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AI ON THE BALLOT: DATA CENTERS AND THE 2026 MIDTERMS

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TABASSI: Good morning, everyone. And good afternoon to the people that are joining us online from different time zones or whatever time zone you are in. We're gonna talk about AI, and I think it's AI and is a topic that I feel like everybody is talking about it every day in many different contexts and many different circumstances.

So I'm gonna keep my opening remarks about AI and how it's actually changing the way we live, the way we work, the way we learn, all kind of non-existence because I think you have heard many of them, many of them before and just try to spend more time hearing from our experts and particularly our special guest today.

It's my pleasure to welcome Congressman Jim Himes, who has represented Connecticut's fourth district since 2009. Since 2023, he has served as ranking member of the House Permanent Select Committee on Intelligence, which makes him one of the eight congressional leaders briefed on the nation's most sensitive intelligence matters.

He has long worked on, at this intersection of technology and national security, including leading the committee's work on how intelligence community keeps pace with emerging technology. Before Congress, he was a Rhodes Scholar, worked in finance, and led a nonprofit focused on affordable housing in New York City.

Congressman, thank you so very much for joining me today. Please join me here. I know how busy you must have been and how busy you are gonna be in the next two weeks. So thank you so very much for being here and,

HIMES: Two weeks minus one day. Not that I'm paying attention.

TABASSI: Yeah, okay, just to be exact and help us understand the space of the AI from where you are sitting, where you're looking at all of these things. So as you said, two weeks minus one day to the election what's on your mind? What keeps the ranking member on House Intelligence Committee up at night?

HIMES: Well, so there, there's a lot. Needless to say, turn on the television and you'll drink from the fire hose. But germane to the subject matter, you know, artificial intelligence, just as it's challenging everything, is challenging election security.

And that really means... I mean, it means a lot of things, but it falls generally into two categories. You know, definitionally, we draw a distinction between election interference, which is somebody trying to get in and mess around with the mechanics of an election, steal voter rolls, change voter rolls, mess with the machines, that sort of thing. Very, very hard to do. And historically, we've never observed operations that were successful or even sort of meaningful in that realm. But these frontier models are showing unbelievable hacking capability. I mean, stuff that we didn't imagine. Stuff like, don't ever take financial advice from me, but, you know, the algorithm that allows bitcoin to do its thing. Like all of a sudden people are starting to think, "Wait a minute, that's crackable." As is the internet and everything else. So that's a whole new area of threats and concerns that has not been, right, much of a thing.

And then you've got influence. Influence is distinct from interference in that influence is, you know, generating false information. This we see all the time. You know, like take it back to 2016 when the Russians were buying all sorts of Facebook posts critical of Hillary Clinton

and that kind of thing. And of course, we're seeing that once again. The Russians in particular are masters of this and crank out an immense amount of volume of garbage, whatever you wanna call it, slop because their strategic interest is in simply creating chaos and a sense of instability, and things don't work, and I hate the establishment. And AI of course can generate that at orders of magnitude higher speeds than was ever possible in the past. And with a qualitative distinction, you know, who knew that you could generate a really lifelike video of me saying something really stupid or whatever. And so that's a, that's a very serious concern.

I am heartened-- last point-- I was really worried that we would all be super gullible gullible to deepfakes and that sort of thing. But there's such a immune system in the American body politic to that stuff. In fact, if anything, the pendulum is probably, you know, let's not believe anything we hear from anybody. And so I worry a lot less than I used to about the gullibility of the body politic to a bad deepfake. You know, the pendulum really swung on that one. So anyway, that's a kind of an overview of the things that we worry about in the context of our elections.

TABASSI: Yeah, thank you very much. As, as you said, AI is changing the picture of a lot of the way we think about a lot of these things, inference and influence.

Now I wanna kind of, flip it back on the AI as a tool that can be used with the intelligence community and the benefits it can, it may have there. So, you have spoken about the importance of the intelligence community access to the frontier models. What, what would that access give intelligence community that you already don't have?

HIMES: Yeah, these questions are always so hard to answer 'cause AI is everything. Right? But again, let's, let's just focus on a couple of areas. I mentioned the the cyber capabilities of these frontier models, which are, which are shocking in a way I can't be too detailed about. But as you might imagine, some of our cutting-edge scientists and cutting-edge researchers are looking at these models and saying, "My God, this is something we thought we might be able to do a decade hence, and this thing can do it on Thursday." And so that, that poses immense challenges to the stability of the commercial internet, to our ability to communicate with embassies and stations abroad, that kind of thing, relying on cryptography.

To, now we can process data and have access to data that we never imagined. I mean, just take visual imagery. We're in a position to capture an awful lot of visual imagery and not used to ... I mean, a generation ago, there were people ten miles out of town with magnifying glasses looking at photographs, right? And this is actually old technology. Now, you know, terabytes, gigabytes of data can be processed even just in the visual realm, including in the signals intelligence realm.

And so I say all that to say that the tools transform, they transform everything. But they certainly... You asked about intelligence. They really transform the intelligence sector in a way that is all about capabilities. And because it's all about capabilities, it, amongst other things, raises profound concerns about things like privacy.

TABASSI: As a risk because we cannot quite protect the privacy because the information is ubiquitous and AI can access them and, and distribute it ubiquitously.

HIMES: Exactly. I mean, you know, five years ago, five, six years ago, before these frontier models came out, you know, we sort of knew that you could stitch together commercially available information on what magazine, I'm showing my age here, what magazines you subscribe to. You know, you could stitch together-

TABASSI: I still subscribe to magazines.

HIMES: Me too. I think I'm the only customer for the printer in my office. But you know, we knew six years ago before AI that you could stitch together a pretty good profile of an individual consumer even though it's all anonymized.

Well, you know, my God, now with the AI capabilities and my suspicion is it's not the IC, but my suspicion is that there are people out there who are generating profiles of individuals with a shocking degree of detail. You know, sort of like I get a cold chill down my spine when I think about it. You know, I mean, HIPAA protected healthcare data. These things have the power to... So yeah, it's a, it's a whole different thing that raises profound privacy concerns.

TABASSI: And all of these uses of AI rests on and depends on an enormous compute power, which gets me to the questions about the data centers, which is the topic or one of the topics of today's conversations. And after this, we're gonna have you're gonna hear from experts from Brookings about their work on the data centers.

So I'm gonna start by asking the first questions about sort of who pays. The House passed the rate payer bill with strong bipartisan support. The Senate didn't quite pick that up yet, at least. So how do you think the cost of grid upgrades for large data centers should be shared between developers and other customers?

And I just wanna also put a disclaimer that in this conversation, we are talking about AI data centers. It's the data centers that are being used for training AI model or inference rather than the data centers that run the compute for watching YouTube videos or something like that. I just wanna make this distinction for our audience back home.

HIMES: Yeah it's a great and interesting question, and then there's a lot of noise around it. And I think it's valuable to set the noise aside. I mean, yes, we passed the Ratepayer Protection Act, but like so much of what we do in Congress, it was meaningless, right?

It was like, let's set up an advisory task force to advise on... You know, it wasn't, it wasn't meaningful or substantive, and the Senate didn't even pass it, right? And there's no doubt I live in a political world. There is no doubt that there is a surprising backlash against data centers out there everywhere.

I was talking to one of your panelists earlier. You know, of course, where I live, where we have the most expensive power in the continental United States, there's a backlash. But I mean, even in rural communities where power is cheaper, there's a backlash. And I think that backlash is driven by an eminently solvable problem, which is the one-- the question that you asked, which is how do we equitably divide up the costs of of building the compute?

I actually think that's eminently solvable because, you know, if these infrastructure companies have one thing, it is unlimited resources. So they're gonna figure out the offer.

And the offer may be as simple as, yes, we're gonna build a data center, but we're not gonna use the municipal water supplies, and we're actually gonna build, you know, three stick cycle plants for two hundred and ten megawatts of generation. Whatever. There's going to be an offer.

And I was, again, with the conversation here, any massive infrastructure build-out is volatile. You know, whether you're talking about the internet, you know, look at '99 versus 2002, right? Those are pretty radically different years in terms of the financeability of it. And you don't know who's gonna be the winners and losers. But the underlying fact is that the demand, the experts tell me that the underlying demand for compute still looks infinite. And as long as that is a true fact, the build will happen. It's just a question of how.

Now, these guys are gonna figure out how to make a much more attractive offer to communities, and no, we're not gonna build a ton more data centers, you know, outside of Dulles Airport. But there are immense numbers of communities around this country where the offer will be too good to refuse. And, you know, there's challenges, right? Data centers don't, on an ongoing basis, employ all that many people, which is sort of what, you know, communities really want, good jobs that are resilient.

But needless to say, I can tell you where the unions are gonna be on this, I saw this fight with pipelines, right? Democrats by and large don't love pipelines, but the unions love the pipelines. So my point is that the compute's gonna get built. Even in an extremist scenario, which I don't think we're gonna get close to, you know, the geniuses in the White House are gonna figure out, if they need to, how not to slow the build of compute by allowing it to get built on military bases. And if you look at... Or federal lands. You, look- ... you know, half the west of the United States is under the control of the federal government.

So there's a lot of noise around it, but the compute's gonna get built. And the good news is that the industry is gonna find much more attractive propositions to the communities that they are going to try to get to build these things or to accept these things.

TABASSI: You mentioned cost, and you mentioned the fact that these things are gonna get built. I wanna sort of double-click on both of them, but start with talking about cost. So you talk about cost. I wanna also ask about the security side of that. You know, many people increasingly are looking at the compute as a strategic asset. I welcome your thoughts about is it the right way of thinking about it or not. But if it is, should large AI data centers be treated as critical infrastructure, and what that might look in practical terms in terms of the security standards, access, foreign ownership or anything like that?

HIMES: Yeah, it's a super interesting question. I mean, we've all been reading about how the Ukrainians and the Russians in the last two weeks have been sort of trading attacks on their on their data centers. Yeah, I think there's no question that they're going to be considered critical infrastructure.

I mean, they're going to be even more important than, you know, the network data centers that we've been living with for 40 years now because so much more functionality is going to rely on their health and existence. And so yes, they're gonna be critical infrastructure, no question about it.

And I think you know, you can go down the road of imagining putting anti-aircraft assets around data centers. That's not where we're going. Maybe where the Russians are going. But you know, the technologists will figure out ways to make for robust compute infrastructure, right? You know, they've been thinking in these terms forever.

You know, back when I was a kid when telecommunications was done in old SONET rings, right? SONET rings existed because they were much more resilient than point to point. So they're gonna figure out how to fragment and disperse and do what they need to do to make sure that critical functions are, are redundant and protected.

You know, they haven't had to think in those terms quite yet because this is a new thing. But as, as more and more of the agents and as more and more of the commercial economy depends on these things, they will start to look more like JPMorgan's resilience centers than they look like today's data centers.

TABASSI: I really like how you kind of tied back to actually building the technology that is resilient and robust by nature rather than trying to solve all of the problem through the, just the policy lens and, and that's one of the focus of our work here, that how to actually look at solving the problem from bringing both technologies and policymakers together.

You-

HIMES: I want to say very, very quickly and this is beyond the scope of this conversation. I'm, I'm sounding a little Pollyanna-ish. I really do believe that a lot of the political noise that you hear right now are problems with solutions. You know, the build out of data centers, I think it has a solution I am profoundly worried, and we don't spend, need to spend a second on this, but I'm profoundly worried about the sociopolitical impacts of the very real possibility that 10 years from now there are no jobs for people between the ages of 20 and 30.

You know, our political system is not anywhere close to prepared to dealing with that. So don't get me wrong here. I'm sounding optimistic about a whole bunch of stuff, but I think this thing is you know, this, this is posing some fundamental societal questions.

TABASSI: Yeah. Point well taken. If it is a transformative technology, as they say, it's gonna really challenge a lot of our assumptions and the way we are doing things. So, the questions about job market, as you said, and a lot of other questions are fundamental questions that we need to understand the transformative power of this and be able to come up with solutions for both during the transition of the society, but also a living in a AI-enabled future. So thank you very much for that explanation, and we are all very clear-eyed on that.

You mentioned that about importance of the compute as it's even more important than than network. So, there are infrastructures, as we are talking, planning to be built out outside of the U.S. And I want to hear your thoughts about as a growing share of U.S. AI compute is being planned to build outside of the U.S. in places such as UAE and Saudi Arabia, as we have seen some of those.

How do you think about the benefits and risks and particularly given the importance, you know, of data AI data centers as a critical infrastructures, and what role do you see for Congress to play in this area?

HIMES: Yeah, it's an interesting question. Again, there's a lot of facets to it. You know, and, and don't ever mistake me for a technologist, but obviously inference compute because of the latency issues is going to need to get built in a fragmented and dispersed basis. So this stuff is going to not just live in Loudoun County. The training obviously can be much more centralized.

So because of latency, it's going to be dispersed. I think it's gonna be hard to disperse it. I mean, again, we're having a conversation about the building of data centers here in the United States. Try doing this in France. I mean, quite frankly, try doing anything in France today. But, you know, power costs are much higher, civil society is much more organized, much more-- much less laissez-faire in build-out. So it's gonna be rough, I think, but it is going to happen. That's sort of a political question.

The Gulf stuff is interesting, right? You know, when you start talking about massive data centers being built in the Gulf, I start to ask questions about, yeah, and how many H200s or more advanced chips are gonna go missing, you know? And we know where they're going. And so it does present some ITAR-oriented or just generally security risks. And, you know, we'll have to be, we'll have to be on that. We can do it. Advanced chips are a little more complicated than watching ASML lithography machines, but we can, we can do it. We just need to be mindful 'cause I do think...

and by the way, I don't believe for one second that we're going to forever maintain a lead over Chinese frontier models, but we should for as long as we can. And the one real lever we have there, of course, is just slowing the dispersion of advanced chips into China.

TABASSI: Yeah. Looking at time, I just wanna before turning to the audience and opening up a question for the whole audience I wanna ask you that what do you hope the next Congress should do in AI infrastructure or AI in general?

HIMES: Yeah. I actually am, I'm sort of pleased by the extent to which the Congress has been educating itself on this on this challenge. It's happened much more, much more rapidly than the internet. I mean, we still have some, you know, famous 80 or 90-year-old senators who aren't quite clear on the inner tubes that run the internet. The Congress has really sort of put its head down and gotten serious about understanding the challenge.

We are inherently a reactive body, right? We didn't come up with Dodd-Frank before the meltdown of 2007, right? We did it afterwards. And so we're always gonna be a little reactive and I have a very dark thing that I say that I probably shouldn't say, but you know, what would really help the Congress would be if there was something a little bit more tangible than you know, a bunch of bots ganging up on Hugging Face, which is sort of an abstraction to most members of Congress. Like, what's Hugging Face? What do you mean? What do they do? So I have a terrible thing that I say if like, if, if the power could go out in a city for three hours, not, not, not three days, but for three hours so that the Congress is like, "Oh my God, we need to actually focus on this," that would be the catalyst to us really accelerating. But what I hope we'll do is, is start where we should start, right? Which is a great deal more transparency, visibility, and some levers on the frontier models.

And, you know, sometimes you say AI to my colleagues, and they just look terrified and their eyes glaze over. There's easy ways to think about this, not perfect, but easy ways to think about this. And the way I illustrate this to some of my colleagues who are a lot older than I

am is like, you know, look, when a Delta flight takes off at DCA and it does a near miss with a United, in that second, in that moment, the FAA is alerted and the FAA knows it, and they think about it. Why did it happen? What can we learn from it, et cetera. And if it's bad enough, we're gonna shut down the airfield or whatever it is.

That's a pretty good analogy for like, that's the kind of transparency and monitoring capabilities that we need in a world where we may discover that right now a bunch of agentic bots are doing something really crazy. So that's a pretty good place to start, and there's a pretty good analogy that most members of Congress would understand.

It would help if the president weren't in the very absolute position he was in because we'll see what happens after election day. But, you know, the Republicans in Congress are still by and large whatever the president says, "Yeah, that's what I want." And so maybe after election day, there'll be a little bit more independence and probably a change in control, but that will help us... If the president would take a less absolute, don't touch anything anywhere, ever, you know, it would be a lot easier to make some fairly simple...

I mean, even if you start with this proposal that Anthropic put out there, right? I think it's way short of where we need to be, but it's a proposal.

TABASSI: You mean the Pacing the Frontier?

HIMES: You know, they made this legislative proposal that you know more about than I do. You know, even if we started there you know, we could make some real progress on it. So I hope that's where we go.

TABASSI: The legislation, the way I understood, is very similar to the Frontier Act, so there're a lot of things discussed there.

HIMES: Yeah, and you know, we haven't talked about this, but one of the barriers I always... This is gonna be my plan B if I lose an election. One of the barriers in addition to power and water is just the sheer exoticism of these Martians that are running this whole operation, right? You know, and so when Anthropic comes out with a proposal that says, "Well, if 50 people are gonna die, then you get to look at..." I mean, this is a... politically speaking, that's a catastrophic way to present a policy proposal, right? I mean, it's just a catastrophe. It's right up there with Mark Zuckerberg, true story, sitting in front of the Financial Services committee to describe the global cryptocurrency that he wants to create.

I mean, it's just, these guys are a disaster. I have infinite admiration for them, but when the public face of this industry is Peter Thiel, who's spending half of his time talking about the emergence of the Antichrist and, you know, Mark Zuckerberg, who can't actually show emotions, like they have a huge problem.

My plan B is like, I'm gonna be like, "I speak human. I speak human. Follow me." You know? So and that's sort of funny, but that, that is a major barrier to solving this problem. The fact that all of these guys, again, it's like they landed from some foreign planet.

TABASSI: I love this. I think all of us should start introducing ourselves with "I'm a human, and it took me this many years to be built," rather than everything that the agent said.

But I really like the stuff that you said particularly on incident reporting, but near-miss reporting. You know, you mentioned the aviation. We don't wait for the incident to happen, there is near-miss reporting. And you brought the example of the two planes, you know, in the near miss for aviation is 500 meters. So that 500 meters came through a lot of the trial and error and experimentations to figure out it should be 500 or something else. And we need to do that for AI, so there is a lot more that we should do. And the transparency is definitely is definitely a great a great place to, to start.

I wanna make sure that we get some questions from the audience. So please I'm gonna take few questions and then give time to Congressman to, to respond. So please. So I have one in the back, one in the front, and one in the corner. So I get one from each column.

AUDIENCE QUESTION: Yes. My name is Roger Cocchetti. I'm a retired high tech executive, Comsat, IBM, VeriSign, CompTIA. And one of the things in discussing data centers you did not comment on, I'd be interested in your thoughts, is the variety of innovative solutions that have been proposed. Elon Musk, for example, has proposed putting 100,000 satellites up and locating the data centers in satellites. Others have said do it on the deep sea beds where it's, you know, water everywhere, and others have said put it in the high seas and floating.

So have you given any thought to these innovative ideas, and if so, what's, what's your reaction? Thanks.

TABASSI: Great. Thank you. So data centers across not only the land, but also space or underwater.

AUDIENCE QUESTION: Thank you so much. By the way, thank you for being a voice of reason about the effect of media in our world, right? America is 4% of the world's population, but 40% of the ad dollars. It's very profitable to get Americans unhinged through the devices.

Do you see any manipulation of Americans happening towards our approach towards AI? Obviously, we're one of the least friendly countries in the world towards AI despite the economic promise.

TABASSI: Thank you. Any other questions here? Right. We get, we get the question here. Please, please go ahead, and then we have a question. Please go ahead.

AUDIENCE QUESTION: Yes. I'm interested, Congressman, when you have meetings, town halls in your district, and people bring the subject of data centers up, how do you respond to them?

Are they emotional questions? Are they, they... Do they express danger? Or they feel fear of the data centers and just how do you respond to that? How do you explain it to them?

TABASSI: That's great. We get the last one question, and then we get to the -- Please go ahead.

AUDIENCE QUESTION: Hi, I'm a pollster and political strategist, and I'm working a lot on these issues and wondering, you know, I get very annoyed at all of the doom polling that

only asks the top line number. What public information is really missing from this debate in what you see?

TABASSI: Great.

HIMES: Yeah. Really, really quickly, just to cycle that through there's, there's no question that it's a very emotional moment, right, around data centers. And that, I won't repeat myself, but to say that for very good grassroots reasons you know, people are concerned about water, about noise, about... there's really good reasons, and this problem is compounded by the near autistic quality of the leadership that is, you know, that is the public face of this stuff.

And it just goes on and on and on, right? I mean, Jeff Bezos, who's using his fortune to launch him- launch himself and his wife into space. Like, again, you could just say to these people, and this is the serious answer to your question, "For God's sake, like, start with a human-centric approach," right? Start the conversation not with, "Are we gonna put, you know, servers on the moon," like Musk keeps talking about. That's a scary thought for a lot of people. But let's start with the fact that you know what? We might actually cure cancer in two years, or you tell me, I don't know, 18 months, whatever. We can cure cancer. We can actually... if this stuff does what it's supposed to do, maybe in ten years, drug discovery and approval is a two-year rather than a 14-year process.

And I, I could go on about all of the human-oriented things that they could lead with. But of course, that's not what they lead with, right? And you get Musk... anyway, I'm not gonna continue to attack these guys. It's just, what a political crime that these guys are going where they are going. I happen to believe it's important that we make progress on this stuff in a safe way, and they're doing everything they can to create the emotional environment where that is going to be very, very difficult to happen.

And that, of course, is reflected in the town hall meetings. Now I come from a very dense community where land and power are super expensive, so nobody in my congressional district is at risk of having a massive data center put right next to them. So it's a little bit more of an abstraction. But again, you've got those real problems, real serious problems around water and power and noise and all that stuff, exacerbated by the sociocultural qualities that I keep pounding on here.

You know, to the technological innovation point, yes, we haven't talked about this, but I mean, before we get to servers on the moon and all that stuff, you know-- I get over my skis pretty quickly here, but the... it's not quite Moore's Law improvement in these processing chips, but you're seeing dramatic improvement in the efficiency of the chip. So the, you know, the energy cost, the cost all in per unit of compute is plummeting. I don't think quite Moore's Law rates, but, you know, yes, there's gonna be innovation which probably takes some of the pressure off what otherwise would be sort of a, a geometric problem.

The moon, undersea, northern Greenland, you know, God bless you, private sector, figure that out. It's my job to make sure that if you wanna put them on the moon and, you know, that's a stupid idea and you're gonna go bankrupt, that's the thing, that's what the private sector is all about. Just don't drop a rocket on Miami. That's sort of the government's job, right? So, you know, if they can come up with, and I think they will, if they can come up with really creative and innovative ideas to... This is the story of technology, right? And I have confidence that they will, that they will do that.

Advertising and what was the question? The second question, advertising, four percent, forty percent.

AUDIENCE QUESTION: Are we being manipulated?

HIMES: Oh, yes. Of course we are. Oh, in this very narrow, in this very narrow area, yeah. You know, there's a lot of allegations out there, and candidly, I haven't really drilled into what our intelligence community is saying about this, but there's a ton of allegations out there that the Chinese and two or three other people are putting out lots of inflammatory stuff about data centers.

I don't know if that's true, but it has a credible feeling to it. So yeah, you know, and again, the Russians are in a category all by themselves in this area. They'll, you know... unlike the Ch-- I've been watching foreign manipulation for a very long time. The Chinese are extremely directed in what they're trying to do. I mean, extremely directed, like down to the individual, whereas the Russians are just like, they're vandals, right? Like, just, you know, put a flaming bag of poop on the doorstep and it's gonna make the family really, really unhappy. That's what they do, right? It's not terribly well thought out. It's just create chaos and randomness and-

TABASSI: You, if that's okay, I wanna ask a ending question, last question. You mentioned something about Congress being reactive and, and you also alluded to the Hugging Face and saying that this is more abstraction. But we saw more than just Hugging Face. You know, there was also reports of agents trying to get access to government facilities in the U.S. And outside. Aren't there enough warning signs for trying to do something? Do we really need to wait for that 50 deaths or 10 billion harm?

HIMES: Yeah. I, I have my example of the power going out for three hours. Again, that's my calibrated thing that would really catalyze the Congress to take this seriously. There's lots of things that would be in that category. You know, if classified data systems were penetrated or anything along those lines, that would cause the Congress to act with more urgency. It's funny, if it were an attack on a government thing, it might actually cause a rethink in the Oval Office, right? Which again, is a real barrier to us making some progress here.

So my overall hope is that we get prompted by something that is bad but not too bad. And you know, what we have that gives me some confidence is... And there's the famous discussion over whether we have a six-month lead or whatever the lead is, over time. We do have something of a lead. So as you might imagine lots of government agencies with lots of initials in their names are, are right now testing our networks against the capabilities of the frontier models, and we just need to, we need to keep doubling down on that defensive work as we all come to terms with the capabilities of these models.

TABASSI: Well, thank you so very much. There's a lot more topics that we'd love to talk with you about and get your insight on, but we are out of time. Thank you so very much for being here, for a very thoughtful and great conversations, and all the best with solving all of these kind of tiny problems. But thank you very much again.

HIMES: Thank you. Thank you.

TABASSI: We're going to move to the next section of our program. It's gonna be a panel with fantastic Brookings colleagues and experts talking about the data centers and all aspects of the data center build out domestically and abroad, and all sorts of data center conversations.

WIRTSCHAFTER: Come on up. Believe it or not, this panel could have been bigger with all of the, the bench of Brookings talent. So up front, I would encourage you, number one this-- I'm Valerie Wirtschafter. I'm a scholar here in our Foreign Policy program and in our AI initiative. I am privileged to be here with all of my Brookings colleagues on stage. I think this is the first time in five-and-a-half years at being at Brookings that I've had an all Brookings panel. So we have Tom Wright, Kyle Chan, Tony Pipa, and Mark Muro, all doing excellent work on data centers and some of these questions, both domestically and internationally.

I will also point out that there, you know, we could have filled another panel. Fortunately some people weren't available today. And I would encourage you to check out the research on the website focused on really every facet of this question. You know, I think that this is one of the areas where we have an extremely deep bench on the data center question that kind of tackles all sorts of aspects, and you'll get a flavor for that today but there's even more, if you can believe it.

So I'm gonna dive right in because we have this great panel assembled and I do wanna leave time at the end for my colleague Sanjay, another person working on some of these issues to offer some concluding remarks.

So Tony, we're gonna start with you. We're gonna start really local and sort of zoom out a little bit on some of these data center questions. So you've reported from Tucker County, West Virginia. Residents have been fighting a proposed data center and power plant since early 2025. What did you find was really driving that fight, and are you seeing other things or similar things in communities, or is there something distinct about this case?

PIPA: Yeah. So thanks. And this is an episode of my podcast, Reimagine Rural, shameless promotion. You can find it wherever you listen to your podcasts. But it is a, a data center that has been proposed for Thomas and Davis in, in West Virginia, two towns that have transformed themselves from former coal and timber into an arts and outdoor recreation economy.

So one thing just to caveat at the very beginning is West Virginia itself as a state has one of the more extreme laws in the state, where state government actually does a lot on the siting decisions for the microgrids and the power plants that would power this data center. So effectively preempts local control. The county commissioners and the local municipalities don't have the decision-making authority. It's to the state, and the state actually also takes seventy percent of the tax revenue.

Having said that, I think to your point, there are three dimensions that I would talk about that surfaced in this particular story and I think are really emblematic of seeing how local communities, especially rural communities, because more and more of the large inference data centers that Elham talked about are coming to, to rural communities.

One is a lack of transparency. So no one in these communities were, was consulted in the least when a developer actually put in for an air permit, an, an air emissions permit to the

state. And you know, no community engagement. Even the local elected officials did not realize what was happening. And we see this lack of transparency actually happening a lot as developers are coming into communities that are asking for confidentiality agreements, for non-nondisclosure agreements. I think the companies themselves have backed off of that, but that lack of transparency where they're dealing with one or two officials in sort of negotiating a potential deal and then bringing the community in it at the very end that has created a very difficult dynamic for the community to feel like they're shaping the future of their community rather than the shaping of their community being done to them.

Secondly, there are real risks. You know, we heard a little bit of those risks in the, in the conversation previous, energy rates, for example, and, and maybe the cost of those energy rates. But land and the land usage, and potentially that land being a stranded asset if we overbuild and, and the economies of scale and new compute power, and that data center doesn't get to be used anymore. Water. There's emissions. There's, you know, both air emissions. There could be runoff. In the West Virginia example, the backup diesel generator for that data center would be a mile from an elementary school. That's a real concern.

And so do the benefits outweigh the risks? I mean, communities are having to deal with that, and they're often having to deal with it with not having had those conversations and planning upfront and proactively. This is coming in from the outside. The speed at which the industry wants to move is, is real and urgent. And so communities are being forced to, to have these conversations under a lot of time pressure where it's very difficult.

And then third is, frankly, a lack of trust. There's a real asymmetry going on at the negotiating table. You have companies that are extremely well-resourced, have a lot of resources to put their interest on the table with local governments, and especially in, in this case, you know, these are local elected officials that are volunteer. They have other full-time jobs. They often don't have economic development staff even.

And so there's a real skepticism on the part of community members that even what agreement is decided, and even if there's community benefits in those agreements That the locality is going to have the ability to ensure that there's compliance with that. And frankly, that trust goes beyond. I think there's a skepticism that AI might be good for them, that it might be good for their community, might be good for society as a whole. And so all of that lack of trust sort of feeds in on itself and creates a non-virtuous cycle

WIRTSCHAFTER: Mark, I wanna go to you because you're sort of, I guess, one level up a bit in terms of regional economies. You've looked at the data center question, you've looked at the economic implications of AI in regional hubs.

I think a very common argument is that the backlash, this fight, is really about broader AI anxieties. How much is it about sort of these building nitty-gritty points and how much of it is the, the broader AI conversation itself and that anxiety and uncertainty?

MURO: Yeah, yeah, great. And thanks, Valerie. And good morning, everybody. It's great to enjoy to join our little inquiry here. I think there's no doubt, I mean, that the summer's backlash does represent an adding up of a whole bunch of actual specific local gripes, right? So there's a core of reality that I think you know, Tony's talking about here. Energy pollution, noise, zoning, effects on electricity pri- those are real.

And it underscores that huge buildings in specific places really matter to people and communities in America, whether it's a community in New York City or, you know, a, a exurban farm town near Wichita, right? So this is something-- This gets to a very deep sense of actual community and where people live and, and the kind of economic fabric of places.

So, the data center mutiny clearly does reflect specific local complaints of a lot of pissed-off people in America right now, in real places. So that's, you know-- we should not minimize that. But I do think that the broader national backlash, it's about more than a bunch of gripes about big, ugly buildings, right?

The sheer sweep of the controversy should, you know, it serves as a tell. The Big Ten appeal -- it says something to us, and the governance and transparency issues Tony brought up really go deeper. You know, Americans just don't like deals that tend to involve shadowy parties, asymmetric negotiations, and secrecy. They might not-- They, they can tolerate deals they don't like, but they don't like especially those last two, the trust issues that I think Tony mentioned and the secrecy question. And that is some-- That is not entirely new, but it, the directness of that approach with this technology has been different, which brings us closer to the crux, I think. This data center backlash isn't just about citizens' inchoate fears of job loss or their professed dislike of AI in general, though they use it all the time. But the mutiny is about the way this technology is being introduced into people's lives. And I would argue that that has been pursued in a shoddier way than usual.

People may be worried about electricity costs or water or automation or agents going rogue, but more broadly, they seem to feel they have little say in how AI is being rolled out. 2025 Pew survey late in the year said only fourteen percent of the general public said citizens had a great deal or quite a bit of control over whether AI is used in their lives. Nearly two-thirds said they would like to see more management of how AI is rolled out. Now, you know, it's just a poll, but I think it points in the right direction. I think it is fair to say that Americans have been feeling frustrated this summer and fall at the peremptory way the new technology has been imposed without guardrails as fast as possible, often through questionable data center deals shrouded in NDAs. I just don't think that's been a good look for the industry.

I'm a technology-oriented person always advocating for the consensus around innovation in America, and I think we haven't seen it challenged as much as it has in the last year or two. And I worry about the country losing a basically optimistic view of, of technology. That would be bad, but I think this has done some damage to it. So ultimately the data center issue may be most, may most reflect a very broad question about human agency about who controls how the future arrives.

And you know, I think, I think this will be... I think the congressman suggested that many of these issues could be addressed quite simply. And with the, you know, near inelastic demand for this, it's not gonna slow the industry down terribly to get the, a basic management in place. So we can talk about that later, but I did wanna just suggest that this is a, is a visible stand-in for a lot of deeper anxieties, yes, but just actual issues. So that's what I've got on this.

WIRTSCHAFTER: Thanks, Mark. Kyle, I wanna turn to you, and I wanna note that it took us about 14 minutes before we touched on China in an AI panel, which I feel very happy about. You know, talking about a little bit some of the implications of this local resistance, you've written about the US having a lead in AI chips, that's very well documented. Also, China

having a significant advantage in energy. Does this local resistance - well, first, how wide is that gap? And does this kind of local resistance amplify that difference at all?

CHAN: Yeah. So, great questions. So the US has an energy bottleneck, and China has a chip bottleneck, right. And it's really telling to see what the AI industry folks in each country complain about the most, right? In the US, it's always about connecting to the grid, getting new power to power all these data centers and these chips. In China, they complain constantly about not having enough compute, not having enough chips themselves.

And what's interesting is for China, they do see compute as part of their national infrastructure, and they've been working hard to kind of build out their data center capacity. But it is one of a number of different areas in China where they're trying to invest heavily in infrastructure. For us, it's a big current story. Like, the data center story is a big shift in how we approach, say, our own energy build-out. But for China, it's sort of one of many different things that are happening simultaneously.

And then on the energy front in particular, some stats I'll sort of, give you to kind of illustrate what's going on. China today generates more than twice as much electricity as the US and has more than three times the power generation capacity as the US. In the past four years alone, China built basically the equivalent of the entire US power grid. And each year they're building on the order of five hundred plus gigawatts of additional energy capacity. The vast majority of that is clean energy, especially solar, solar plus batteries. And for for China, they're also investing very heavily in their grid infrastructure, so they have plans now to invest over seven hundred billion US dollars equivalent in their grid infrastructure over the next several years, going to twenty-thirty.

For China, building new energy is part of this longer story of not just data centers and AI, which is sort of a newer thing, but of just trying to keep up with basic industry and manufacturing. In many ways, it's not too dissimilar to US history, right? When we had a booming manufacturing industry, we were actually building energy at a pretty rapid clip as well. That has since changed as we shifted over time to a service economy. And so in China's case, they're still a manufacturing economy. They're still, they're still trying to add energy capacity, especially for manufacturing. And the data center part is sort of just one, one piece out of all of that.

So what does that all mean? You know, does that mean that China will be able to surpass us on compute because they can, they can build more energy faster and we can't? The story's more complicated. One thing I would point out is that for China, they're trying to use energy to make up for their deficit in chips, right? So they're trying to string together clusters of lower performing chips that are less energy efficient, but leveraging that greater energy abundance in China. Whereas for us, we have not just more powerful chips, but more power efficient chips. And they're getting-- they're improving, as the congressman had noted earlier.

Another sort of caveat to this is the broader story of how much the compute matters for training more powerful models. And we sometimes have to break this down into not just aggregate compute, but can you build the large enough clusters of chips that can train new models? That's one thing. Versus being able to build out inference that is deploy sort of compute regionally and perhaps even around the world to try to serve AI to customers in different parts of the country or in different parts of the world. So those are different sorts of stories, and when you start to break that down it's a much more complicated picture than

simply, you know, one country is ahead or China's gonna win because they have the energy abundance.

And then when it comes to your question about the role of sort of local community backlash to some extent it can slow down the US compute build-out if, in particular, it slows down the US energy build-out because that is such a key bottleneck. So to some extent, some of the data centers might be built in different parts of the country that are more amenable to having data centers.

But for the power generation side, that is, that is a key bottleneck where it really will depend on things like permitting reform and speeding up the interconnection queue in the United States, and we can, we can come back to that discussion later. So, for some of those issues, I think you know, there are sort of nuts and bolts ways to tackle those, those bottlenecks. But I do think that that is something that will be increasingly part of the discussion in the United States.

WIRTSCHAFTER: Now, Tom, I wanna turn to you 'cause Representative Himes talked about, you know, this is, the ball is rolling. It's not slowing down. The demand is insatiable. You mentioned more attractive offers. We could talk about what those look like a little bit later. But another option is obviously to go abroad, and the administration has already tried some of that, right? And we've seen some of the consequences there especially in the Middle East. So is it sort of-- what does that dynamic look like for frontier labs, for hyperscalers in looking at data center projects? Is it, you know, a, a cluster could end up in Abu Dhabi or elsewhere if it doesn't wind up in the domestic context? Or is it sort of-- Is there more complicated dynamics in play?

WRIGHT: Yeah. Thank you. I thought the congressman laid it out pretty well in that there are, you know, there are big decisions that I think that need to be made, need to be made consciously and deliberately about sort of AI infrastructure globally, where that will be placed.

But much of it on the inference side needs to be domestic because of the latency issue, which is the, you know, for regular use of AI services you need sort of the speed of that to be local, right? So if, if you have inference centers in the UAE or in the Indo-Pacific you're gonna have some delays and some glitches in your regular sort of experience of using AI or of dealing with AI products.

It's the training centers that are the most sort of energy-intensive, where it doesn't really matter where they are. So they can be located anywhere around the, anywhere around the world. So if there's objections to a data center, you know, in Virginia or in Connecticut, that's likely to go somewhere else in the United States or somewhere else locally that's willing to host that data center or to provide those incentives.

I think the major sort of question on the inference side is whether or not, and our panelists, earlier panelists mentioned this, whether the US can sort of build, have the necessary sort of energy and power and permitting reforms to be able to you know, house these data centers domestically. And I think the congressman had it right that they are likely to be built somewhere because the demand is insatiable.

But I think there is a larger question then about the sort of training centers. And there, I think it can't just be on economic incentives, right? Because these training centers are at the crown jewels of AI infrastructure. That's where the lead over China comes into it. That's where some of the security risks in terms of how these frontier models will operate comes into play. So ideally, those will be built in the United States, but it's unlikely that there will be sufficient capacity to do that.

And so then the question gets into, and I'm sure we'll come to this later, but just to talk a little bit about it, that's when you get into big questions about what would serve, you know, the strategic and national interests of the United States in terms of those, you know, partners. So if you place those training centers, you know, in the Middle East you have a question about, as we've seen this year, about conflict, whether those data centers will be targeted. They might be very difficult to move in the case that they'd be targeted.

There's a whole question about the relationship of some countries to China and the security of the physical facilities. You could look at other countries within the Five Eyes alliance like Canada or Australia that might sort of satisfy those security requirements and would be fairly aligned on an interest and value basis.

So, I think that that's the type of conversation that began near the end of the Biden administration. And when the Biden administration released the diffusion rule at the end, that was an attempt to institute different tiers, priority tiers to say that unlimited numbers of chips would go to the countries that could be most trusted. But as you go down the tiers, they would be more sort of metered.

The Trump administration rescinded that. I think there's been some back and forth sort of since, and there's some questions on, especially since the Iran war, you know, started, about whether or not to move forward with some of those clusters in the UAE. But I think that's a strategic decision, you know, that we need to take that sort of on criteria that don't just include the economic incentives. And I think if it's not here in the United States, it is important, I think, that it's in sort of trusted allies and partners where there is considerable alignment between between the US and those countries.

WIRTSCHAFTER: Thanks, Tom. That's great.

Tony, back to you. You know, obviously there's sort of-- there's nuance in where these data centers will go based on Tom's response. Something's ultimately going to happen here. But there are conversations about moving some of these larger facilities whether it's the UAE deal or to Australia or other places if local backlash potentially becomes too acute for some of these, these larger facilities.

Does that harm some of the leverage that communities have? Where's sort of the middle ground in terms of what they can be asking for versus you know, the realities of whether it's they're gonna get built anyways, they can move somewhere around the United States, maybe one day they can move to space, maybe they can go underwater in a cave.

So where is the community leverage then rest?

PIPA: Yeah. And I think from a local community's perspective, they're thinking less about data center moving to Australia or moving to, you know, the Middle East versus moving to

two counties over, and those two, you know, that county getting the, the revenue versus them. Or, you know, the next state over. So governors are worried about, you know, losing out to other states as well.

And I, I think that's one of the, that's one of the things I wish we had better data on actually and more research on, is the extent to which different either local policies and very much state policies are creating impacts in the market. Like, are we creating a race to the bottom or are we, you know, actually providing the offer, as the congressman said, to local communities in a way that will-- where their benefits will outweigh the risks that they're taking on?

But in terms of that leverage, so first off, communities, you know, as the data center build-out started, there were the developers and users themselves were asking for tax abatements, for example. I think communities want to say, "Look, we want on-budget long-term revenue, and it should be proportional to what we're giving up in terms of the land. We want that property tax." You want to make sure that you have it and that it's coming to your local community.

And then there's been a lot of conversation on even complementing that, doing things like community benefits agreements, where the community itself feels like we require some, we want some more investment in our capacity and the institutions that we need for the quality of life of our community. This is a risk to our quality of life. It's a risk to the way in which our community is structured now. And so we want investments into our schools, into our hospitals, into amenities that can that can ensure that the kind of place where we're living now, this will be good for us. And I think there's an honest conversation to have about that.

And I think that's a conversation that you can have without, as, interested to hear what Mark says about this, but without it risking for that data center fleeing to another place. 'Cause you do need a happy combination of water, energy, land, and a bunch of other things. It's not like they're just gonna pop up willy-nilly everywhere.

I think the, the most interesting question, especially given the low levels of trust of where we are now, is, you know, why not equity? Why should communities not be actually sharing in what the companies themselves might benefit from? And we have a colleague, Dan Getzel, who's just done some writing about this.

But I think, you know, I think given where the level of trust is right now and the asymmetry of these companies with the, with the local communities that are looking at it, I think that offer, it's not just the offer and the economics of the offer, but it is the engagement and the partnership and the shaping.

I have a colleague who says, you know, "Community benefits need to move from being compensation to investments in capacity." And I think that's exactly where we're at, and I think communities have more leverage than they think they have to be able to get there.

WIRTSCHAFTER: Mark, the congressman talked about, you know, that this is really broadly a communications challenge in terms of, like, the aliens descending from Silicon Valley and saying, "We will build a data center here," and not really communicating well the, the values and the benefits.

And I know in February you argued about - or you put out a piece about what communities might gain from some of this development and how they have more leverage- in these conversations. And so I wanted to, to draw you out a little bit in terms of why some of these, these arguments about the, the benefits of data centers for communities have not translated.

And I think somebody submitted this question in advance. Especially that well-designed data center policies can in fact benefit communities. What, what has happened? What are the benefits potentially, and what is the translation challenge?

MURO: Yeah. So so first let's look way, way past the immediate crises of the, the summer and way back, you know, seven months ago.

It seemed absolutely unthinkable to see that these actually-- these deals -- it became, it became clear that these could be win-win deals. And I think the norm in American history has been to solve, find solutions that are mutually beneficial to regions and communities. It seemed like that would be impossible, but at the same time, you know, some of us noted that the extreme demand for these centers, the need for extreme speed that I think we've been hearing about, and the need for huge land parcels, you know, all of those were the bases for at least places asking for a little more.

And there were some examples that, that we pointed out you know, partnerships, sort of one-offs. I think a lot has happened since then, and the, a potential benefit of the current backlash is it, it really has elevated local and journalistic scrutiny on, of bad behavior. It's enforcing better behavior.

And I think just this month, Google, Amazon, and Anthropic have all announced they will no longer use NDAs. And, you know, Amazon said it was, would be allocating something like a billion dollars to community development in the next year. So the ground is shifting. I think there really is now an opening now finally to get more out of these deals for everyone.

It goes without saying that these projects need to be built somewhere. We've just been hearing about some of the trade-offs of driving them somewhere else. I think the -- it looks to me like the firms have seen that the jig is up on the, the battle way of doing things, and they're beginning to put forward very thoughtful... Microsoft as well as-has a thoughtful community stance.

So, there's a moment now to elevate aspirations. I think it begins with the places actually putting together real visions of what they want for their own economic development, but then You know, asking for things like upfront community benefit agreements, not ones tacked on at the end. Free compute for universities and local startups. Some of these communities are, you know, proximate to university systems or startup ecosystems where there's actually a shortage of compute. R&D partnerships, there're already examples of those. Regional testbeds, workforce training supports, small business hubs, aid for housing. I think Tony named a few other things that maybe are more relevant for smaller places. So there is the basis for now a negotiation. Things that need to happen include, I think, thought about transparency, thought about availability of resources and, and an actual trade. But there is a lot of room now, I think, for actually solving these problems in places.

WIRTSCHAFTER: Now, I'm realizing I wanna leave time for questions. But Kyle, I wanted to come back to you a little bit more on the international vantage point and some of these deals

around AI infrastructure abroad. And Rep Himes has made this argument that if the US doesn't engage in this space, China will enter in and fill that gap. And so, building is actually both domestically but abroad as well is required of this AI infrastructure build-out and the AI race more broadly. Is that a real risk, and how do you see China actually approaching building compute abroad?

CHAN: Yeah. So I break this down into near term versus medium to long term.

In the near term, we are not competing with China for building out AI data centers abroad. China's constrained by their chips, by their own chip production capacity. And things like high bandwidth memory. The machines that are required for producing chips are in limited supply in China, and they struggle to supply enough AI chips to their own domestic industry, much less export that abroad. And so, you know, that's kind of the equivalent of, like, selling a car without the motor, right? China can kind of do everything else, but if you don't have those chips, that's a fundamental bottleneck in what you're able to offer to other countries. That's in the near term.

In the medium to long term, though, what I do see is a number of Chinese companies gearing up for broader global expansion trying to set up cloud services abroad, trying to offer AI services in different parts of the world. And potentially, when Chinese chip production does begin to ramp up, then be poised to offer these sort of package deals with the models, the hardware maybe even the energy to go along with that in a kind of repeat, in some ways, of the Belt and Road Initiative but for AI. So a lot of this will depend on some of these variables, right? Can China increase its chip production to a point where they can not only satisfy domestic demand, but export competitively and compete with, with the US abroad? That is still a big question, but that's kind of how I break down this problem where we stand.

WIRTSCHAFTER: Really quick, Tom, I wanna jump to you, and then I have one more question really quickly of all the panelists, and then we'll open it up to, to the room.

So Rep Himes also talked about, and you mentioned sort of the lever that we have in slowing China's development is chips. More broadly, kinda looking at the domestic dynamics, the way the AI build-out has happened, I think we got a question earlier about just the very visceral negative public opinion around AI in the US.

We have this unique framing around a race, the US-China race to, you know, go... I don't think... to AGI, ASI, what- We're racing. Does that... We're racing somewhere. Does that framing help the build-out? Does it harm the broader conversation in terms of the developments that we want to see happening, the real tangible benefits, whether it's for the national security community, the, the intelligence community specifically some of the, the domestic benefits around health care and the like? Does that framing help?

WRIGHT: Yeah. Like to me, I think, It's a really important question. I think two things are simultaneously true, right? I think it is true that we shouldn't use the excuse of a race to do something incredibly stupid, right? So, it makes no sense to be pushing the frontier to develop models that we don't remotely sort of understand that could be massively destabilizing. Even if you set aside the, you know, existential risk part, just the very severe risk you know, companies should not do that, and I think there should be regulation, more regulation than we have to stop that.

I think it is also true that the race does sort of matter at some degree. So to give you an example, you know, if a Chinese company had developed Mythos first, I think that would've been a problem, right? I think it was important... clearly it could've been invented because it was invented. It was important that a US company got there first. It was important that they performed responsibly once they did that by notifying the government, by setting up, you know, Project Glasswing, bringing in the major companies. I think it was a major mistake for the administration not to include US allies quickly in that and to include those companies. But clearly that's sort of an example where, you know, being first, I think, matters.

And then I think if you broaden it out, I think it does matter profoundly you know, that the, that the US and sort of our allies and partners are ahead in AI. I think the way to square the circle with that and the race dynamic and the safety piece is what, what Kyle was mentioning, which is the chips part, right? If we can think about strategically how to how these chips are distributed, to deny them to China because this is the only area where we actually have an advantage because they have the advantage, you know, on energy, they have plenty of talent that will actually allow US companies to pace the frontier, to slow down, to do the adequate testing. And, you know, if significant amounts of China's development comes from distillation and other sort of means, then that won't mean that we fall behind. So I, I think the chips part, the export control part is a crucial you know, piece of this puzzle.

But I think you're absolutely right that, like, the race dynamic, I think sometimes it's said sincerely, sometimes it's not. I mean, frankly, Mark Zuckerberg coming out saying he's concerned about China winning, I think is completely absurd for anyone who's familiar with his track record on any of this, right? Whereas I think others, I think, you may think it is more sincere, but we shouldn't move so fast ahead because of the China dynamic that we do things that are irresponsible.

WIRTSCHAFTER: So really quick before we turn to the audience, if there's sort of one policy change as we're thinking about kind of, elections and the like, one policy change at either local or national level that would most improve how data centers get developed or just this broader AI conversation what would it be?

Let's go down the line. We're going big picture to local.

MURO: Let's see. So barring NDAs can't happen fast enough, but it's already happening because the market wants it. So let's leave that out. I would say actually some way states or the federal government would intervene to make sure that places have in place good development strategies for their region and you know, improve deal-making capacity too, because these are asymmetric dealings too often that lead to problems.

WIRTSCHAFTER: Tony?

PIPA: Yeah, so I'll build on... Just to me, SWAT teams of lawyers, engineers, others, that can go help local communities do all of the assessment they need, not just the deal itself. And then a floor of one percent of capital expenditure going into a community benefits agreement or community fund or equity or something like that.

WIRTSCHAFTER: Kyle?

CHAN: For me, it would be streamlining the power build-out and the grid connection. And so that you can have the energy to power the data centers and have the energy to not raise electricity costs for local communities. You could have, you could have both. It doesn't have to be one or the other.

WRIGHT: Yeah, energy reform, I agree with Kyle.

WIRTSCHAFTER: Great. All right. Let us open it up to the group. We'll start first hand I saw there, then we'll come here and here.

AUDIENCE QUESTION: I'm Evan Fazenfeld from the Program for Public Consultation. We do public opinion polling through the University of Maryland. And one of the polls that we've done recently was on AI regulation, and it focused more on the Algorithmic Accountability Act, and there was very strong bipartisan support across nationally as well as across all of the competitive districts where we polled.

And so my question is obviously there needs to be, from the public's perspective, some kind of regulatory and environment, and right now there is none. And the Frontier Act doesn't even come close to doing that. And I agree with some of the colleagues over here that part of the problem is a lack of listening to the people and a lack of getting public input and actually reacting to it.

And at the University of Washington, I'm familiar with the power issue where the University of Washington decided to create clean power, but they built it out enough not only to meet the university's needs, but also the local community's needs. And so they're providing power to more than just their university.

And so the question is basically: What should the shape of this regulatory environment look like? I mentioned one that is in front of Congress, the Algorithmic Accountability Act. But do you see any others that could be... there's a lot of local solutions that have been offered to regulate data centers and whatnot. What's the shape of that both domestically as well as internationally?

WIRTSCHAFTER: Let's take a couple at a time, cognizant of time. So, oh, wow. Okay, more hands. Let's go here and here, and then we'll bring it back to the panel, and then we'll take a second round.

AUDIENCE QUESTION: My question sort of builds off that one. As communities are making all these CBAs, and there are multiple promises made in those, I'm just wondering who are the key players who should hold the data centers, the hyperscalers responsible for meeting the different promises in these CBAs?

And as communities are being approached by developers, are there certain guardrails or penalties that they can put in their agreements if the promises are not kept?

WIRTSCHAFTER: In the jean jacket there.

AUDIENCE QUESTION: This is specifically for Kyle. You compared China's energy and energy generation with the US, but it seems like more relevant is how each country's

capacity compares with its own needs. And maybe the answer is, like, it's neither is there, but that was my question.

WIRTSCHAFTER: Any thoughts on whoever would like to, to tackle a question?

MURO: I'll, I'll jump in on who's responsible in terms of gov- And, and I know this is a, you know, a midterms federal discussion mainly, but states really have a tremendous role here, and I think have a degree of legitimacy with communities that stands between localities and the remote federal government, and control a lot of the levers here, whether it's electricity hookups, environmental aspects and others.

So I think that states are becoming more active. It, you know, it's come through the prism of moratoria and pauses this summer, but I think it could become an ongoing important role. So to me, that's a place to look.

WRIGHT: Yeah, Tony.

PIPA: So I agree with Mark on the states. For me, the states gets to the first question around where is regulation happening or going to happen. Because in the absence of the federal government actually taking action, and that doesn't look to be happening anytime soon, it is falling to the states.

And so you have states as diverse as what, you know, Governor Shapiro has done in Pennsylvania with his executive order, trying to set some standards next door to West Virginia, which has taken a completely opposite view. And so I think what's interesting is that, you know, states see themselves a little bit in competition with each other as well. And so we're not getting a good sense of how the market's reacting to those differences amongst the regulation that states are putting forward, and that is where the absence of the federal government really hurts because we don't have, like, a standard across the board.

And I really do think that there needs to be some, some more concerted action at the national level and some guidance at the national level about responsibilities and compliances. So let's, let's be honest. Everybody's talking about community benefits agreements. There's maybe one or two that have actually been executed, and none have been tested, right?

And so the lack of trust that I was talking about, I'm sorry, but, you know, I grew up not too far from Lancaster, Pennsylvania, and if I live in Lancaster, Pennsylvania, we got a twenty million dollar payment through our CBA. First off, that's not really proportionally huge, right? That's not a huge investment comparatively speaking to the investment in the data center.

But secondly, if we have to test this in court and hold somebody accountable, are we gonna win? Like, and do we have the resources even to be able to go through with that? It is a big question mark. And so I think we have to be honest about that's where we're at right now. And given what happened at the build-out, as Mark has talked about, in terms of confidentiality and lack of transparency and that asymmetric-asymmetry that communities are already feeling, they don't have a lot of faith that even what might get negotiated is what's going to actually come to pass over the next ten to twenty years. And I think we have to be honest about that.

CHAN: Yeah, on the the China question, so it's a real interesting question 'cause in the US it seems fairly across the board that there is a search for new energy and new sources of energy to hook up to. And that's why you see, you know, AI executives trying to restart nuclear power plants in the US. So that gives you a sense of how desperate they are for that across the US.

In China, what's interesting is it's a bit of a regional issue. So there is overall energy abundance in aggregate, and they look on track to be able to fulfill their energy demand needs over the next couple years. But it's lumpy. So in the, in sort of inner sort of western provinces within China, places like inner Mongolia, further sort of in the southwest as well, you have a lot of renewable energy resources that have been built out that actually are not all being used. And so China's trying to balance some of these issues in some ways use their compute build out to try to soak up some of their extra energy. You know, it's a different kind of problem that we're having in the US and try to shift some of that build out to those regions where there is energy abundance within China.

WIRTSCHAFTER: All right, let's do one quick round cognizant of time. Okay, we'll go one, two, and three.

AUDIENCE QUESTION: Thank you. Kevin Bryan, Eknor Vault Partners. The conversation is very interesting in terms of how we're talking about communities, and how those communities are actually involved in not just input into how AI is shaping society, but are they part of the solution generation process? Are they a part of the governance of this system?

It almost sounds as if we're gonna... Because AI is so different, because it is actually a transformational technology, we're gonna need a new system for how we sit and talk about these issues and how communities are involved. We see a number of conversations already beginning to happen, but they seem disconnected.

Are you seeing opportunities where some of these community discussions about how AI is impacting them, how data centers are being built, other infrastructure, do you see some of those conversations being connected? Do you see that some of those conver- that those conversations are actually producing fruit?

And how do you think we can produce a more connected system where you're not just talking about input into individual localized activities, but in terms of how the AI infrastructure is gonna be developed and how AI is gonna shape society?

WIRTSCHAFTER: All right, we'll take two more. Keep them very quick, and we're gonna have very quick responses.

I'll ask the panelists also to just stay put when Sanjay comes up, and Sanjay's got some, some thoughts on how we're gonna bring this all together. Yeah.

AUDIENCE QUESTION: Oh, awesome. Well, thank you so much for your time. And so something I want to mention is that there's a lot, a lot of noise in what's called the Trump Account Initiative, in which a lot of AI leaders such as Mike Dell have poured billions of dollars into. So my question to you is, how is, how do you see this increasing sense of AI philanthropy influence technology policymaking?

WIRTSCHAFTER: All right. We have one more question. Oh, yeah. Okay. Right there.

AUDIENCE QUESTION: I'd like to direct this question to all of you. This lady a few minutes ago said aliens from Silicon Valley, and in the earlier presentation, we heard tech CEOs described as inhuman. Do you think that type of language increases the distrust, skepticism, and resistance of local communities to data centers?

WIRTSCHAFTER: I'll take that really quick. I was more mirroring his remarks. I think some of it is more about just communication style and actually being able to relay what the value is for communities in some of these conversations. And when you come from, you know, whether it's the distrust of Silicon Valley or the distrust in terms of how much money these companies are raking in, I think that's where the challenge is. So I - point noted in terms of language. I think it's very important to, to build that bridge, but I think there's a broader mistrust that stems from just the amount of money people are seeing coming in. The sort of coming into our land and taking over, those types of questions. All right.

PIPA: So, I'll try to tie two of the questions together. I think that we are missing an opportunity right now for those community conversations to be part of governance overall. Part of it's the speed, part of it's the pressure, and part of it is... and I think that's why you're seeing moratoriums. So moratoriums are trying to give communities a a breath to even plan what they think the future of their community ought to look like, let alone them being part of those conversations of how, to Mark's point, how AI can shape the future of their communities.

I think the how in the AI philanthropy is going to be enormously important, and right now it's focused on individuals, not communities, and it's communities that are actually bearing the brunt. And in fact, when you read things like the third wave of philanthropy and, you know, all the billions that might be generated the question is being raised about, like, we don't have enough nonprofits to absorb all of this.

Well, to me, actually having had most of my career in philanthropy, I think you need to flip that on its head. You have plenty of communities who could absorb that capital, but you just actually need to create relationships with them, not actually be thinking that they're, you know, you're going to use the big questions and the big solutions to, to use AI to solve it. But actually to be investing in those particular communities and let them be part of those conversations and the governance going forward.

WIRTSCHAFTER: I'm gonna welcome Sanjay up for some concluding remarks, and thank you all for the attention. Sanjay.

PATNAIK: Well, thank you so much. This was a really fascinating panel and great, thought-provoking comments. I'm Sanjay Patnaik. I lead the Center on Regulation and Markets here at Brookings, and we have actually had work streams on AI and energy separately for the last couple of years, and now they're really converging.

I would like to highlight a few critical aspects of the debate on data centers and AI, building on what my colleagues said here. I think what is really important to keep in mind is that just like the, on the issue of AI regulation in general, the debate and public perception is often driven by extreme viewpoints.

In addition to the local concerns that we do have of AI data centers and oftentimes the lack of transparency that Tony mentioned, what we can observe is I think the data centers are kind of being used as a scapegoat for the general justifiable anxiety that people have about AI, about AI potentially impacting their jobs, their futures for their children, et cetera.

And data centers are something very concrete that is in a specific neighborhood that people can put their position to. But what is really important, the congressman actually alluded to this, is we've had data centers for a very long time. And they're not AI data centers, and the build-out we see is obviously very different in terms of scale, but our economy runs on the digital economy and on data centers.

Whenever you pull out a phone without data centers, most of the functions would not work. And when we look at the future, our economic development, AI and the data center infrastructure, we need a really, the critical components to have to actually be able to develop the economy of the future.

Whenever the debate on data centers becomes too heated, I ask a very simple question: What is your counterfactual for economic development? Because we live in a digital economy, right? If you are a policymaker, let's say in a county, in a district, and you have to think about how to grow your economy, how to provide some opportunities, how to put, get tax revenue, what are your alternatives, right?

If you ask most people, would you rather live next to a chemical manufacturing plant, a nuclear power plant, a data center, or a cattle ranch with, like, five thousand cattle and their waste, I think most people would pick the data center, right? And also, when you think about where is the future going, where do we want to maintain our competitive advantage?

And so I think it's, it's very important that we keep this in mind when we lead this discussion, because I'm really worried when I hear people proposing things like data center moratoria. At the same time, it's really important that we involve the communities, and we have not done that to the extent that we should when we build data centers.

Any negative effects on water and energy need to be mitigated to the maximum extent possible. The same goes for air pollution, right? But I don't think the solution could be to say we have to stop building data centers, and we're just going to try to turn back the clock. The, the economy of the future is being driven by AI, and that's something we cannot or don't want to put the clock back on.

And also on energy and water, it's really important to look at the facts and the nuance here. Because when we look at water, for instance, there's been a lot of kinda like, news me-articles being written on how much water data centers use. When you compare the water usage of the average data center to water usage of American golf courses or cattle ranches, they don't even compare.

Golf courses, for instance, use on average significantly more water in many cases. And you don't see that opposition to building new golf courses around the country, right? The same goes for energy. When we look at energy, it's actually a very nuanced question. We are doing some research on this at the center.

Data centers have been kind of like paraded around as the single biggest reason for spiking electricity rates across the country. But actually, when you look at the data, it really depends on where in the country you live in, what is driving your electricity increases or decreases. And there are a lot of different swings that are at the regional level.

And this is actually really interesting because when we look at real electricity price rate changes between 2019 and 2025, 22 states saw increasing real electricity prices, 29 states saw decreases. And they vary very significantly depending on what is driving those. For instance, in California, a lot of the changes, which are about 35% between 2019 and 2025, it's a significant increase, are driven by wildfire mitigation by trying to do underground power lines.

In the Northeast region, it's the transmission build-out and gas exposure. In the mid-Atlantic region, which is often used as an example, PJM, for instance, where we live, data centers definitely have played an important role, and we've seen a, like a 10% real electricity price increase. In the Pacific, again, it's a lot of the resilience spending.

So it really depends, and it's not a single story. And it's important to build out that nuance because that will allow us to target the policies much more accurately to actually helping people, bringing rates down, and solving some of the problems.

I also want to spend kind of like the last two, three minutes here looking at the opportunities that AI can bring. Actually, there was one of the questions in the audience, which is really interesting because when we look at the last couple of years, and especially the last couple of months a, a lot of times the debates about risk dominates in the United States, right? Americans are being told repeatedly that you're gonna lose your jobs, that AI will be bad for your young children, that it's increasing electricity prices, that there are existential risks. And there are a lot of risks. But we also need to acknowledge the upsides and the opportunities. And the congressman really put that quite nicely, I think because the debate is again driven by very extreme points. We need to think about AI like any other technology. It has the extreme potential to make our lives much better, but it also has significant risks, right?

And so, we need to find a way, like we do for any other technology in any other markets, to mitigate those risks without killing off the innovation. And so one way to go about this is to implement regulatory frameworks that we call smart regulation that don't over-regulate, but they don't under-regulate.

And that is a tricky balance to find, and I think the states are leading actually the way here. We have seen some really innovative approaches in Utah, for instance, and other states that are implementing regulatory sandboxes to try to find that, that sweet spot of regulation. But it's not something that kinda like we, we can either let go completely without regulation or completely, like, try to stop.

We have to find a middle way, right? A good example that we already have is the FDA. We don't let companies release medications on the market without the FDA certifying that they're safe, right? We already know how to do this in many other products and markets to make sure that anything that gets released to consumers is safe.

And you have to be transparent, you have the supervision there, you have regulators that actually think about this. And so we have to think about AI in a similar, similar way. We need

safeguards. We need safeguards in place for the higher level things like job market impact for the more far-end risks, the national security risks, but we also need safeguards for local communities, how to mitigate impact on energy, water, and noise.

I think the polling that we have seen reflects this, that it, it's such an important topic, and especially when we look at the midterms, and it also shows that it's really important to get this right. Well, I think one part of the problem is that when we look at, at social media, we were on one side of the extreme where we did not regulate a lot of the harms, and we now see with all the lawsuits that are coming out how it impacted our teenagers, our children, their mental health.

We cannot make the same mistake with AI. But we also cannot go in so heavy-handed that we impede the innovation because we are leading the world in AI, and luckily we are leading the world in AI. Because if we want to-- if we slow down the development, our adversaries like China and Russia will not slow it down.

And, and I think this is really important because everyone realizes this is the competitive advantage of the future for any country, any industry that actually gets there first. But as, as Tom pointed out, we have to do it in a, in a measured way. We cannot, like, race towards something that actually is bad for all of us.

And so I think we see a lot of interesting developments in this area. I actually have quite high hopes for permitting reform for after the midterms. We'll see whether that leads somewhere that would help us build out some of that infrastructure that we need in a more efficient way.

But I think it's it's a really fascinating topic and my colleagues' viewpoints just show the breadth of work we have here at Brookings. So please check out some of their research, their written research. We can't do justice to this in a short event here, but we have a lot of really good papers and articles on there. I invite you to check it out, and I thank you for your attention. We'll probably stick around here if you have any more questions for us.