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WEBINAR

CAN BIDEN'S BROADBAND INFRASTRUCTURE PLAN
CLOSE THE DIGITAL DIVIDE?

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P R O C E E D I N G S

MS. REARDON: Okay, thank you everybody for joining us. I am Maggie Reardon, and I am a senior reporter at CNET, and I'll be moderating today's discussion, and we're going to be talking about President Biden's massive infrastructure plan, which also includes a great deal of money for broadband. And we have some really amazing guests here, today, to talk with us.

So, first, we've got Keith Gabbard, who is CEO, of The Peoples Rural Telephone Cooperative, in Kentucky, Scott Wallsten, who is president and senior fellow of the Technology Policy Institute, and Nicol Turner Lee, a senior fellow in Governance Studies, the director of the Center for Technology Innovation, and a co-editor in chief of Brookings' TechTank Blog. So, before we get started here, I want to make sure that I remind everybody in the audience to please submit questions. We're going to have about 15 minutes here at the end, where we're going to go to questions, and you can submit those at events@brooking.edu, or via Twitter, using the #DigitalDivide.

SO, let's kick if off. I guess my first question, for you guys, is what are your first impressions of this big plan? It was kicked off in about March, we don't have a ton on details, but let's start with you, Nicol. What was your first sort of impression, or what's been your impression, since it's been kicked off, here?

MS. TURNER LEE: Well, thank you, Maggie, for hosting this, and I'm really excited to be on the panel with Scott and Keith, as we discuss, I think, what has become one of the most prominent issues, alongside of several other issues that our society is actually addressing. And this is good news, just -- I have to say, for those of us who been doing this for 25 years, actually seeing this properly displayed as a discussion point.

I mean, I got to say this, I think, I'm pretty excited about the fact that broadband infrastructure is actually being seen as a critical asset. You know, it's been a long time since we've actually seen some kind of consistency and proclamation that we need to do something to, you know, not just repair our water and bridges, and -- water systems and bridges, and other critical infrastructure. But we've included broadband in a meaningful way. And it's unfortunate that the pandemic had to bring this to the forefront, but while we have the momentum, I'm pretty excited that the infrastructure plan is

including that.

With that being said, and this is current conversations that are actually going on between the Democrats and Republicans, I hope they realize that it takes a lot of money to build a continuous network across the country, and the smaller and smaller that down payment becomes, it means that we are going to have to find other resources to actually subsidize areas that may be unserved or underserved, and we may find ourselves pretty much in the same traps, that we have been over the years, where we have not necessarily predicted out just how massive this situation is, and how much it really requires a multistakeholder approach, between the public and private sector.

So, I would say, again, I am excited about it, but I also see, I think, some opportunities to avoid spinning the same wheel, and I'll just end here, Maggie. I mean, clearly, there's been a lot of us that have been doing this for a long time, and we want to make sure that this plan doesn't become an infrastructure plan of post-it notes, that we sort of discuss individually, with not having it strategically match with a broader plan, that will have metrics and outcomes, that we can say, we've done a better job.

Some of you might know, I've been putting out this idea of a tech new deal proposal, primarily to push us to think more comprehensively around what this looks like, when we look at deployment, adoption, and utilization, as well as local investments and digital equity. So, I just hope, Maggie, you know, this doesn't become sort of like the same conversation we had, maybe when we talked about, you know, American Recovery under Obama, where we put a lot of money out there. We put a lot of ideas. We had the political will, but, yet, we're still not solving the problem.

And, unfortunately, until we get down to what that looks like, and hopefully we'll talk about it today, the core essence of what the pandemic taught us. It's not just about being connected, it's about being poor and disconnect. It's about being rural and disconnected.

MS. REARDON: Yeah.

MS. TURNER LEE: It's about being old and disconnected. So, my hope is, this infrastructure plan becomes more than just about infrastructure, that it really goes and taps into the people, that are behind the infrastructure, who need to get access to be much more, you know, contributors of our society.

MS. REARDON: Yeah. Keith, what were your first impressions?

MR. GABBARD: Well, my first impression -- well, first of all, thank you, Maggie, for hosting this, and allowing me to be on. My first impression was still a lot of unanswered questions of the details. Certainly, as a CEO of a broadband provider in a rural -- small rural area, in Eastern Kentucky, we know a little bit about what it takes to provide broadband, and we actually were fortunate enough, in two counties, countywide, here. We've provide fiber to the Premise, to every home in Premise, every home and business in both these counties.

So, we know it can be done, and we know it's expensive, and the American Recovery Act was some of the funds that we used to do that, back -- started back in 2008, so. So, we know how critical it is to our consumers and member owners, as well, and it's just a very important topic, and I'm just happy that it's being discussed, as Nicol said.

MS. REARDON: Now, I think, so far, we've got Nicol who's saying, let's get the political will to do this, and you're saying I want to know the details.

MR. GABBARD: Yes.

MS. REARDON: And, Scott, what was your impression, first of all?

MR. WALLSTEN: Right, well, I mean, I guess my very first impression was I can't believe we're going to spend a $100 billion, based on two paragraphs. But, you know, the bigger impression though is, first, you know, what Nicol said, it's nice that we're actually paying attention to this problem, outside of the, you know, the smallish telecom community, because, I mean, this is an issue that lots of us have written and studied about for a long time. And now, with the pandemic, everybody can see the problems of not being connected and knows what the cost can be.

And so, that's really nice to see, that this is a -- become sort of a mainstream thing. A couple of things that I'm a little bit concerned about, though. One is that I'm concerned that we're going to fall into the same trap, that we've been in for a long time, with universal service spending, which is spending far more on rural areas, which are primarily white, and ignoring low-income communities, which are, you know, are much less likely to be connected.

Now, that's not to say there aren't problems in rural America, because we all know there

are, but the balance has long been very strongly in favor of connecting in rural America, and we might

ask, how it is that we've already spent a hundred billion dollars there, and it's still so terrible. So, we need

to -- we need to address that.

The other thing that worries me is that, so far, again, like Keith said, we don't details, and

those will matter a lot. There isn't much or any emphasis of -- on evaluation. You know, how are we

going to know if this works? And this really needs to be built into the programs, themselves, because,

looking at it ex-postly and after the fact, it's very hard to identify, whether it's the subsidies that made a

difference, whether we're continuing on a similar trend. And we really want to know. It's an opportunity to

learn lots of things. And then, you know, one -- I guess one final thought, and I know we'll get into RDOF

later, but the idea of reverse options to distribute the funds is a good idea, but it can also be -- the

outcomes can also be affected by politics.

And so, Keith mentioned the (inaudible), the program -- the President Obama Stimulus

Plan, and it's effectiveness was -- it was made less effective by having to have, at least -- I forget what

the exact rule is -- but having to have, at least, one project in every state, and so, sometimes, if there is

only one or two proposals, you're, you know, it might be not very cost effective, at all. And so, you know,

we minimize the extent to which politics gets in the way of those.

MS. REARDON: Yeah. Yeah. So, we all mentioned here, initially, this was coming out

as being billed as a $100 billion program that, you know, I'm not sure where we got a $100 billion,

because I think a lot of people think this is -- what's likely to be the Obama -- or the Biden Plan is going to

be coming from -- the basis is from Representative Clyburn's bill, that's now being talked about. And I

think that was about $80 billion, if I'm not mistaken. All right, so, we tacked on another $20 billion, but

then, now, the $100 billion is changing. It could be $65 billion if Republicans sort of get their wishes.

So, and we can talk a little bit about the money here, but one of the aspects of the plan,

that I thought was interesting, one of the details we've got, is this idea of investing in future proof

networks, and I think, a lot of people took that to mean fiber, and I'm just curious what you all feel about

that, you know, this, again, whether it is $65 billion, $80 billion, $100 billion. It does seem like a lot of

money, and a lot of it is going to be going toward some sort of infrastructure. So, is fiber the way to go?

Is it okay for the government to be directing money toward specific types of technology, for their funds?

So, I don't know, Keith, do you want to kick off with that? What are your thoughts on that?

MR. GABBARD: Yeah, and, of course, I will say I'm a little biased because we have built fiber to the home, everywhere, and throughout our service areas. So, I'm definitely a strong proponent of fiber. Fiber is the best technology. It's the best way to send the technology out, right now. I think as much fiber as we can possibly give is the way to go.

And now we're also, along with four other small companies, based in Kentucky, owners of original wireless companies. So, I'm very familiar with the cellular, the wireless business, how that works, as well. But, I mean, fiber is as future proof, as you're going to get, and we just seen some major -- major differences in the quality of life, here, where we've built fiber, and almost every county that surrounds --

MS. REARDON: But is it -- is it realistic? I mean do we think that -- I don't know. I don't know, Scott, do you want to take that one? Like, is it realistic to have fiber everywhere?

MR. WALLSTEN: Sure, well, first I don't like the phrase future proof because it's meaningless. What we really want to do is minimize our, you know, the net present value of total expenses, subject to, you know, whatever level of service we think is appropriate for every time. Now, just because we think we might need, whatever, you make -- make up a number, two gigs in 10 years, doesn't mean that you should pay for two gigs right now.

It just doesn't make any sense because paying more, you know, paying for some of it later will make a lot -- would make a lot more sense. And that's the context in which should be thinking about it. And I think Keith is right, fiber is great, obviously, and so I don't want to criticize anybody who's laying fiber because that's awesome. But it is code for fiber, and I think the right way to think about it is sort of really along the lines that the FCC has been doing it now, for, now, under several administrations -- a couple of administrations, which is kind of trying to figure out what the relative weights are, of how much people value different types of service, and making awards based on that. We can talk more about that later. But I think that's a great way to approach it.

MS. REARDON: I guess it -- yeah, I was just going to say, though, but isn't the idea of

future proofing, I think, it's this -- the sense I'm getting with that statement is also a frustration, that the

FCC, in particular, has spent billions and billions of dollars, over many years, you know, providing

subsidies for companies to build networks, that, then, they have to go back in those same areas and build

networks again. And that seems like that's problematic, and I don't know, Nicol, do want to sort of chime

in on that? I mean, so, is it -- I mean, that seems, to me, what they are trying to get at, here, with like,

let's build it once, and get the infrastructure, like the roads, where they need to be, and then we can put

the service on top of it, and get people to subscribe.

   MS. TURNER LEE: Yeah, I mean, I think, to both Keith's point, as well as Scott's, I

mean, I think we need to be a little bit careful, when we talk about future proofing to one standard. And I

think it's really important that whatever we do is technology agnostic. I can tell you, from the tour that I

did around my book, there were people that were using wireless, or a fixed wireless. There were people

who were using tv white space, you know, people were doing whatever took fiber to ensure that

communities were actually served.

   And part of the challenge that we've had, historically, Maggie, is that we have our

programs primarily devoted just to fiber, when it comes to funding, and that wholesale approach is just not

working. That's why we had massive, not necessarily networking failures, but just failures on the

universal service side because we've not really funded a very diversified portfolio, when it comes to how

we wanted to connect people.

   I think we also run the risk, if we try to go back and retro fit networks. How long is that

going to take, right? So, now, we're looking at adding more time, and I can tell you, about 20-25 years

ago, I was trying to get access to dark fiber, when I was in -- using community technology centers, in

cities, and I'm sure Keith can tell you the same thing, that there are also multiple uses of fiber, in

communities, which makes it also unrealistic, because some of that fiber is already designated.

   So, I think the key thing for this plan, if we're actually going to grow into how technology

is actually evolved, we need to be thinking about the plethora of technologies, figure out what's the right

solution for a particular community. I love -- you know, I had the opportunity to be on NPR with Keith, not

too long ago, and I do love the stories of these independent guys who -- and women, who are out there

wiring communities of 500 people, without government assistance. They're basically, as one guy told me,

in Kansas, he's wiring -- he's leased everything, except his wife, to be able to bring access to his home,

for the Wi-Fi connection.

And so, I think, again, as the plan moves forward, let us not forget how far we actually

have come with innovation, and let's start to think about what type of technologies work best, for where

people are situated. What may be a better solution to accomplish the topographical challenges in rural?

Where might there be a solution to hybrid? But if we have a plan that becomes strictly, you know,

collocated to a certain technology, that's not technology agnostic, I think we're going to run into some of

the same challenges, that we've had with what Scott said, universal service.

Maggie, I just want to say one more thing --

MS. REARDON: Yeah.

MS. TURNER LEE: -- to that, is very important on the rural piece, and I know you're

going to jump into it, but I just want to respond, quickly, to Scott. I do want people to understand that,

when we talk rural broadband and urban broadband, we're talking about American broadband problems.

And so, I do think it's important to understand, that there are low-income consumers that are affected,

and I do think it's important that the way the money has been allocated in rural appears to have gone to

communities, predominantly white. But I want people to remember that there are people who live in Black

Belt of Mississippi, and parts of Louisiana that do not have access. And so, the question we should be

saying is, who are the least -- who are the ones, among us, that are least served?

And let's start there, and I think that shifts the conversation to, how do we address,

maybe, the competition issues that are affecting urban residents, or affordability concerns, or how has

that effected the fact that we don't have, let alone running water, in some places, where people are

extremely poor, and not connected to resources that could actually boost their economic recovery.

MS. REARDON: I agree, and we've also got, you know, people living in native lands,

too, you know, --

MS. TURNER LEE: Right.

MS. REARDON: -- our native populations, too, that are very rural and unconnected,

yeah. So, I'm just curious, though, with this technology agnostic idea, what about sort of unproven technologies? I think everybody knows who I'm talking about here, the low-orbiting satellite technology, that a lot of people, particularly the FCC, really like to be promoting. And, you know, Starlink got a lot of money, from the last reverse auction that went out, allocating some FCC money.

There are some critics who say that maybe that wasn't the best use of public funds, for them to be getting such a big chunk, in some of these states. So, I'm just curious what you guys think? I mean, was that -- is that the kind of investments we should be making, or should we -- because, really, if you look at that, I mean, low-orbiting satellite, nothing's unconnected, right, because satellite can go anywhere.

MR. WALLSTEN: So, I'd like to start with that one, I guess. You know, generally speaking, we want to make sure that every technology can compete because if we, you know, if we had started a long time ago, saying that, you know, unproven technology could compete, we might be stuck with, you know, some early version of DSL, or -- but so -- but the problem, the thing that may have happened in RDOF, and we, you know, we won't know this, really, for a long time, maybe we'll all be pleasantly surprised, is that the rules seem to allow us -- seem to make it so that you can bid in a way that the government or the, you know, the taxpayers were taking all the risk of the technology not working.

And so, if, you know, if it doesn't -- if SpaceX -- if it doesn't work out, if the other company can't provide it, they don't really lose that much. They -- it could have been done differently, and, you know, so, for example, you could've -- you could do it in a way that, you know, they only get -- they get the money that they bid for, in -- you know, as they meet certain goals, and with a guaranteed payout from the government, they would -- they'd be able to raise money, in capital markets. That means they would -- the banks would know that they could pay it back.

And so, you know, that would be a way of putting the risk on them. And so, if they couldn't do it, then you've sort of -- ways to reverse the risk. So, you want to get them to participate, but you want to find ways that -- to make sure that they really believe in their technology. That's, I think, would be one of the best ways to do it because, now, they could bid for it with, really, no risk to

themselves.

MS. REARDON: Right. And I just want to back up for a second, and just explain a little bit, when we're talking about RDOF, because we like -- I know, we're in telecom world, we like to say fun acronyms.

MR. WALLSTEN: Right.

MS. REARDON: So, that was a mechanism of reverse auction, right, the Rural Digital Opportunity Fund, right, that the FCC had a pot of money that they were trying to allocate to different providers, to build out infrastructure in rural areas, and they use this idea of a reverse auction. And, Scott, I know, you've done a lot of work on reverse auctions. Is that a good way to allocate this money? Because I think that kind of falls into our conversation, too, because we're going to be potentially giving away a lot federal dollars, here, and did that work well?

MR. WALLSTEN: It's a great way to give -- it's a great way to give away money. It's, you know, for the ones we've done so far, we're seeing the results. The outcomes are much more cost effective than any other approach would be. And it's been done in other countries, for decades. And we were not the first ones to do this.

If it turns out that this most recent one didn't work so well, maybe that's example of why the details of auctions matter so much, as we know from the economists who won the Noble Prize this year, on auctions, and it was for a -- they made a lot of good work -- they did have to do it with spectrum auctions, and people don't necessarily remember it, again, unless they're in the telecom world. But a lot of the early spectrum auctions had problems, too, and, you know, it took a while to get to work -- to figure out all of the details.

But, as we know, those auctions have brought tremendous benefits to the world. And so, I think it's important continue with these reverse auctions. If there was -- if something did go wrong with RDOF, the key is to figure out what? And like I said, maybe it'll turn out that everything will go so well, where, you know, the whole country will be covered by low -- by LEO Satellite, or low-earth orbit satellites, but it's the -- but the details matter a lot, and we have to pay attention to them.

MS. TURNER LEE: And, Maggie, I want to Keith to jump in because he's more of a

RDOF (inaudible), but I do want to let people know that satellite, as one of the promising technologies, also has other technical concerns that we still have to deal with, right? There are certain places satellite cannot be deployed. There are certain interference challenges. And I think the key thing is, again, creating an ecosystem, where you can have some of these unproven technologies be applied, in particular pilots or areas, to see what the return is on investment.

I really want to caution people just to think, like, let's throw every post-it note at the digital divide. I mean, we're not serving anybody, if we're still not meeting some mandatory thresholds, I think, of affordability of satellite, or consistency and resiliency of those networks, or the extent to which, you know, a windstorm comes through, and you can't get anything, not even, you know, because as we know, with satellite in rural areas, and, Keith, correct me if I'm wrong, we see a lot of that, just for cable television, potentially, but not necessarily where this intersection of a variety of technologies are playing off of that same network.

That comes from my experience with it, but I will be quiet, and let Keith jump in on the RDOF --

MS. REARDON: Yeah.

MS. TURNER LEE: -- but I think those are important considerations.

MS. REARDON: Yeah, Keith, I mean, did the RDOF reverse auction, did that work well for you guys? I mean, you were a participant.

MR. GABBARD: We were a participant, and we were awarded some areas. Several counties that surround us, have pretty much still DSL, you know, copper, and they're desperate for a better broadband, and we're trying to edge out into some of those communities, and trying to figure out where to make a business case, and RDOF was one of the ways that we're trying to do that. We also -- using USDA, with the Reconnect Program and some community grants, any source of funding that we can get to make a business case for area that's just five or six customers per mile. That makes it difficult to build fiber to.

MS. REARDON: Yeah, okay. So, I also want to get back the plan here, a little bit. You know, there was also some mention of prioritizing municipal networks, so, cities and other sort of

nonprofits, I guess, that would potentially be in a community and building out broadband, and this has proven to be pretty controversial among the carriers, you know, the big guys, like Comcast, and Verizon, and AT&T. They've all spoken out, that they feel like that's a really bad idea.

And some might argue because they don't like anybody competing with them. But, Keith, since we have you, and you're a smaller competitor, I mean, what are your thoughts on, you know, if the government is going to be allocating all these big, you know, buckets of money? Should they be giving up preference to city governments and other sort of nonprofit cooperatives?

MR. GABBARD: That is a difficult question, and I will say, that our largest city is 700 people, so, they're not going to be building a network, I don't think, a municipal network, but we are competing against other companies, as we branch out, and I totally get that. But when -- you know, one other thing about when these -- some of these big companies start doing a poor job, and still trying to serve people with copper, for broadband, you know, you can understand why people are looking for alternatives, better broadband providers.

And, so, it's a tough -- as a provider, it's tough question to answer because, obviously, you know, we don't skip cities competing against, but if we're doing a poor enough job, that we're not getting the job done, I can certainly see why that's a popular topic, and why it's going to be more prevalent.

MS. REARDON: Yeah, Nicol, I don't know, do you want to -- what of the idea of government funds going to fund city owned networks?

MS. TURNER LEE: Well, you know, I have a really interesting opinion about this because I've been in this game for like 20 plus years. I know I don't look that old, and I'm not going to tell you how old I am. But I've been in this a very long time, you know, and I was around before --

MS. REARDON: You were in elementary school, come on.

MS. TURNER LEE: I was, I was. I would love to say that I was, but you know. You know, the thing is -- I mean, with municipal broadband, let me just be real clear about it. I mean, first and foremost, it is a very tough business model, particularly the government is not an anchor to that network, and I don't care what people say, I have seen it, the last 15-20 years, where, you know, I'm sitting in the

city of Chicago, actually debating one of the first municipal networks. There was a challenge of having

the city migrate all their services to make the network profitable, which is why, again, I think what we find

ourselves in this infrastructure plan, kind of going down the same rat holes.

And what I would actually suggest -- what I love about Keith's model, for example, some

of these people that are out here trying to provide broadband service are also trying to make money,

whether it is an incumbent provider, or it's a small non-profit collaborative, or it's an electrical provider, the

key thing is we have to stop being so constrained, when it comes to the way that we're trying to get

access to everybody. I think, if you go down the trap of municipal broadband, yes, you want to make

some clearings.

There were lots of schools, I'll give you a great example, that were trying to build mesh

networks, that came back to me, and said, wait a minute, we can't do this because we heard that there

are municipal broadband network rules. But what those schools were actually trying to do were not in

violation of municipal broadband. They were trying to figure out how to navigate a system that had so

many constraints, that when we got to this place where schools needed to find ways to invest in mesh

networks, or churches wanted to run their own networks, that's a different conversation.

And I think that's where we have to look at this infrastructure plan, and think about -- we

can go down the municipal broadband networks, particularly in areas we know there's not going to be a

provider, where the city, or the local government has proven a business case, that they are going to be the

provider. They're going to be the trouble shooter. They're going to make sure that they have massive

right revenue for the types of updates.

But at the same time, and I'm not, in no way, suggesting that a big company does it

better. I think we also need to be realistic that the ecosystem is large and wide. And it's large and wide

enough for us to figure out how people, like Keith, do not have to go to seven different agencies to fund a

network that -- where he's serving people who are five to seven folks within a square mile.

And I think that's a different conversation, Maggie, that I feel like, often times, when I look

at the infrastructure bill, and I'm sort of reflecting on what is the next step, I'm thinking, are we still trying

to regurgitate some of the old policies that we know, for a fact, put us back into sort of a dogma, where

we couldn't get things done. And when we do that --

MS. REARDON: Right.

MS. TURNER LEE: -- we're not servicing the country by keeping people connected.

We're basically --

MS. REARDON: Yeah.

MS. TURNER LEE: -- going back to old conversations, without progressively moving

forward, on what have we learned so far, that can work. Where are we not connected? And I'm going to

be honest, that actually starts with the lack of a broadband map, which we probably desperately need

first, before we even talk about any of this stuff.

MS. REARDON: Right.

MS. TURNER LEE: Because, without that, we're, again, going to go back to old models

of practices, and back to places that maybe over capitalized, underbuilt, or overbuilt, without really

understanding what we're trying to solve.

MS. REARDON: Right. And I think --

MR. GABBARD: We've been working on that broadband map for about, what, 10 or 15

years, now, I think.

MR. WALLSTEN: Yeah, that's right.

MS. TURNER LEE: I know, I was a teenager, Keith, a teenager. That's what we talked

about, so.

MS. REARDON: So, you know, the other thing, too, is, you know, we talk about this

money that could be coming from this plan, right, from the infrastructure legislation that we are expecting

to come out. But then there is also the ongoing funding, which happens, you know, and is particularly

hard for a lot of these rural networks. And that's where, you know, the FCC comes in with its Universal

Service Fund, and I just want to touch on this really quick, before we sort of move on to getting away from

talking about strictly rural and get into some of these other issues.

But FCC Commissioner Brendan Carr came out with an idea, last week, about how to

keep the Universal Service Fund alive, and for those of you who don't really know what that is, this is a

fund that, actually, the telephone providers pay into, and it's based upon revenue that they get from long-distance and international phone calling, which, as we all know, I mean, who calls long-distance anymore, right? So, that's been going down, and down, and the contribution factor, as a result, is going up. And he is saying he wants big tech companies to pay for that, and I would love to hear some thoughts on that. Nicol, do -- you know --

MR. WALLSTEN: Well, actually, if I could, before you --

MS. REARDON: Yeah. Sure.

MR. WALLSTEN: -- just before we move on too far from this, on municipal broadband, I just want to add one thing, quickly.

MS. REARDON: Okay, sure.

MR. WALLSTEN: You know, I think that an important question to ask is, what is the objective that people are going for? I mean, if it's to help low-income people get online, and there is already service, is that -- is it -- are you more likely to achieve an objective, by building an entirely new network, rather than subsidizing those low-income people? And the second is with -- you know, a lot of municipal networks often run through cross subsidies, and so, if they're going to be -- if they're going to be, you know, by taking money from other parts of the budget, and they're often not transparent at all.

A colleague of mine, Sarah Ode, did a paper on municipal networks, and it was not specifically on this topic, but what she found was that only about a third of all Muni networks even bothered reporting data to the FCC, under their -- what they call Form 477, even though they're required to. So, somehow, there's this myth that these networks, some of them might be great, I'm not criticizing any particular network, but that they must be all goodness and light, and, in fact, they are operating without giving us any information. So, it seems odd to want to promote that, without sort of knowing the details behind them. So, sorry, I just wanted to -- wanted to weigh in a little bit. Yeah.

MS. REARDON: Right, yeah, no, no, that was a great point to make, yeah, for sure. Well, why don't you kick us --

MR. WALLSTEN: And you know --

MS. REARDON: What do you think about Commissioner Carr's proposal for running

USF?

MR. WALLSTEN: Oh, right, the original -- your actual question, right?

MS. REARDON: Yeah.

MR. WALLSTEN: So, universal service has been -- the Universal Service Fund has been a big problem. And almost every report by the GAO or the Congressional Research Service, in Academics, has found the Rural Program, now called the Connected America Fund, had zero impact on buildout. So, that's one thing. It's been very -- it's been extremely ineffective. Then, the other thing is that it's becoming relatively more expensive to keep going, like you -- you say the contribution factor is going up, and it's a tax that -- you ask, who calls long distance now? The answer is poor people and immigrants, you know, people who use calling cards. And so, it's an extremely regressive tax to keep this program going.

So, you know, one thing we need to do is make the program more efficient. And there are some moves towards that, but still mostly -- if you -- once you're in the program, you get money forever, and they have private planes, and, I mean, I -- that's an exaggeration for lots of the companies, but it's not for all of them. And so, we need work on that, and the current rules on the Universal Service Fund prevent the FCC from collecting less than $4.5 billion a year, even if they don't give out $4.5 billion a year. So, you know, that would be a nice reform, not to collect more money than they say that they need.

Now, where the money should come from, we -- we want a tax that will have -- that's -- somehow fits in with -- that, at least, is not regressive, that, or if it's progressive. Ideally, it should come from tax revenues, the way that most subsidies do, rather, but a tax on the service it's subsidizing, which is also kind of a weird thing. The tech companies -- it seems to me that, you know, the rationale for going after the tech companies is that they have money, and maybe that's enough of a rationale for some people. But, you know, I'm not sure about this. I have mixed feelings because, yeah, they do have money, and -- but on the other hand, they do also pay for access. They maintain networks, too, maybe not the last mile.

MS. REARDON: Right.

MR. WALLSTEN: So, I don't think it's a simple question.

MS. REARDON: Yeah. I know. Nicol, do you have some thoughts? You know, should we make Google pay?

MS. TURNER LEE: You know, listen, I'm going to tell you the -- from -- people have heard me say this. I think, you know, Commissioner Carr actually read my stuff, that's why he started talking about it. Here's the deal. I mean, what happened with the pandemic was quite disturbing, right? We had this sense, and Larry Irvin has called it digital poverty, I've called it digitally invisible, where, again, this binary digital divide became much more apparent to us.

And as a result of that, we actually didn't know what to do, as a nation, and we have, as Scott has mentioned, a universal service Program that was always designed in communication, to allow for eligibility among our low-income consumers or those who are elderly, etc. In that, for those of you who are watching this and are not aware of how it works, there's always the deployment money or infrastructure money, that is primary channeled to rural communities or rural telehealth. Then, there's money that addresses affordability to the Lifeline Program.

Here's the challenge. When 50 million school-aged kids go home because they no longer could be within the classroom, and we find out that 15 to 16 million of them do not have a device nor internet access at home, and nine million of them that didn't have either were Black and Brown kids or kids from tribal lands, we failed because, guess what, schools had to beg, borrow, and steal their way from stimulus spending to get money to provide the universal service and access that was needed for our children to do distance learning.

And we saw this play out in telehealth and work and other venues, which I think is really important for us to go back and reevaluate. Do we have enough universal service to give? What we found out during this pandemic, as well, is not only whether telecom companies maintain the networks, but our tech companies were providing our groceries, providing our social networks, allowing us to speak with our, you know, friends, and family, and doctors, and communicate with civic partners. I mean, I'm a PTA vice chair. We did all of our meetings via these platforms.

And you have to ask yourself, on the universal service that was historically rooted in old

telecom services, in a new 21st century economy, do we have enough money? Will we have enough money to ensure that we'll never be in this place again? And that goes back to Scott. I do think it's high time to go back and revisit this. Is the money readily available because it's on a reimbursement basis? Are we putting it only in areas where, you know, we might want to diversify the portfolio? As I said earlier, be more technology agnostic. Do we need to think about whether or not the contribution factor, in and of itself, is enough, in an environment, where, as Scott sort of mentioned, we don't have as many companies that are providing phone services? So, what are we tapping into, and how does that pass to the consumer?

So, I, too, and I have said this, and I -- and, you know, I say it from a perspective of two ways. One, we either have to have the political good -- political will to look at broadband as a service vulnerability, the same way we look at food, and housing, and other areas, and we put it on the National Treasury, and we treat it as a social support program, much like we're doing with EBB right now, which has gotten over one million people subscribed to it, or we got to bring in new players. And the logical players who make billions of dollars in advertising revenue are tech companies, who, with one cut of a check, could actually broaden the scope of the fund, but also help us serve more people.

So, again, I think, you know, this goes back to having this conversation. This down payment in infrastructure is only going to go so far. And what's going to happen, Maggie, and Scott, and Keith, and tell me if I'm wrong, we're going to see these fractures and leakages in outdated functions and our sustainability programs, have us go back when this other money runs out, because that's what people are doing right now, right? The stimulus money is running out for thousands of schools. Those hotspots are going back. Uh-huh.

MR. WALLSTEN: The thing I'm worried about, though, is that -- the thing I worry about is that we end up thinking that there are certain -- certain groups should pay for certain types of subsidies.

MS. TURNER LEE: Right.

MR. WALLSTEN: And we'll always end up in that, you know -- then, you know, things will change, and there won't be enough in that pot, as opposed -- we don't decide that certain groups are responsible for certain other people or sort of as a society supposed to be responsible for everybody, and

that's why. Ideally, it would go through the broader tax system, right? And now, I -- whether there's a --

whether there's actually a political will for that is a different question.

But we don't have a one set way in this country of doing it, which is kind of a problem,

right? Like, roads are maintained through gasoline taxes mostly. But, you know, Nicol mentioned food,

SNAP. It's -- we don't -- you know, we don't charge Kraft to pay for that. That's comes from, you know,

comes from a --

MS. REARDON: Let's get into this some more. Yeah.

MR. WALLSTEN: -- role tax, and so, it's hard for us to figure out because we don't have

one way of doing it in this country.

MS. REARDON: Yeah. I want to -- and this is a great way to sort of move into the next

sort of portion that I want to make sure we have some time to talk about. And before we do that, though, I

want to remind the audience that, you know, please, submit your questions. We're going to try to leave

some time here, at the end, to talk, and you can submit those at events@brookings.edu, or on Twitter at

#DigitalDivide.

So, let's go into this next little area that we should talk about here because the plan isn't

going to just cover like building out infrastructure. You know, another big area of discussion in public

policy here is really around affordability. And that's something that I feel like has been ignored for a

number of years or not really addressed. And I want to talk a little bit more about that. I guess, you

know, one of my big questions is, like, first, what does it mean? When we're talking about making

broadband affordable, like, who is it affordable for? Who should it be affordable for? And what should

the policy -- you know, should it be affordable for me, you know, Maggie Reardon, or is it, you know,

affordable for somebody who, you know, maybe doesn't have a job and really is living below the poverty

level? So, what -- what are we talking about here? Who wants to go first? I don't know if, Keith, if you

want to talk about, like, in particularly, in Kentucky and in the area that you serve? I mean --

MR. GABBARD: Yes, we -- I can so that.

MS. REARDON: -- what does affordability look like for your constituents?

MR. GABBARD: Well, actually, I serve the minorities, two of the poorest counties in the

country, actually, and we have a lot of poverty here, but the -- ironically, the Universal Service Fund we were just talking about helps us be able to keep our rates -- reasonable rates in comparable urban areas. And then, of course, affordability is part of USF, the Lifeline part. And, you know, of course, the EBB Program has started, and we don't know how long that's going to last, but I know we've had over 200 people apply for the EBB Program, just in the last couple weeks. And, you know, it's a little bit difficult trying to get everything straight, as to how do you actually apply, and use seconds, and struggling with that.

MS. REARDON: Yeah, it's interesting though, Keith, you mention that just like we were talking about the Universal Service Fund, so, getting that subsidy from the federal government to help with operations actually helps you be able to keep the cost down of your service, too. That's interesting.

MR. GABBARD: Absolutely, that's --

MS. REARDON: Yeah.

MR. GABBARD: -- a big part of what the USF is for. And it's, you know, allowed us to be able to keep our rates -- you know, I think we charged under $40 -- $39 for 100 Meg, up and down, and a gig for under $100, and we -- and our people -- you know, we're getting -- a high percentage of our people taking our broadband because it's becoming more and more of a utility now. It's like water and electricity. You almost have to have it, no matter what your income.

MS. REARDON: Yeah, and, you know, and just to sort of, again, explain to folks who are dropping in and watching this, when we talk about, you know, subsidies on the consumer side, we -- again, Universal Service Fund is also funding the Lifeline Program, which provides a $9.25 subsidy for low-income people who qualify, that they can spend on either telephone service or broadband, and then, since the pandemic, Congress also allocated funds for the Emergency Broadband Benefit Program, which Nicol mentioned, and that provides a $50 subsidy to -- for internet service. And, I mean, how's that going? A million people have signed up, more than a million people. I think people think that that's -- a lot of people heralding that, is like, oh, this is great, we really needed this subsidy. But how's it going? I mean, are there concerns?   Like, is that how we make broadband affordable for everyone?

MS. TURNER LEE: Just -- go ahead --

MR. WALLSTEN: Maybe I -- can I take -- yeah.

MS. TURNER LEE: -- go ahead, Scott, then I'll go -- I'll go next.

MS. REARDON: Okay, go ahead, Scott.

MR. WALLSTEN: So, I mean, your first -- the way you set up the question, also, is really interesting because, you know, do we have an affordability problem? But it's a problem defining affordability. We don't -- you know, it doesn't have a specific definition, and there has been a lot of work on that question, overall. Mollie Orshansky, an economist, who came up with basically our poverty -- what we consider our poverty lines, in the 1960s, kind of built this whole field of how do we -- how do we think about that question? Because it depends on how much people value different things and then also prices. So, it's hard to define what it even means.

But then, going to the EBBP and what people -- and how you might help people, a voucher-like program is definitely the right way to go. You let people make decisions on what they're going to spend their money on. So, the best thing would be to give them money and let them decide to spend -- what to spend their money on, but we don't do that. And so, you know, the next best thing would be some kind of voucher program.

But the problem -- the problem with the Emergency Broadband Benefit Program, as it was set up, well, there are two. One is that, if you look in the law, it has no objective. It doesn't say what it's for. So, how are we supposed to measure whether it's done a good job, when we don't know what it's for? Was it to get more people online?   Was it to help people who are having trouble paying their bills? Was it to let the ISPs bring everyone up to a $50 a month plan, since, you know, the households can be charged zero, no matter what the price of their plan was, up to $50? And so, it's hard to say. I mean, anybody who's eligible for it should definitely sign up for it. But we could do better with a plan like that, going forward, if we were to, you know, put more thought into how it should be designed because we can -- it could be done in a way that does not create incentives for ISPs to bump up the plans that people are on.

MS. REARDON: And I think that's something that people have been complaining about, right? That's come out in some of the reporting that I've seen, is that Verizon has been accused of sort of

bumping people up to a more expensive plan, and that's covered under EBB, and then it --

MR. WALLSTEN: Yeah, it's what was 100% predictable.

MS. REARDON: Right.

MR. WALLSTEN: In fact, many of us predicted it because, I mean, if you're in the pricing department of an ISP, anywhere, why wouldn't you? But it didn't have to be like that. The program could be designed -- a program could be designed to make it very difficult for a company to do it. And I don't mean via rules or laws because those are easy to gain. But, for example, if you could design a voucher so that the company doesn't know that you're paying with a voucher, then you can't identify the people who are using it. And it reduces the incentive to get rid of the low-cost plans. So, there are things we could do to really improve this in the future, if we go forward with it.

MS. TURNER LEE: Right.

MS. REARDON: Yeah, and what are your thoughts, Nicol?

MS. TURNER LEE: Yeah, I mean, I think it's such an interesting conversation we're having about the Emergency Broadband Benefit because I sort of look at it a different way. I mean, first and foremost, you can go back and have this conversation that maybe there was, you know, some type of price changing because of the benefit being available. But then you look at Keith, where his folks are paying $39, and they have a $50 benefit to put towards that. I think, again, we find ourselves going down the telecom trap, which is sort of seeing everything so myopic, when, really, and, Scott, the thing that you said, that I can agree really, is the fact that we actually saw Lifeline 2.0 in this Emergency Broadband Benefit.

The $9.25 is obviously not enough money in universal service for people to actually get service, whatsoever. The fact that we have had 40% uptake on Lifeline, and we saw a million people come on this, and I'm going to be honest, I saw the EBB marketed in my county school district, I have seen it in commercials, I have seen it among community-based organizations, and I think that speaks volumes to the fact that when we look at what Biden is trying to do with Broadband Infrastructure Plan, and I hope somebody from the White House is listening, we're not talking about making this a telecom issue.

We're really talking about how do we integrate this type of universal service, where it's interagency, and it's also driven by our social service providers, in partnership with our private sector. And I agree with you, Scott, we got to think about what this looks like. But clearly, when people are choosing between broadband and bread, and the EBB is really clear. Are you on free or reduced-price lunch? Are you a person who is unemployed or dislocated during the pandemic? Those folks, and as Keith said, are you in an area where the poverty line is so high that you have to continuously make decisions, based on data that we already know, that costs, though not as high as other areas of relevancy? There's still grandmothers that make less than a dollar, and -- on -- about 50 cents on a dollar, that are getting their kids connection to broadband because they want them to be successful in school and break the trajectory of poverty.

But I do think, Scott, to your point, I do think it's important for us to look at, again, what we've learned in this pilot, and how do we take those lessons and modernize the Lifeline Program, so we can actually see --

MS. REARDON: Yeah.

MS. TURNER LEE: -- what value that brings to get more people connected.

MR. WALLSTEN: And you're also making -- you know, you're saying, again, a point you made earlier, which is that, you know, we have to decide what kind of program is this. Is it supposed to be like --?

MS. TURNER LEE: Right.

MR. WALLSTEN: -- a Welfare Program? And I don't mean that in a pejorative sense.

MS. TURNER LEE: Right, it shouldn't be a social service program. Right. Right.

MR. WALLSTEN: I mean, is it assistance or is it specifically for broadband?

MS. TURNER LEE: Right, but --

MR. WALLSTEN: And those have kind of different implications.

MS. TURNER LEE: But it doesn't -- I'm sorry, Maggie.

MS. REARDON: You know -- you can go.

MS. TURNER LEE: There was one thing on Scott's point.

MS. REARDON: Okay.

MS. TURNER LEE: But it does indicate, Scott, that if it's -- and I don't -- I'm glad that you, like, wrote it, and backtrack on the welfare program, it's not about a welfare program. It's whether or not the FCC, as an agency by itself, can actually deliver that benefit to the people that need it the most.

MR. WALLSTEN: Yeah, that's fair.

MS. TURNER LEE: And I think that's something that, for me as a researcher, I've learned tremendously, even in the writing of the book, that here is a program that had a million plus people taken up, in a very short period of time, because it was disseminated through a variety of entities, something that many of us who are watching this have been advocating here.

MR. WALLSTEN: Right, but -- but let's do a little experiment question right here, a little data gathering. Keith, how many people who signed up for EBBP are new subscribers?

MR. GABBARD: There are a few. Off the -- probably about, you know, maybe 10% of the 200.

MR. WALLSTEN: Ten percent? Okay, so --

MR. GABBARD: So, we did get some. I wondered about that, myself. Would it just be people getting a discount, or would it be new? And we've got several.

MR. WALLSTEN: Right, and so, that's one of the inherent problems. What is it we're going for? Is this to help poorer people, or is it to get a -- to encourage adoption? Because those have, you know, kind of different implications of what we -- you know, how we want to proceed.

MS. REARDON: But you could possibly be doing both, in a sense.

MR. WALLSTEN: Well, we -- yeah, we are, I mean, but --

MS. TURNER LEE: Well, that's just it, you could be doing both.

MS. REARDON: The one thing I question, though -- the one thing I question, though, is $50, right. To me, that seems like you're -- you're also artificially -- if you keep that as permanent, right?

MS. TURNER LEE: Right. Right.

MS. REARDON: Like, that could artificially inflate the price of broadband because we are seeing providers, most major ones, are offering a $10 or $15 low-cost option. Lifeline would cover that,

as it stands today. So, why do we -- you know, do we need a higher subsidy? And, you know, like, for example, Keith, not to pick on you, but, you know, you've got a $39 plan, right? Would there be an incentive for you to bump that up to $50, if you've got, you know, a subsidy that people are going to get? I mean, why not get another 10 bucks from the government?

MR. WALLSTEN: Keith has the disadvantage of being the only one of us who actually does something.

MS. REARDON: Right.

MS. TURNER LEE: Right, right, right.

MR. GABBARD: We don't -- we don't operate that way. A small communication provider or a cooperative, we just -- these are our neighbors and friends, and we're not looking to just maximize profits --

MS. REARDON: But if you were a bad guy.

MR. GABBARD: -- it's more than that. I'm trying to keep --

MS. TURNER LEE: Right.

MR. GABBARD: -- make people's lives better here. It's part of our mission.

MS. TURNER LEE: That's right. And, Maggie, if I could add to that, I think, you know -- and again, in writing the book, and it's coming soon, folks, it's coming soon, I promise. The issue is the manuscript is almost done. If Darrell West is watching, it's coming to you, it's coming to you. But, listen, this is the issue which I think is so important about this conversation.

When we start talking about infrastructure, we start talking about broadband, we immediately go to, you know, deployment. We immediately go to, well, poor people got to get online. So, how are they going to get online? And let me tell you, folks, the train has left the station. This is no longer a binary who's online and who's not online. We're talking about basic functions of learning, working, telehealth, and others that are bandwidth sapping applications, that also require people to have a device alongside, when you talk about that with the EBB, in terms of people getting a device.

And I think it's important for us to start to think about how do we create an internet for all, and for all intents and purposes, where we're not necessarily starting to bifurcate out the internet, in ways

that we're trying provide people with a handout. It is a true fact that people, before the pandemic, were on the wrong side of digital opportunity, Black, Brown, low-income, elderly, tribal, and that's a fact, foreign born. And guess what? We have found that the more and more we allow those folks to be digitally invisible, the more and more we're going to pay the cost in other ways. So, I do think it's important to -- to both Keith and Scott, let's document what we're seeing.

The biggest failure of this whole pandemic, in the digital access, is we have no life lessons of what happened with schools, of what happened in telehealth, what happened with all of these national experiments. We've been placing post-it notes on the wall. And that's why, again, I put out there a framework of a tech new deal because we're only talking about the adoption side. What about digital literacy? What about workforce development opportunities that come from this? What about making churches and libraries that were digital parking lots into digital anchor institutions that can help?

And I think one of the nice things that we haven't talked about, that I do like in the Clyburn and Klobuchar bill, is the creation of an agency that would actually look at what you're talking about, Scott, which is to gather the data and listen to people, like Keith and others, to figure out what is it that they need, and to do what Maggie's talking about. And you're talking about -- which is to collect the data, so we ensure that we're not, you know, creating predatory schemes or potentially not seeing some blind spots, as we try to close the divide across the country.

MS. REARDON: Yeah.

MR. WALLSTEN: I mean, I can't -- I can't agree with you more on that because we missed a huge opportunity during the pandemic to learn lots. You know, every school tried to do something to deal -- to help kids who weren't connected. You know, somebody should have been taking notes on what they were doing. What did each school do? How many of those programs were successful? You know, and it could be -- you know, there could have been short-term success, like did the kids attend classes? Long-term success, how did it affect their education? But, no, nobody was interested. Nobody did it. The FCC didn't do it. The Department of Education didn't do it. And, you know, think of what we would've learned. There have been 10,000 experiments.

MS. REARDON: Yeah.

MR. WALLSTEN: But, nope. And so, that worries me a little bit that we still don't understand the importance of gathering that kind of information.

MS. REARDON: I'm going to move a little bit to some audience questions because I've gotten some here, in my little chat window, and this goes to what we're talking about. What about -- you know, David Webber asks, what about, you know, defining broadband as a utility, and then you make it eligible for some other social service, like Utility Assistance Programs, like assisted housing rent, you know, using housing rent calculations? I mean, would that -- you know, does that require Title II, oh my gosh, the third rail, or, you know, how --?

MS. TURNER LEE: No, you know --

MS. REARDON: What would we do there?

MS. TURNER LEE: I think it's a great question. I mean, it goes back to the conversation we've been having. And thank you, David, for that question. I mean, there was no reason that public housing or for any federally assisted housing in this country didn't have broadband sort of baked into that, that we didn't create these super Wi-Fi hotspots, that young people could actually tap into, or, you know, community-based organizations were eligible to e-rate, the same way other organizations were.

It's interesting, though, and I like this question from the standpoint, as I've been talking about it in my own work, that there is something to be said about equating broadband to rural electricity, right, which is not as dynamic, versus creating broadband to a utility, whereas we look at other utility services that have these social supports, right? So, there is the Low-Income Housing Assistance Program that goes, so you can make sure you can afford heat. There's something with water that's actually -- you know, there's all these wraparound programs, much like what we're trying to do with EBB.

So, I do think, you know -- I know we're out of time, and, Maggie, we are hijacking your panel. And I think that it's worth the conversation, which I think all of us are kind of saying, which is, if we know the direction that we're trying to go in this country, then how does that pair this down payment on infrastructure, universal service, in terms of, you know, really reevaluating what we're trying to solve, and then how do we measure that, so we can go back and say that this is very helpful? I'll leave it at that.

MS. REARDON: And it's not -- the other thing that I want to touch on, too, is it's not just

about affordability, too. That's not another barrier, right? There are -- you know, because -- and I think

someone else on this panel, I -- forgive me for forgetting who said it. But it wasn't -- some of these

programs, the ones that are, you know, free or very low cost, they still won't have amazing take rates,

right? So, why aren't people signing up for broadband, even when it's available, even when it's made to

be more affordable? Like, what are the barriers, and what can this legislation do to try to get those

people online, too, because that's important.

MR. WALLSTEN: Well, I mean, partly, it goes to doing experiments because if we have

lots of different programs, we can see which ones are more effective at getting people online. Another

thing is that, you know, still, most of the data we're working with is from before the pandemic, and, you

know, one thing that -- you know, when people say that broadband or the internet's not relevant to them,

probably for -- a lot of people realized that was no longer true during the pandemic, and we -- and while

the FCC data and so on isn't really out yet, for most of the pandemic, I guess some is, the -- you know,

you can look at ISPs, 10-Ks, and you can see an uptick in subscribership during the pandemic.

So, you know, and as more and more people sign -- as people sign up, the group that's

left gets to be harder and harder to get because those are the ones who, for various reasons, obviously, if

they're the last ones to sign up, and there are reasons for it, and so, they're the hardest ones to get, and

so, the problem gets more and more challenging, over time, even as you -- even as you're succeeding.

MS. REARDON: Yeah.

MS. TURNER LEE: I'm going to let Keith go. Keith, I'm being good, okay, so, you can

go.

MR. GABBARD: Well, I may not -- it is a difficult question because there are some

people that just do not want the internet. We have customers that just -- that have, actually, telephones

with us, that don't want the internet. I know that's hard to believe, but it's still -- there's still a few out

there. And it's just going to take time for them to realize the relevance or whatever because we all know,

most of us, it's one of the more important things in our life, broadband, and we can't hardly function

without it, and it's hard to believe there's still people out there that are functioning without it, but there are

some, and it's a smaller and smaller percentage, I think, as time goes by. I think time will take care of

this, if nothing else does, but there's probably other ways to resolve it quicker. But I'm not sure that I have those ideas.

MS. REARDON: Yeah.

MS. TURNER LEE: Yeah, and, I mean, I would say this, I mean, when I say that I've been in this 20 plus years, Maggie, I've been in this 20 plus years, starting with the community tech center movement, when we were just training people on basic computer functions, like Microsoft Office, to be able to get jobs. I mean, here's the deal. We have dealt with this digital divide as a binary constraint, and we now have an internet where it is actually so much more complicated and so much more layered. You cannot get a ridesharing service without a smartphone and a credit card. You cannot see a doctor, you know, without some form of either Federally supported health insurance or your own private insurance, and a smartphone, and broadband. And so, I think the more and more we see -- sort of see this push, where you cannot function in the analog world, that this question of adoption -- and there's -- adoption is actually going to become a moot point. The problem will be is that we will continue to widen the systemic inequalities that already exist in this country.

MS. REARDON: Yeah.

MS. TURNER LEE: The people who are not online, that, for example, I'll just go back to the schools, in terms of what Scott was asked, in terms of data, we already know, publicly, that McKinsey study, that says that Black, and Brown, and tribal land students, are going to be behind months, in terms of cognitive retention of learning principles, simply because they could not live online to actually do school. With that being the case, it's just really important for us to sort of take this, assume that the train has left the station, and work hard to get to local champions that are actually doing this work. I could tell you, and, you know, I feel so shameless because I'm not moderating, and I know I work at Brookings, but it was a really nice treat to go to the people that are affected most by this, the people who are trying, every day, to figure out how to navigate this, whether they have one or two providers, they have no providers, they have 0G, they got 4G, they almost got 5G, they got a laptop, they don't -- the bottom line is people know what they are without, and it's just incumbent on us, as we've experienced with this pandemic, to figure out ways to normalize this for our communities.

MS. REARDON: And you know what? That leads to another question we have from the audience, from Bryan Kelley, at the Education Commission of the States. How can state policymakers move to close the digital divide, especially in light of federal changes in all this federal money? How does -- will -- should this impact state education policy? I don't know, what do you guys think about, like, state policymakers?

MS. TURNER LEE: Yeah, I mean, I'll say this, and then I'll be quiet for the rest of the time, I promise. I, personally, think the state officials need to take on, with the federal government, Department of Education, and the agencies, No Child Left Offline. We did it with No Child Left Behind. We need to do it with No Child Left Offline. We know we have to equip our students for 21st century learning. I have a 14-year-old. I did not like her being home for over 18 months, I really didn't, because I was here, and she was on her device. But she has learned so many skills that are going to be skills she'll need for the 21st century. So, I do think it's important for us to have something where states can actually take on this No Child Left Offline Initiative and get resources to the schools, that our kids are resourceful.

MR. GABBARD: I think a lot of the states are doing their own broadband initiatives.

MS. TURNER LEE: Yep.

MR. GABBARD: I know Kentucky's just passed one --

MS. TURNER LEE: Yep.

MR. GABBARD: -- this year. They're going to start a program this year, and a lot of states are doing that. And I know, in my two counties, all these kids had access to internet, and all of them -- not all of them had it --

MS. TURNER LEE: That's right.

MR. GABBARD: -- because -- but the lot of them got it that didn't have it, once the pandemic started, and it was -- but surrounding counties, they really, really struggled here, in Eastern Kentucky.

MS. TURNER LEE: That's right. No Child Left Offline.

MS. REARDON: Okay, great. So, we've -- we're getting down here to the wire. Real quick, does anybody want to wrap up for us here, a little bit of your thoughts on where do we go from

here? You know, Scott, you wanted -- I know your big thing is we need to be able to measure this, right? Any last thoughts on where do we go?

MR. WALLSTEN: Well, I guess -- you gave my last thought pretty well. I want to make -- I want to know -- we need to know that what we're doing is making a difference because, otherwise, you know, we can just spend money and say that the outcome is that we spent all this money. And that's not the outcome we want. The outcome we want is that people are online and know how to use the internet and benefit from it. And so, we need to know whether the programs were promoting or making that difference, and we need to build that in from the start, and I hope we do.

MS. REARDON: Yeah. Keith, how about you, last thoughts here to wrap up?

MR. GABBARD: The last thoughts are it's expensive to build good broadband and government assistance is needed. And from all what I hear, the government assistance is coming even more, and we need to use it wisely and take full advantage of it. And, hopefully, small companies, like mine, will continue to branch out, and edge out, and do -- and cover areas that don't have it.

MS. REARDON: Yeah. How about you, Nicol?

MS. TURNER LEE: I'm just going to say this, read my book. It's coming out. It has everything in here. No, I'm kidding. I just want to say -- I couldn't help it. No, I think I ditto what everybody said. And, Maggie, thank you for doing this because I think, at the end, we got to figure out how to close this divide, for good.

MS. REARDON: Yeah, well, I want to thank all of you. This was a really great discussion, and I hope I get invited back to talk to some more really smart people about this issue. I'm pretty passionate about it, too. Okay.

MS. TURNER LEE: Thank you.

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