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WEBINAR

HOW COMMUNITY BENEFIT AGREEMENTS CAN MITIGATE
PUBLIC CONCERNS ABOUT DATA CENTERS

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WEST: Good morning. I'm Darell West, a senior fellow in the Governance Studies program at the Brookings Institution, and I'm pleased to welcome you to our webinar on how community benefit agreements can mitigate public concerns about data centers. Data centers undergird the whole AI revolution and the emerging digital economy. They house the file servers and networking equipment that power AI and other emerging technologies. But there are many community concerns about both the building and operations of data centers, Dr. Nicol Turner Lee and I have a new Brookings report on community benefit agreements and data centers. You can look at the barriers to their development in this report and the ways we think that we can address those challenges. You can find that report online. It's free and available for all of you at [brookings.edu](https://www.brookings.edu).

Nicol is going to give a short overview of our paper as she's the director of the Brookings Center for Technology Innovation and a senior fellow in our Governance Studies program. She will review the highlights of our paper, and then we will have some experts who will discuss the situation with data centers. So, Nicol, I will turn things over to you.

LEE: Thank you so much Darrell and thank you to all of you for joining us this morning. As Darrell mentioned, the Center for Technology Innovation is very happy to put out this research. It appears to be getting a lot of interest, and we're really excited by not only all of you who have joined us today, but the many of you who have continued to email us and invite us to talk about this issue. As Darrell said, our first paper was an explainer. It really was. For those of you who want to understand what, this is something that CTI does best. We take very sophisticated and complex issues, and we make them into palatable bites so that you can translate that into good policymaking and programs.

For this paper, this is an offshoot of our first paper on explaining what data centers are the community benefits agreement paper that we just published at Darell's reference that you can find at the Center for Technology Innovation website or [brookings.edu](https://www.brookings.edu). It's really a conversation around what are the formal negotiated arrangements that state and local communities should be pursuing as they explore the institution of data centers within their communities.

Now, just one caveat, in no way are we saying that every community is gonna say yes. I wanna be clear about that. Part of this community benefits agreement conversation we're gonna have today is

really assessing both the opportunities and the risk and being very clear on both sides about the reciprocity that comes in securing a data center in one's community. That's why I wanna make sure we're not providing a commercial for this. What we're really trying to do based on the evidence of what's out there, the things that we have seen communities do ensure that you are taking into consideration a variety of variables that I think will impact whether or not the relationship is maximized for local people with data centers in people's backyards.

So, I wanna just point out a couple of those that we plan to talk about today that are also in the paper. Community Benefit Agreement should directly be addressed with industry, government, and local communities. This is not something where the store should be given away without the appropriate representation at the table, and in many instances, more community engagement so that communities can be well aware of what is actually being negotiated on their behalf. Clearly, community benefit agreements, particularly those that are templates for future collaboration and cooperation must include things like workforce attributes. What's the impact on the workforce? Where are the jobs going to be created and retained conversations on tax revenue and exemptions. We say in the paper, it's really clear that those negotiations can happen upfront, but communities also need to consider the resiliency. Once the data center is up and these revenues actually begin to come in, energy, water, and electricity consumption is a big deal and should be part of the discussion and community benefit agreements across the country and alongside some of the panelists today, those conversations are happening and it's important that communities begin to address those upfront rather than to wait until it becomes a firestorm. Location and infrastructure, implementation, noise and environmental considerations, health and wellbeing. Digital access. You all know me as a digital divide expert who is looking at ways in which we enhance and improve connectivity in America and across the world. We need to make sure that is also part of a community benefit agreement.

And then obviously, I think something that would drive accountability, that Darrell and I are very sensitive to, which are public dashboards. I wanna close here because we're gonna dive into this conversation, but I think it's really important to see how we at Brookings are building upon this initial explanation of what data centers are.

Obviously today's conversation is about community benefits. In two weeks, we hope to have a podcast that will look at data centers as they relate to tribal communities here. And after that, we hope to go a little deeper on the global implications of data centers and how they're serving communities, maybe in some, in instances, more as edge providers versus hyperscalers. And then obviously there's a need for an energy playbook and a respect for activism as we begin to think about how data centers are flourishing across this country and the policies that are making them to actually cultivate a spirit of cooperation and collaboration, much like we talk about in the paper.

I'm excited about today's conversation. I wanted to put this out there because expect more from my colleague Darell West and myself. This is an area that I think the explanation is worthwhile and needed. And for those of you working in this space, we wanna hear from you. So, the more that we can gather about what's working, what's not working in communities and where communities are drawing ex extreme red lines is also helpful. And where industry might be doing things that are creatively enhancing the conversations as this becomes more and more of a living room conversation. So, with that, Darell, I'm gonna turn it back over to you so we can jump into the panel.

WEST: Okay. Thank you Nicol. That's a great overview of our paper. And again, for those of you who's tuning in, who would like more details on that, you can find our paper at [brookings.edu](https://www.brookings.edu). Now, to help us understand these and other issues related to data centers, I'm delighted to be joined by three distinguished experts. One of them you just met my co-author, Dr. Nicol Turner Lee, and in addition to directing our Center for Technology Innovation, she is the author of a Brookings book entitled "Digitally Invisible, How the Internet Is Creating The New Underclass." It's a terrific book and I highly recommend that you read it. Another panelist is Lili Gangas. She is the Chief Technology Community Officer at the Kaper Center. She co-leads the Center's Equitable Technology Policy Initiative and focuses on inclusive technology. That Center has released a new study on data centers in California, and we're gonna discuss those findings.

A very interesting paper as well. Mike Turner is the Vice Chair and the Ashburn District Supervisor on the Loudoun County Virginia Board of Supervisors. And many of Northern Virginia is the epicenter of the data center boom, and Loudoun County is right in the middle of that development. Loudoun County alone has 200 data centers and there are many more underway. So, he's been working on

this issue for a number of years. In his role on the Loudoun County Board of Supervisors, Mike has been on the front lines of data center issues. He's actually the author of a 2025 paper about data centers that calls for a strategy for what he calls a changing paradigm.

So, he will share his perspective on how local communities should think about data centers. And if you have questions for our panelists, we will save some time for questions from the audience you can email them to us events@brookings.edu. That's events@brookingsuh.edu. So, Mike, I wanna start with you. You are on the front lines of data centers and been working on them for a number of years now. You've written about data centers and their enormous need for energy and water. What has been the experience in Loudoun County with data centers?

TURNER: Thank you Darrell very much, and it's a pleasure to be here with all of you. I, we had started building data centers in Loudoun County right around 2019 99, 2000. And really the comparative vantage factor that brought data centers to Loudoun County was our underground fiber optic network, which creates very fast latency, speeds the speed with which data point a data, piece of data moves from point A to point B. It was originally built by ARPA Energy advanced Research Project Agency. That's why an OL moved here. And then Equinix, the big co-location data center, was the first one to take over. What became known as a metropolitan area Exchange East the hub of the internet. Over the course of the last 25 years, we have gone through an evolution and as Darrell said, we now have 200 plus data centers, about 53 million square feet built in Eastern Loudoun County.

And it has been an evolution, it has been a growing experience. And I would say we are the most mature data center market on the planet. And I was asked in November of 23 to give a presentation to the Virginia Association of Counties, which I did, and I finished with, these are the stakeholders and this is where we are now. And as an elected official in Loudoun County, I realized it's not responsible for me to stop with, okay, this is how we got here and this is where we are without talking about what are the factors shaping the future of Loudoun County, what's going to affect our constituents and understanding all the factors in play.

I won't get into the details. We can do that over the course of the conversation. But some big, broad-brush things have evolved here in Loudoun County. The first is, and I tell audiences this all the time,

there are no good guys and bad guys in this discussion. There are stakeholders that are doing their very best to respond to a historically changing marketplace. I would classify the four stakeholders as data centers, utilities, elected officials locally and their constituents. And we have, for the 25 years, been thinking in silos. Each of those silos thinks, oh my gosh, the market's changing. I've got to respond and do more that I've done already. And the things that I've done already do 'em bigger and faster and more of them.

And each of the stakeholders in those four silos have done that. The premise of my paper is we've got to start talking to each other and collaborating on how we can do this better. Now, I, it's fascinating. A community benefit agreement for honestly, the first term, I, the first time I heard that term was when I was preparing for this webinar, and it's fascinating. I came up with a list of 15 best practices for communities that are considering data centers. And you can I'll give the location here later on, but I realized, and I'm dating myself, it goes back to Frederick. Hers motivator. Hygiene factors. Hygiene factors are what are, keep the workplace from being okay and safe and environmentally.

Okay. But if you do all your hygiene factors, it's not a motivator. Your motivator factors are what can you do to help a community positively. I realize my entire list of 15 things are hygiene factors. These are things communities need to do to avoid problems with your constituents. I think the community benefits agreement takes the other, it takes that and builds on it with benefits potentially to a community if you preemptively organize how a data center is gonna come to a community. So, I'm really looking forward to the conversation. It sounds like a fascinating evolution, and I'm really excited about it. Thank you.

WEST: Thank you, Mike. I'll just have one quick follow up for you. So, you mentioned your 15 best practices. I don't expect you to run through all of them, but what are the key ones? If you were advising local communities across the country and there's tremendous interest all across the United States on this, what would you be telling them about what they should do to bring benefits to their community and protect themselves?

TURNER: There are six factors that every community must answer when a data center is coming your way. Sound setback, site meaning what's it gonna look like? Power, water and emissions. You have

to address those questions right at the outset because the data centers are going to tap into all six of those areas and sound noise is the number one community complaint for data centers. You have to address noise right up front. So those six things are critical. I would also say one of the lessons we learned is never allow buy right development of data centers. Buy right development means in Loudoun County with ours and zoning is different in every county. If you have a piece of land and there are permitted uses that our zoning allows to be built on that land without board of supervisors oversight or permission. We've already looked at that land and said, if you wanna build a gas station or a fast-food restaurant, you can do that for about oh 15 years, data centers were considered office parks and could build Buy Right on any piece of land that allowed an office park. And when office parks were first designed, they were intended to be nestled in amongst residential neighborhoods.

It took us years once we figured out what was going on, to realize, don't allow Buy Right data center development. Every single data center must come to your local jurisdictional body for permission to build the data center so you can see what is going on with that data center. I introduced a motion a year ago that finally got approved on March 18th, 2025, to end by right data center development in Loudoun County. That was a historic motion. And so now any new data center in Loudoun County must come to the Board of Supervisors for approval. And the first thing you look at when they do is those six key factors that I mentioned.

WEST: Okay. Thank you. Lili, I wanna bring you into the conversation. I know you and your colleagues at the Kaper Center have a new report out on data centers focusing in particular on California. And you note some of the problems in terms of energy environment and public health. What did you find in your research?

GANGAS: Definitely. Thank you so much, Darrell. And just minor correction Kaper foundation, the foundation side as that's where the report came from and a huge shout out to the entire team, especially our lead author, Cecilia Madina who helped us really explore this area and to jump right in, into Darl. I think one of the important parts here too is also if we zoom out into like why data centers, what's driving this massive growth and investment. And as we know that the rapid gen ai growth that we're seeing every day, whenever you log on into looking at stocks and looking at any type of analysis, the amount of investment going into data centers is immense.

McKinsey's 2025 numbers show with \$7 trillion globally investment into CapEx towards data centers, of which 4 trillion are supposed to go towards computing, hardware investments, and then the rest going into real estate power infrastructure with 40% of that being in the us. And when you think of California specifically. California is the headquarters of all these big tech companies are making those investment decisions for the rest of the world. And that's extremely concerning because you may think as California having some of the most progressive environmental protections, we still have a lot of challenges at home.

And looking at some of the number of data centers already have been built, the proximity to the communities are overburdened, but also at a state level, we're seeing that these data centers already have reported health impacts that have tripled in the four past four years. We're seeing the data centers that are gonna be needing to require double the power by 2035, and despite legislation at the state level to help create more transparency. Some of that legislation was veto last year, and so we know that there is a lot of decisions that are being made that we need to make sure those, that there's transparency, accountability, and input from all the stakeholders that are being impacted. For us, we wanted to explore the role that California has, but specifically get, get more into the relationships with within data center locations environmental and health patterns that we're seeing across communities.

We also wanted to start to explore what the ESG goals are at. Some of these data centers are saying that they're much more sustainable to make sure that we're also being able to better have a better understanding. So, in our report on that equal burden data centers, we wanted to specifically highlight the disproportionate location selection and build out of data centers in communities that are already facing unhealthy air quality groundwater threats, the presence of hazardous waste, as well as the continuous environmental and health risk that expanding all this AI infrastructure composed to the communities. So, through our report, we were able to use a spatial analysis to compare the state's data center's location with some of these community air quality indexes, the groundwater quality, the presence of hazardous waste using data sets like the Calen Viro screen score for each census track. We were able to find that unfortunately an air, unhealthy air quality is around 82% of data centers in California are already located in communities with poor air quality.

We're seeing 65% of these data centers already in areas that are facing the highest groundwater threats levels. We are also seeing that 79% of the data centers in California are located within the top 2020 percentile of hazardous waste. And this is extremely concerning because if we even take a deeper dive city by city, which is what our report further did, where we looked at three specific case studies. Bayview Hunter Point in San Francisco, the El Passio Heights in Sacramento, and as well as Hawthorne in Los Angeles, we to compare the north and Southern California. We saw that at these three case studies, that proximity to communities of color and where, how they're, the data centers and proximity to them are experiencing high levels of pollution and asthma rates.

We're also, we wanted to use these case studies to also further examine the accuracy of the sustainability claims that these data centers that are planned and operating in these communities are having and how to better evaluate their impact in these already overburdened communities. And I think this is really critical because for us, when you take a look at the criteria for these three case studies, we wanted to specifically look at the majority minority communities, largely black and Latina proportion. And just the high levels of rates of pollution and asthma are, I think, the status that, that I share, there's this, the disparate and so they're already facing just overburdened health hazards, environmental. And so, it's really important that we tackle these. And in our report we provide some of those recommendations as well of what we could do at the state level, at the local level as well.

WEST: No, that's great. Your report does do an excellent job of outlining some of these problems, environmental issues, the health issues, and just the general impact on vulnerable populations. And at the very end, you mentioned that you do make some recommendations. Give us a little bit of a sense of what you do recommend in terms of dealing with these issues. How can communities do a better job of protecting their residents?

GANGAS: Definitely. As Mike shared, I think that this is an issue that there's by jurisdiction, right? The, I think that's what makes one of these challenge, makes the data center transparency, oversight, accountability challenging. But however, in our report, we provided four key recommendations. One is prohibit data center development on already contaminated and environmental overburdened sites. This is gonna require to modernize also outdated zoning ordinances at the local level to making sure that we're not overburdening building out data centers and areas already overburdened.

We also wanna make sure that as you're seeing this prohibit the land use at the state level on Superfund sites for data centers. Number two, we wanna make sure that we're strengthening the government capacity, and this is at all levels, right from the municipality to the state. To the counties to make sure that there's a, an increased capacity for air quality monitoring and enforcement. This is gonna require proactive monitoring to ensure that the reporting is timely, it's accurate, but it's also accessible. 'cause a lot of the times being able to get some of these public records takes a while and then you have to crunch through the data. And so, we wanna make sure that there is that transparency being in capacity being built at the local level.

Number three, we wanna require the data centers utility usage and environmental impact can be publicly accessible. Again, more transparency, more accessibility, requiring that the information on these data centers specifically water consumption. Energy use, pollution emissions from some of these standby generators and other contaminant are also publicly accessible. So then that way not only can the local officials, but also at the state and furthermore at the federal level, that we're also able to better understand what is the implication, what are the trends, so be able to make sure that we're not providing over even more burdens to communities.

And then also being able to make sure that we are requiring a proposed data centers to disclose 90 days in advance of what their expected water and power use is gonna be. I think the energy conversation is huge, and we're starting to see some of these big tech companies say that they're gonna cover the cost. I think we have to dig in into more what that impacts are locally. And then lastly, we wanna make sure that we're requiring data center developers to develop and implement community benefit agreements. And I know for some folks when you hear CBAs it might be a little triggering because some of them may not have the teeth of implementation, but also accountability and oversight.

But I think this is a moment to really look at new ways to develop these CBAs that are empowering and enabling coalitions and organizations to negotiate. Not only after, but right before, this is an important part. We wanna make sure that folks are at the table. The folks are able to be able to work in coalition together and have CBAs that are legally binding, that require transparency, that are also helping identify the projected impacts of not just the current buildout, but also what's gonna happen in

5, 10, 15 years. And also, how do you dispose of data centers. I think that the whole life cycle is an area that we need to be also discussing much more deeper.

WEST: We definitely appreciate your interest on community benefit agreements and obviously we share your emphasis on that as well. We think, we know that there are a lot of community concerns out there about different aspects, but these are issues that should be negotiated. They should be addressed. And as you point out local communities should be transparent about this and there should be accountability in terms of the decisions that are made. Nicol, I know that you focus on the community aspects of data centers. We know there's been resistance in many places owing to concerns about various aspects of data center development and operations. What challenges do you see with data centers for local communities and how should those communities address this?

LEE: So, it's so interesting. I've enjoyed the conversations from my colleagues Darrell as it relates to, just the opportunities, the benefits, opportunities and costs of data census. And just digging deeply into again, I think setting up the right inappropriate structure so that you don't find yourself in an agreement or in a situation or circumstance, which you can't back out of. So, I think that. Is really useful. I do wanna say this before I get into the challenges though. I had the opportunity to testify before the house committee on small business, and I think among rural communities, which we are not adequately represented on the panel due to a scheduling challenge that we had.

One of the potential participants that obviously they are seeing this as a market surge, right? Based on the continuous disinvestment in rural communities, the ailing infrastructure that is actually there. The fact that, the decline in agriculture in my book, I talked to a lot of farmers who were finding themselves in competition generationally with the high-tech industries of the present. Data centers has been an interesting intrigue, right? Because it offers, I think, the opportunity to develop not just a data center market, but secondary effects when it comes to workforce and training education. Better connectivity is the assumption as well as the tax revenue to build, just better infrastructure, firehouses, main street football fields, you name it.

So, I wanna put that out in this conversation because I think in the communities that we consistently talk about, I think there are different benefit gains for each of those communities. Now I think the

general conversation about community benefit agreements applies to all wherever you are, there has to be this conversation, as Lili mentioned, of a no negotiated arrangements prior to the data center coming into existence. Pretty much similar to what we have consistently done with zoning and compliance as data centers represented economic development opportunity for communities. And I think that's a really interesting way to look at this. As with any tech that we have previously looked at, we're actually bringing in capacity that, as Mike said, can leverage off of existing infrastructure and help bolster that.

Because as I have heard Mike speak in the past, Loudoun County already had actually great. Broadband infrastructure built in terms of their fiber connects. But there's also this opportunity to think about what Lili's referencing. Not just the infrastructure itself, but the community and the constituents, as Mike put it that are going to be impacted by the data center builds. And these are buildings that are not necessarily quickly able to be repurposed into a basketball court or community center, or health clinic or school, right? These come with both security provisions. Aluminum coppers, Darrell, you and I wrote about in the first paper real estate provision is really important in terms of where the data center sits closer to residential outside of that, but again, it all goes back to ways in which communities handle zoning and compliance.

And I would actually recommend that communities start thinking about that now versus when the data center comes into the community that they've had some conversation on how they actually going to treat the permitting process and the zoning compliance process when it comes to that. I think the other challenge that has been persistent in the telecom space over the years is sharing. How do data centers share the energy and utilities that are existing the same way that we saw the similar conversations with 5G Technology back in the days. Mike, you might remember those days in terms of sharing the polls and assets, right? But having that similar conversation. I think what makes this different to Lilly's point, and again, these are just more infrastructure challenges that I'll share.

First is the fact that we already have a very corroded grid and so we are actually putting newer assets on what is actually a way overdue modernization of the electric grid, wherever you are. And so having that balancing act, making sure, particularly for tech companies who have decided to override that process and build their own substations or recommission, nuclear microsites, it's really important that

this energy conversation not necessarily be a distraction, but it's also a trigger for future energy conversations. I think the energy community needs their own AI playbook. I've said this in several panels to see how they actually play in this space. And I also wanna suggest that telecom has to be a part of this conversation. Much of the propagation of these networks, of these centers actually rely upon effervescent broadband infrastructure.

And that has to be simultaneously done while we're doing this. So, I wanna just put that as infrastructure challenges I've seen in my work so far that I think are worth discussing. On the community constituent level, I think there are a herd of concerns. Darrell, to your point, data centers, although they have, and I just heard the stats I wanna share with everybody, I found it. They are taking up about 1% 0.1% of the GDP right now in terms of being an economic driver. Constituents are really up in arms when they have very little information and transparency about what these are. We're seeing that become a campaign tool. We are also seeing it become something of concern when it comes to the affordability of many Americans across the US that are trying to figure out if their electric bills have come up.

Because the data center came in their community. These are issues I think in terms of transparency that could be addressed. Many companies are starting to do that. I think we need to see a uniform standard of transparency, as Lili talked about in her paper, some type of public dashboard, which is similar to what we've discussed, but really getting into. Helping communities understand what is actually happening and how that is going to affect their affordability as well as their general environmental concerns that they have. Come on folks. We are in the middle and I'll get to a close, but I have to say this, we're in the middle of a Potomac sewage spill and people are now trying to figure that out, right out.

And we do not need any of those types of missteps because I think it will erode the confidence that we're all putting into AI systems if the very infrastructure that we're building is not trustworthy, reliable. I actually have coined this new term ethical and responsible data center development so that we move forward in a way that I think is uniform with the goals and aspirations of communities. And I would just say the last thing that we haven't talked about yet, that I will add that has become of concern to Darrell and I are jobs, the, preload of jobs on the construction side are going to be massive.

The potential for the same type of job creation may not be as massive in the construction and pre-development phase as it is as to who works in the data center.

We've been really vocal, and I testified on this as well in January, that we need data centers with these community benefit agreements to assist. Those developers to assist in the development and cultivation of the workforce. If you need plumbers and licensed electricians and site engineers and that community does not have it, this is a great opportunity to either invest in small businesses or consultants or people who, for whatever reason, have not been able to recertify because of, whatever situation they've been. It's a good opportunity to weed out that talent pool and keep that talent pool in the community when the data center opens so that you are creating a license blue collar workforce, white collar workforce, that the data center is one aspect of the type of workforce development and labor force development that's happening in communities.

Our colleague, Mark Morrow, has written on this as well in terms of just the jobs that are being created, but it's really important that we revisit national conversations on apprenticeships. And we're revisiting small businesses. I think if you're gonna have a data center and you're gonna need a maintenance contract, hire locally. So, the extent to which community benefit agreements can start to talk like this and think like this, I think on the workforce side, it normalizes and balances what could potentially be some incongruencies from when the data center is built and who actually takes up space in that facility when it opens.

And so, I'll stop there. Because this is obviously an area that we're exploring quite deeply, like our colleagues, but I think it's one in which the community benefit agreement has to take into consideration the innovation and infrastructure side, the community side as it's been mentioned. But then also as Lili said, really think about what are communities putting in place to avoid stranded assets and ensuring that they're not, they're gonna have a resiliency plan beyond the life of the data center, or the data center in turn will create more opportunities for either literacy or greater connectivity as a result of being in that neighborhood.

WEST: Nicol, those are all great points. And you mentioned our Metro colleague Mark Miro. He's also written a new paper on why data centers should be part of the broader regional economic

development conversation in local communities. Like he doesn't want there just to be a data center strategy. He wants the data center to be part of the larger economic development plan for regions. And I think that's a very good point. People could find his paper on the Brookings website as well. Mike, I wanna come back to you. I know both in your writings as well as in your work on the board of supervisors, energy looms, large both energy in terms of electricity and water resources required to cool data centers. I'm just curious to what extent how would you advise other communities to handle the energy component of data centers and to what extent? Can technology be part of the solution? Are there ways that technology might make data centers more efficient, both on the electricity side as well as on the water side that might help us deal with this issue in general?

TURNER: Thanks Darrell. Yeah, the Loudoun County right now has a constrained power grid. Last year we used 5.33 gigawatts of electricity to power our data centers in Loudoun County. My straight-line extrapolation in my paper over the next five years is that within now three years, we're gonna need 11 and a half gigawatts of power in Eastern Loudoun County.

I don't know how they're gonna get there. My paper talks about three iterative processes that I believe are gonna take place. The first one's already taking place. The power companies are gonna cap the power that the data centers can have. About a year ago dominion said if you sign a new electricity service agreement with US and you're a major consumer, you used to give, have three to four years before we can provide maximum power. We're extending that now to four to seven years. So, if you build a new data center, it could be seven years before you have the maximum power that you've agreed to. We do not have visibility over these electricity service agreements. They are proprietary. That would have to go into a community benefit agreement that the local jurisdiction has to be able to see how much power you projecting to use and the utilities have to play in that game because that's gotta be transparent.

We've got to know what is the load that you're anticipating to come onto the grid. We are in a regulated monopoly state. Dominion Electric, energy cannot deny power to a consumer. They are delaying power to a consumer. So, the first iteration is the utilities will cap the power going to the data centers. The second iteration is what you referred to Darrell, which is more efficiencies and the data center community is feverishly working to use less energy to process data. That's great. But as I

mentioned in my paper, there's a thing called Jevons Paradox. Which says any resource used more efficiently will result in more of that resource being used.

The data center individual that talked in our joint legislative audit review committee report recently said, look, if we've got 48 data acts in a data cabinet and a data center, and suddenly efficiencies allow us to do that same processing in two data racks, and we have 46 empty racks, what do you think is gonna happen to those 46 racks? We're gonna fill 'em up with 46 of the new racks. A 200-megawatt data center is always gonna be a 200-megawatt data center. So, the technological advances to use less energy are good, but they're highly iterative. They will implement those, they will save energy, and then they will go back to using the same amount of energy they were using.

And then the third iteration is data centers will get tired of relying on what is becoming a more unreliable grid and move to onsite power. That's a PR real problem. There's only two one source of onsite base load power right now in existence natural gas, and it's it, you should have selective catalytic reduction attached to the gas turbines on site. You're gonna have noise problems. That's a much cleaner solution, but it's still dirty. It still emits CO2. It still emits particular matter, but that's where they're going to is natural gas. Not surprisingly, the supply chain for natural gas turbines is now seven years, and the cost of a natural gas turbine has gone up tenfold in the last year.

I don't know what the answer is. I will be it, just to slide this in, take just a bit longer in my answer. Something that occurred to me that I think everybody should be aware of, our legislature is in session right now. I introduced a bill through our board of supervisors. I, the language was approved by our board and we said, give local jurisdictions the right to deny a data center application based on available power on our local grid. And it died within a week. It, the sessions basically coming up on four weeks old and within the first week that legislation died. There is a move in this country right now. I used to think that the hierarchy of importance of public service is federal at the top, then state and county after six years as a county supervisor, I'm absolutely certain that is exactly backwards.

The most important impact on the community is your local county officials. But there is a movement afoot right now because of the urgency of the situation for the federal government and the state government to usurp local authority to make data center decisions. That is really critical. It doesn't

make any, you're gonna have a real problem if you work really hard to get a community benefit agreement with data centers before they come to town. And suddenly the federal government takes over the siting decision from you with no re no thought whatsoever, the infrastructure or demands on the grid. And that move is afoot at the federal level and at the state level to rest sighting and performance, standard control of data centers from the local communities.

I believe that is a disaster. Every data center positioning in a community is a unique community solution. As and I mentioned before the meeting here, I'm running for second vice president right now. One of the things that the National Association of Counties needs to do is fight fiercely to retain jurisdictional authority with the local, with the county's and municipalities on things like data center placement and data center performance standards. The pressure is rising exponentially to take that control away. And I can't think of a more disastrous outcome for local communities than to lose that authority to say, look, we are a unique situation. Community benefit agreements are terrific, but you've gotta be able to implement 'em. You've gotta have the power to be able to implement them. And that's one of the things that we're seeing here in Virginia is that is slowly there is pressure to take that power away from the local community.

WEST: No, that's a great point. And we're seeing challenges on federalism in a lot of different areas. Like I remember when I was growing up, there used to be. Certain things, the national government did, certain things the states did, and certain things local government did. And increasingly, it seems like the national government, and you mentioned states as well, starting to move into areas that used to be considered local prerogative. I agree that is a problem. Lili I'm just curious your thoughts either on this angle or there's also this question about non-disclosure agreements because it seems like a lot of communities they negotiate with these companies, but then the information is considered confidential or proprietary and therefore not available to the general community. And my view is, and it consistent with the point you made in your paper, the lack of transparency is going to fuel public paranoia. They're gonna assume the worst-case scenario if they don't have the basic information. So, I'm just curious your thoughts both on the energy side and the transparency side with non-disclosure agreements.

GANGAS: Thank you so much Darrell for that question. And I think to, to Mike's point as well, I think what we're seeing right now and they society, this really great paper called the Big AI case of just what's happening at the federal level. 'cause I think that's super critical to also map to the state, to the local and seeing the dynamics are also taking place of the huge de-risking of the construction data centers and energy infrastructure. As we send some of the executive orders, we saw the super fund type of classifications, and in California and in other places, there are certain liberties that some of these data centers, especially some energy consumption, when it's below a level, they can, go under the radar. We without much disclosure requirements.

And I think that's a big issue. I wanted to uplift to answer your question, the work that the NAACP center's doing specifically on having a national data center coalition that is super hyperlocal. And so, through the NAACP actually used our report as part of their 2026 recommendations for protecting frontline communities called Stop Dirty Data. And I think that, as you were mentioning the lack of transparency is super critical. And so, part of the recommendations for the group and the national priorities are one, permitting, permitting, reform, and environmental protections, transparency and fiscal accountability. Specifically, this is where we gotta expose these NDAs are taking place, that they're hiding the deals from the residents.

Sometimes residents don't even know. As we saw some of the different types of lawsuits we're seeing some of the types of community organizing and shout out to everyone in the coalition that's part of it, from media justice to public citizen to NAACP and all the different local chapters and many other organizations 'cause we're seeing all these specific opportunities where the communities are organizing or getting informed are attending the zoning meetings or attending the city council meetings to demand more transparency, specifically also requiring and requesting public records to look at the minutes and agendas and being able to understand how are some of the decisions being made, especially when.

Some of these data centers are already at people's communities and some of the report that I mentioned earlier in San Francisco, the data center is just 300 feet, 300 feet away from residential areas. When you think about the environmental impacts, the noise, and a lot of these communities didn't even have an option or have the opportunity to, and that's, a lot of it is coming from the lack of

transparency in this. And so I think it's really important to take a look at that, and another part of the NAACP's work is also making sure that there's tracking the projects, there's data center mapping and doubling down on power people, power mobilization, making sure that data centers are paying for any grid changes that they're seeing, making sure that there's clear rate payer protections as some of their increases in electricity being passed into communities, which I know has been getting covered pretty widely.

Making sure that if data centers are also bringing in new options for new clean energy and making sure that there are the prohibition of data centers in construction and land use on Superfund Sense, as I mentioned before, specifically wetlands. And I think we're gonna continue to have to see this multi-disciplined coalition building of experts to really take down and really explore the opportunities here at the moment.

WEST: Thank you, your views on both the energy and the transparency part, and then we're gonna take some questions from our audience.

LEE: I think both Lili and Mike have hit the questions and concerns when it comes to the utility consumption of water as well as electricity. And the fact that this has become a growing concern, because again, as I mentioned in my comments earlier, I think there's a lot of confusion and ambiguity around what communities know about data census and what the ultimate goal is. And as it was mentioned and we've written about this, I've talked about this as well, any type of federal exertion of. Accelerated policy regimes that are referencing data center acceleration, they do come at the cost of state rights and local rights. And so, part of this is it's one of those things.

We continue to see this constant struggle around the broader category of AI that is gonna implicate itself as we try to build more infrastructure to accommodate that growing demand, which is actually where I kind of wanna land this, right? Part of the reason why we're doing this is because we need more compute, storage, and power for ai, right? And the challenge is as AI becomes more ubiquitously and widely available in some of the supercomputing capacities, particularly in the hyperscale's become much more complex, it's going to need this level of energy consumption as well as land space and all the things that we spoke about. I think this is where we have to deconstruct the

railroad analogy when it comes to data centers. I've been asked that several times. Unlike railroads that were built, and I think about periods in black history, month of reconstruction where people from the south moved to the north because the railroad was there, the railroad was there because it had available jobs that were places and goods and services that people could exchange.

The stop represented new opportunities in housing and, education. It was the railroad was this interconnector not just of, the tracks itself, but it actually offered an opportunity to have an improved quality of life and life chances. And I think that's where we are right now, right? As we build these data centers. It's gonna be incumbent upon policymakers and community members as well as the industry to have a conversation around, what's the industrial policy that's going to find itself, beset with data center movement. And how are communities like Loudoun County or the state of California or rural communities like Lancaster, Pennsylvania and other places that are negotiating data center agree community benefit agreements, going to find their communities much more enriched as a result.

And I think, this is more of an analogy, PO potentially of what we saw with logistical economic development where we put more manufacturing and warehouses in. But they served a purpose in the community. They got people involved. Just a quick note. My daughter is in upstate New York for college. Now when I see the big buildings across the interstate, I have to ask myself, is that a logistical center or a data center? Because of the fact that the land space is so huge and then I see a bay for a truck and then I'm reminded that is actually a logistical center that's created a certain amount of jobs both in that region and across the region.

So, I just wanna put that out there. I think, all of the concerns are adequate, Darell, and I think the key thing is we do not want communities to give away the store and then come back and try to remediate the wellbeing risks that actually occur or do not go into these. We don't want communities to go into this project. I think we suggest in the paper without really collecting the right amount of data. That will allow committees to understand what could be the short and long-term consequences out the gate before they actually engage in these conversations. And that's something I think to Mike's point, when you put burdens on states that if they stand in the way that you're gonna take away their broadband funding, you actually set yourself up for a scenario that is failed to lose because you're not creating the right type of cooperation and collaboration that communities need to be at the driver's seat in in

the development of these data centers itself. We're all trying to, we're all trying to use ours. Ai, but it shouldn't come at the cost of communities.

GANGAS: Yeah. If I can just add really quickly to Nicol's point. I think it's really critical right now that we know the challenges and the harms that data centers are having with all these different research I mentioned so many different organizations, and a clarification on my previous point. The current at the federal level, we are accelerating, but we're increasing the risks and the harms without, by removing a lot of this oversight. And I think that this is an important part because as Nicol was saying, when the, this types of investments that's taking place, data centers need to be better investigated and questioned.

Data centers are not new, right? We've been a, we've seen them the size, the types of hyperscalers are, but they're also bypassing existing regulations and communities that they know are moving. They're building faster and faster, but the communities organizing and there's active litigation in the enforcement side. But I do think that to Nicol's point around the economic perspective, data centers, I think that we should double down. And also, just question the current narrative, because there's also a lot of mis and disinformation that a lot of. For-profit companies are going towards the city council members and say, oh, this is gonna be bring jobs.

This is gonna bring economic growth. And yes, sign here. Let's go do it. When in reality, because data centers are not new, there are a history of data already. And Good jobs.org has a really great report on this, that it's actually looking at some of the investments of the CapEx from the big tech companies, from Amazon, Google Met and Microsoft and so forth, that there's actually a loss between 52 to 70 cents on every dollar for this, that, on the, that states are having. So as of right now, some of this data is showing that it's a net loss. And so, I think that's where we need to be. Also doing a deeper economic analysis on countering what these so and proposals are from the data center buildouts. And then lastly, I know we're. Almost running outta time.

I also wanna make sure that I'm uplifting the fact that when we're talking about data centers as well, that is entire supply chain from the way the minerals are being extracted to how these components are being built to where not only where and how they're being utilized, this is also a global issue. And

so, I think that there's a need to make sure that we're also looking at that and investigating that more closer. But I would say we have to, question these dominant narratives and question the missing and disinformation on the economic side much more closer. And I think this is why it's gonna be really critical to continue to work in hyperlocal coalitions with the communities and especially the communities that are seeing the overburdened impact on their health, on the type of land, what's around our neighborhood.

And a lot of the times by the time we do that, it's too late. So, I hope that with. My call to action is that we continue to mobilize and educate and be able to take strong positions on this specific issue. And there's just also a lot of great momentum and great wins. And I think it's also an opportunity to bring more of the community into the being even more further engaged in tech issues that a lot of times feel that it's not impacting them as directly. So just my, my, my soapbox right there that I wanted to make sure it was, and

LEE: Darrell, I can't, Lili's point if I can't lose...

WEST: I do, but quick because we need to get some questions.

LEE: Okay.

WEST: Actually, I'll just move we have several questions dealing with enforcement of community benefit agreements. So, one of the questions is, what does enforcement look like for community benefit agreements and what's your general sense of how companies do in keeping their commitments? There's another variation on this a different question, but it relates to enforcement. Is there a precedent. For legal standing in circuit or state courts in the negotiation process and for enforcing community benefit agreements when they actually are put into effect.

And then a third variation on the enforcement question concerns rural America. There are a lot of small counties where data centers are starting to come in, they're trying to negotiate agreements. They feel outgunned by, these large tech companies. And the specific question is how do small communities, rural communities negotiate these agreements when they have few legal resources?

And then how do they enforce them if the company agrees to do something but ends up not doing it. Mike, perhaps we can start with you on that.

TURNER: Actually, I'm the worst guy to start with. We have no community benefit agreements. I'm not even I didn't even know what they were before this webinar. But I will say it's absolutely the right direction. I don't know the answer to the question, how they enforced, but I can tell you this, it's a whole lot better to have them and figure out the enforcement issue after you have them than it is to not have them. The whole notion of preemptive and proactive involvement. To constrain the unconstrained growth of data centers in your community is a good thing. So yeah, I think that's the next iteration of one of the many problems that we have to solve is how would you enforce A CBA? But I don't shy away from CBAs just because we haven't solved the issue of how to enforce them yet. And I'll defer to Nicol and Lili that they may know some ways to enforce them. We have not encountered them in Loudoun County at all. We have no such thing as a CBA.

WEST: Nicol, Lili any thoughts on enforcement of CBAs?

LEE: I think you could still apply. If we look at this as an economic development issue, you can apply actually some of the enforcement triggers that we use in economic development, right? When it comes to compliance reports, ensuring that there are dashboards that show community progress public dashboards, that is Lili said engaging in the process of enforcement through behavioral change by having many of the community town halls where it's not just. Mike, you're gonna attest to this.

It's not just the city council member and the community, but the industry has to come in and actually talk about their plans. We're seeing a lot of that across the country where the community is basically negotiating with the local legislator versus negotiating with the people who are actually building them. So, I think there are some lessons for the person that we could actually see an economic development planning. For rural communities, you're right, it's much more difficult because again, you have a corroded economic infrastructure. And so oftentimes the data center, tax revenue when it does come in, is building the next school or fire station or police department or football field.

And so, the question becomes, again, having that public dashboard, ensuring that there are some compliance metrics, making sure you put in place in the community benefit agreement dashboards, in terms of timelines potentially. And then I think what Lili is talking about, and we've seen some companies do it, but not consistently enough making some commitments towards paying it forward. I know the Microsoft Agreement, for example, that came out a few weeks ago, was all about paying it forward. How do you keep that in compliance? You have to put those public dashboards in place and make a way for the community to have some metrics that this is moving in the direction at which they actually endorsed.

So, Darrell, that's another blog I think we need to write about based on this conversation. But I do feel that we're missing the mark by not looking at what's been done in the community development space when it comes to land enforcement over, building agreements, et cetera. I'm a daughter of an architect, and I'm pretty clear that there's enforcement when we have builders and developers who fall short of their commitments.

GANGAS: Just to add quickly to what Nicol has shared, I think this is the opportunity for innovation really. And also looking at new ways to think about some of the ways that not just enforcement, but those commitments, that how can they actually be realized in not a long term, but a short term, and how are we measuring those? So there, there's been conversations about community benefit funds. There's been conversations around also making sure that we're not overlooking what happens towards the end, right? The maintenance or recycling that the commissioning plans 'cause those may also have larger costs that are not being accounted for.

So, making sure, again, like I said earlier. The full life cycle and really doubling down. I think that the question is on how is this gonna benefit the local community of not just on the jobs and economically, but also educational. And then also what is also the tradeoffs that have been made in order to have this data center here. If this wasn't here, what would this have been? Would this have been something else that would've generated more economic opportunities, a different type of serve a need that the community was needing? So, I think that those are important parts that when we think about all the different levels of decision making and stakeholders, I think it's a really important time.

And for the folks who sometimes feel a bit overwhelmed, there's an, there's a part for you all to play in the current data center, buildout. This is for all of us to engage of all backgrounds and expertise and community. So, it's really important that conversation like this are taking place. So, thank you.

TURNER: Darrell. Can I dive? One short point? It occurred to me while Nicol and Lili were talking our experience with data centers as Loudoun County is they are falling all over themselves to help the community. The data center sector is becoming increasingly aware that it is much smarter from a market perspective to have a very good, robust, positive relationship with a local community than it is to have them as your enemy from the outset.

They want to have community benefit agreements. They want to adhere to community benefit agreements. I think it's very possible the enforcement piece may actually be. A non-relevant factor because it is to their benefit to live by an a properly negotiated community benefit agreement. And that the whole sector is becoming very aware of the fact that this is, has to be a collaborative relationship. They're breaking down those silos, so they have every motivation to sit down and craft a strong community benefit agreement and then abide by it to have a good relationship with the community.

WEST: I think that's a great point to close this because I agree that there is two things that are taking place right now. There are two things taking place right now. One is there is a tech lash a backlash against technology. People's worries about ai, people's concern about the cost of data centers. But yet on the other hand, local communities actually do have a lot of leverage now because of the discontent within their communities. So, what I would encourage local officials to do is to bargain hard. They have leverage. They have things that these tech companies need. They have the land and basically negotiating as many things as they can upfront as opposed to waiting for problems to pop up and then try and negotiate them as when people start complaining.

That is too late in the process. We are out of time on this webinar, but I want to thank Mike, Lili and Nicol. All of you did a tremendous job. Those of you who would like to read more about this at Brookings, we have a number of scholars who've written on various aspects of data centers. The work

that Nicol and I have done is available at brookings.edu. Mark Murrow has written on this and others are writing as well. To our viewing audience thank you very much for tuning in.