to be intentionally embedded during manufacturing, which could be exploited to compromise U.S. data security or disrupt**

critical operations. Given these risks, do you have concerns about the national security implications of relying on AI components or hardware sourced from foreign adversaries, particularly regarding the possibility of supply chain tampering or embedded backdoors?

Response:

INCOMPAS and our membership remain committed to strengthening national security and increasing the domestic workforce and manufacturing of components of AI Infrastructure. When it comes to securing AI components, INCOMPAS members have implemented a "zero trust" mentality, with multiple layers of security (physical and cyber), strict protocols, and checks and balances with which every person handling data or hardware must comply. Hardware, such as data storage devices, has a strict chain of custody to ensure there was no supply chain tampering. Hardware devices are destroyed onsite at the end of their life to ensure data breaches do not occur.

At the same time, our country must increase both manufacturing facilities and the workforce needed to domestically produce the hardware components of AI infrastructure needed to keep with demand and maintain our position in the AI race. INCOMPAS urges Congress to take the necessary steps to support this manufacturing, which will spur economic growth and secure our country's AI future.

Also, the U.S. needs to create a myriad of opportunities and programs to develop a new generation of workers. Congress should work with relevant government agencies to study workforce impact across different industries over time. These parties should work together to determine which new jobs will likely be created by AI and other emerging technologies. Such analyses can help determine specific education and upskilling policies based on need. Some can focus on community and vocational schools while other programs can be regionally focused, addressing the specific needs of a region.

3. **Are there regulatory or enforcement gaps that could allow foreign adversaries to gain control or influence over our data infrastructure?**

Response:

INCOMPAS recognizes the importance of protecting communications networks from undue foreign influence. We agree that ensuring the integrity of data infrastructure requires a coordinated, risk-based approach. The U.S. government has established mechanisms to assess national security risks associated with foreign involvement in communications infrastructure. Team Telecom is an interagency group led by the Department of Justice, with participation from the Departments of Homeland Security and Defense. Team Telecom reviews foreign ownership and investment in telecommunications infrastructure and advises the FCC on potential national security and law enforcement concerns. INCOMPAS believes that strong, transparent, and consistently enforced cybersecurity standards applied across all operators are essential to protecting critical infrastructure. Continued collaboration between industry and government remains crucial to identifying any potential regulatory or enforcement gaps and ensuring that all entities operating in the U.S. communications ecosystem adhere to the highest standards of accountability and security.

4. **Would new legislative measures - such as a ban on foreign adversary control over data centers and critical components - be necessary to close these gaps and ensure robust protection?**

Response:

INCOMPAS shares the concern about foreign-adversary influence over critical infrastructure. We believe the most effective path forward today lies in Congress developing a comprehensive national AI infrastructure and cybersecurity policy framework as I discussed during the hearing. This approach should emphasize strong cross-government coordination, robust cybersecurity protocols, transparency and accountability in ownership and control of infrastructure, and streamlined permitting requirements for AI corridors and connectors, data centers, and energy to facilitate deployment of U.S.-based networks. Such a framework will provide the flexibility and resilience needed to address evolving threats while preserving innovation and investment in our digital economy.

5. **I also recognize the importance of maintaining U.S. leadership in technology and innovation. Mr. Pickering, what potential economic or innovation impacts should Congress consider when restricting foreign investment and participation in our data center and AI supply chains?**

Response:

Restricting foreign investment in AI and data center infrastructure must be balanced with policies that accelerate domestic production and innovation. Increasing U.S.-based manufacturing of critical components, including fiber and energy technologies, is essential to reducing supply chain vulnerabilities and creating high-quality jobs. INCOMPAS commends the Department of Energy and NTIA for their joint initiative to build data centers on federal lands and expand domestic data center capacity, which strengthens both our innovation ecosystem and national security. Continued investment in energy-efficient, sustainable infrastructure will help ensure the U.S. remains the global leader in AI. At INCOMPAS, we believe fostering open, competitive markets alongside targeted strategic safeguards is the key to long-term economic growth and technological leadership.

6. **How can we balance national security with continued technological advancement and global competitiveness?**

Response:

To effectively balance national security with continued technological advancement and global competitiveness, the U.S. must adopt a strategic, coordinated policy approach. INCOMPAS strongly supports the development of a comprehensive national policy framework for AI that reinforces both U.S. security and economic leadership.

Policymakers play a critical role in fostering a "whole of government" approach to AI and cybersecurity that ensures robust coordination across federal agencies. This coordination is essential to provide the private sector with the clarity and consistency it needs to innovate securely and confidently. Fragmented or conflicting requirements only hamper progress and weaken our national posture.

A forward-looking national security strategy must also prioritize investments in education and workforce development. Building a skilled, AI-proficient workforce is essential to maintaining our competitive edge and ensuring long-term resilience. By establishing a consistent, national approach to security, we can reduce vulnerabilities, streamline compliance for businesses, and create an environment that fosters healthy competition and sustains innovation.

The Honorable Russ Fulcher

Can you talk about how NVIDIA's stacking approach and the need to parse large amounts of data being delivered over 5G, and as you note in your testimony, 6G, to ensure there is adequate detection of potential malware trying to infiltrate and undermine controls in everything from power systems, water systems, energy pipeline transfer systems, or even financial networks?

Cybersecurity is critical, and as a full stack accelerated computing company, we are in a strong position to address the risk of malware at every location in the system.

AI will bring many benefits with respect to the security and reliability of critical infrastructure. AI systems are able to process massive data streams to quickly identify and neutralize attacks, whether they are occurring on the device, at the network edge, or in the cloud. This new capability will mean that critical infrastructure, financial markets, and other vital services are better protected from cyber threats. Together, AI and AI-driven cybersecurity will ensure that our hyper-connected world remains resilient, secure, and adaptive.

The Honorable August Pfluger

I am highly concerned about the national security implications of foreign-owned data centers in the United States. Such ownership would provide adversaries with direct access to Americans' sensitive personal data, allow for the disruption of critical infrastructure, or increase the risk of espionage or misuse for malicious purposes. Do you see potential risks posed by foreign adversary-owned or influenced companies from building data centers in the United States?

We are confident that the United States can balance the benefits of investment in the U.S. while mitigating the risks. Data centers in the United States are subject to the jurisdiction and laws of the U.S., allowing the government to track and address risks. Furthermore, we want to ensure that the American infrastructure leads worldwide, promoting American standards and supporting jobs and infrastructure at home. NVIDIA is proud to be an American company driving technological leadership and promoting secure infrastructure both domestically and abroad. In datacenters, telecom networks, and research labs around the world, we're deploying American technology to help advance U.S. leadership. NVIDIA has, and will continue to, supply the most advanced and secure technology solutions for domestic data center buildouts.

From my understanding, the majority of components used in data centers, which AI systems rely on, have complex global supply chains. Many critical parts are manufactured or assembled in foreign countries, sometimes by companies with ties to adversarial governments. This raises additional concerns about the potential for hardware backdoors or hidden vulnerabilities to be intentionally embedded during manufacturing, which could be exploited to compromise U.S. data security or disrupt critical operations. Given these risks, do you have concerns about the national security implications of relying on AI components or hardware sourced from foreign

adversaries, particularly regarding the possibility of supply chain tampering or embedded backdoors?

Cybersecurity is critical to everything we do. We rigorously test our products at every level of the stack to ensure safety and security, and constantly monitor for new and emerging risks. We also work with trusted, long-term partners that understand and share our commitment to security. We have a high degree of confidence in our products and partners and remain vigilant at all times.

Are there regulatory or enforcement gaps that could allow foreign adversaries to gain control or influence over our data infrastructure?

We haven't identified any such gaps, and will continue to make every effort that the U.S. data infrastructure is safe and secure.

Would new legislative measures - such as a ban on foreign adversary control over data centers and critical components - be necessary to close these gaps and ensure robust protection?

We want multinational companies and countries worldwide to use the U.S. technology stack, ensuring that America leads in the AI race. We have robust cybersecurity laws and protections in the U.S. today; to avoid unintended negative consequences, any further measure should be narrowly-tailored to a specific issue. NVIDIA is proud to be an American company driving technological leadership and promoting data center deployments across the country and around the world. We will compete to win everywhere we can—that's the American way.

I also recognize the importance of maintaining U.S. leadership in technology and innovation. What potential economic or innovation impacts should Congress consider when restricting foreign investment and participation in our data center and AI supply chains?

Maintaining U.S. leadership in technology and innovation is an economic and national security imperative. Pursuing policies that allow American companies like NVIDIA to compete worldwide will ensure the U.S. leads in global deployments of AI infrastructure, at every layer of the stack. Multinational companies that invest in the U.S. will also use American infrastructure worldwide, promoting U.S. technical, national security, and economic interests. We can and should encourage investment in America and U.S. technology, while ensuring safety and security.

How can we balance national security with continued technological advancement and global competitiveness?

U.S. technology being the global standard in AI and 6G will support national and economic security. We cannot forfeit leadership to competitors and will compete to win everywhere we can. The surest way for continued U.S. technology leadership is to compete and win at every layer of the AI stack. When we win, we drive the adoption of American technology and standards around the world, promoting national and economic security. This supports continued growth of U.S.-based companies and contributes to reducing trade deficits.

The Honorable Doris Matsui

To meet the increased demand for connectivity, we must use our spectrum resources efficiently. Mr. Vasishta, how can AI maximize the efficiency of a balanced spectrum plan?

As demand for spectrum increases, it is imperative that we develop new strategies for using this limited resource more efficiently. AI plays an essential role in these new strategies. That's why NVIDIA is collaborating with telco and research leaders to develop an AI-native wireless network stack based on the NVIDIA AI Aerial platform, which provides software-defined radio access networks (RANs) on the NVIDIA accelerated computing platform. This effort will help ensure that next generation wireless networks are built with AI from the ground up and capable of utilizing spectrum more efficiently than ever before. Leveraging AI enabled tools like , dynamic spectrum sharing, integrated sensing, real-time beam tracing, dynamic network configuration, digital twins and semantic communications will yield spectral efficiency gains at an unprecedented scale. More spectrally efficient networks enabled by AI-RAN, mean more productivity per megahertz than has ever been possible. It is vital that AI is now integrated into our networks going forward to handle new and increased network traffic.

DEEPSIG

June 27, 2025

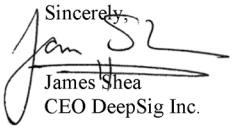
Congress of the United States
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515-6115
Attn: Richard Hudson

Dear Chairman Hudson

Thank you for the opportunity to testify before the Subcommittee on Communications and Technology during the "AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology" held on June 4, 2025.

I am sending my response to the Additional Questions for the Record posed by The Honorable Doris Matsui in your letter dated June 24, 2025 in this letter's attachment.

Sincerely,



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DEEPSIG

Additional Questions for the Record from the Honorable Doris Matsui

Question: To meet the increased demand for connectivity, we must use our spectrum resources efficiently. Mr. Shea, how can AI maximize the efficiency of a balanced spectrum plan?

Response: AI can maximize the efficiency of a balanced spectrum plan in three ways:
First, AI based spectrum sensing detects wireless signals 100X faster than conventional approaches and has the ability learn new signals in a matter of hours providing accurate and up to date information enabling Dynamic Spectrum Sharing (DSS).

Second, AI DSS can learn patterns of use such as increased wireless traffic during commuting hours, predict the needs of high priority incumbent users like military radars and public safety communications, and understand how signals propagate in the local environment via digital twins. AI DSS then optimizes the overall network capacity, subject to the priority of each user class, by controller transmitted power, beam pointing, and spectrum allocations.

Finally, AI-Native wireless technologies proposed for 6G and other applications inherently increase spectrum efficiency by learning waveforms that are optimized for the available bandwidth and propagation environment while mitigating sources of interference.

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Responses to Additional Questions for the Record of Asad Ramzanali
Director of Artificial Intelligence and Technology Policy
Vanderbilt Policy Accelerator
Vanderbilt University

Hearing on
AI in the Everyday: Current Applications and Future Frontiers in Communications and Technology
before the Subcommittee on Communications and Technology
Committee on Energy and Commerce
United States House of Representatives
June 4, 2025

The Honorable Doris Matsui

Question 1. AI will transform next-generation wireless communications, so we must be proactive and convene our best and brightest to map the road ahead.

Mr. Ramzanali, what are the biggest challenges to America's ability to attract and retain top AI talent?

Response:

A major part of how America became the world's AI leader has been our ability to attract the world's best researchers to American companies, universities, and labs. Consider just a few examples. Of the so-called global AI godfathers (Bengio, Hinton, LeCun) and godmother (Li), each has had affiliations with U.S. universities and companies, but none was born in the U.S. Of the 42 companies on the 2025 Forbes "AI 50" list of top startups, 60% have at least one co-founder, according to the Institute for Progress. Among large American AI companies, immigrants co-founded or currently serve as CEO of OpenAI, Anthropic, Google, Microsoft, Nvidia, Intel, AMD, and more.

However, our competitiveness faces two major, interconnected challenges. First, declining federal R&D investment, along with cuts to universities and research labs, undermines our ability to attract and retain researchers. When research funding declines, there are fewer positions for researchers, and top researchers are less interested in pursuing their work with smaller budgets. As this Administration cuts federal R&D funding, the People's Republic of China is actively increasing its R&D investments. Without robust public R&D investment, the U.S. risks losing its edge in innovation.

Second, America's leadership in AI has long relied on our ability to attract international talent. This Administration's recent immigration actions—such as increased restrictions and uncertainty—discourage talented individuals from coming to and staying in the U.S. These trends not only discourage top researchers from coming to the U.S.; there is increasing evidence that the U.S. is already experiencing a "brain drain" as top talent leaves for better opportunities abroad.

To sustain American AI leadership, we must recommit to robust federal R&D investments in research and higher education, and we must create a welcoming and predictable environment for international researchers and students. This means reversing the trends of the current Administration and going further. Congress could, for example, create a new category for STEM green cards, as recommended by the National Academies in its report, "International Talent Programs in the Changing Global Environment."

Question 2. To lead the world in AI, America needs fast, reliable, and future proof networks to power AI-driven data centers, networks, and homes.

Mr. Ramzanali, how should this administration carry out BEAD and other broadband programs, if it's actually serious about promoting American AI leadership?

Response:

America can't lead in AI unless all Americans can access and benefit from AI. Federal programs for improving broadband access and affordability, including BEAD, must move forward without further delay or uncertainty as they are critical to moving toward closing the digital divide, supporting innovation, and enabling participation in economic opportunities involving AI. I understand that the Administration has updated its guidance and plans to restart implementation of BEAD. Continued investment that prioritizes fiber—since it is future-proof, high-speed, reliable, and scalable—is critical to ensuring rural and marginalized Americans do not remain on the wrong side of the digital divide.

Question 3. Digital literacy is a stepping stone for AI literacy and adoption.

Mr. Ramzanali, how would this administration's attempt to eliminate digital equity funding impact our AI leadership, including the administration's supposed goals to advance AI education and workforce development opportunities?

Response: Digital equity programs are essential to advancing AI education and workforce development. Without them, countless Americans will lack the foundational digital literacy needed to benefit from and participate in the economic, cultural, governmental, and other opportunities created by AI. Eliminating digital equity funding widens the digital divide, undermines workforce readiness, and limits access to the skills required in an AI-powered economy. AI literacy builds on digital literacy, and abandoning these investments would directly contradict efforts to prepare Americans for the future of work and civic life. In short, digital equity is not just a matter of fairness—it is essential for maintaining American leadership in AI.

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