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SASHA MACKLER INTERVIEW

Hi, and welcome to GridTalk. Today we're very pleased to have with us, Sasha Mackler at the Bipartisan Policy Center where he heads up their all-important and center of attention Energy Program.

Q: Hi, Sasha.

A: Hey, Marty. Nice to be here.

Q: We're very happy to have you here with us because there's a very big topic with a lot of money attached to it that I want to help people grapple with it and I, too, want to grapple with. We're talking about the firehose of federal money unleashed by the Biden Administration and Congress, namely the Inflation Reduction Act and the Bipartisan Infrastructure Law that have come along in the last few years. Talk basically about what that firehose is and the timeline for its release.

A: Yeah, sure, I mean just to start at the beginning and maybe set the stage a little bit. The Bipartisan Infrastructure Law and the Inflation Reduction Act are really two major achievements from a federal policy perspective when we think about how do we advance and modernize our energy system and they're very focused on the developments and in particular the deployment of clean energy technologies across the American economy and they, as you say, they really have the potential to unleash an enormous amount of new capital from the federal government into this energy transition and into this this energy modernization. The Infrastructure Law came first; that was the Bipartisan Bill and it sent over to in particular the Department of Energy over $60 billion dollars; I think sort of $62 to $65 billion are the exact figures there that are targeting particular programs that the department can manage that are really focused on commercialization and demonstration of advanced energy technologies and also has capital to kind of improve the transmission network and grid across the country so that's the Infrastructure Law and…sorry, go ahead.

Q: And the timeline on that is roughly the next five years since it's a fast rollout, correct?

A: That's correct. It was a unique law in that it sort of combined authorizations and appropriations together so many of the programs that were authorized to the Department of Energy that I just described have a sort of five-year appropriations associated with them so that does give the department a little bit of a runway there to standup the programs and then fund them which is a little unique. What often happens with the Department of Energy is they are; they have to go through an annual appropriations cycle for many programs that they run but the infrastructure programs I think were largely funded for five years. The Inflation Reduction Act on the other hand was a Democratic-only bill passed through budget reconciliation and within the IRA as we call it, there was a clean energy tax package that really had a broad set of tax incentives there that are focused on the deployments of clean energy technologies and many of those tax credits go out 10 years; not all of them but many of them do and that tax package for the energy component in the IRA received a score at the time which is the assessment of how much it would cost the federal government of $370 billion dollars. Of course, the exact figures associated with the tax incentives really are dependent on how many projects take advantage of them so it's really only an estimate but it could be $370 billion; it could be a little bit less, it could be a little

bit more but it is a significant federal investment none the less.

Q: So, when did the first dime or dollar of this get spent, and is it making a discernible difference yet or have we yet to see its impact?

A: I think we have yet to see the impact because it takes time to develop projects. It takes time to standup new programs and those, so there's a flurry of activity, an enormous amount of activity within the federal government which we can talk about, and also in the private sector. Dollars are being spent; small grants have gone out the door. Big grants and funding programs have been established and funding commitments have been made but the actual large dollars that are going to flow into the economy, those are still really getting setup because projects take time to sort of work through the commercial permitting phase, to get the consortiums together, to get the contracts in place so that they can actually get out into the market and attract the capital and start the construction so there's a number of announcements have been made and all different kinds of industries and sectors that touch energy but it's really too soon to tell right now how this is going to go, how effective it will be but we know it has changed the calculus of the industry as they think about their strategic planning where they're going to deploy their dollars

and how they're thinking about sort of the next phase of the energy system here in the U.S. We know it has really changed that logic.

Q: So, Sasha, you've done an excellent job setting the stage and the platform that we're going to jump off of now but I want you to take 30 seconds to talk about what the Bipartisan Policy Center was established to do and quickly segue from that into a discussion about how much of this is vulnerable pending the outcome of the election in next November? How much do you judge and the other experts, policy experts, judge is unstoppable and will go forward regardless?

A: Yeah, well there's a lot to unpack there so the Bipartisan Policy Center, the organization that I am a part of and I lead the energy work here at the BPC. We are a Washington, DC-based research and advocacy organization that really focuses on bringing together prospectives, research, analytics, and stakeholders from across the spectrum from the energy industry, the conventional energy industry, the emerging clean energy industry, environmental stakeholders, political officials, former political officials and appointees and members of Congress and we work a lot with the administration and current political officials and our goal is really to take the evidence as we see it, the best facts and the best data we can get our hands on and

to access the challenges that we are facing from an energy system perspective and try to find the best answers and the best policy solutions that the broad group of stakeholders can get behind and not only to put forward ideas on how we can resolve them through legislation or regulation but also do the work to get them passed into law or into regulation so we're very focused on the research, on the socialization and education of the work that we do and then the impact so we have a…go ahead.

Q: So just to say, how much of that is segregated from the poisonous political atmosphere right now?

A: Well, that's…we are a part of the discourse and the system and so we have to deal with the politics as they are today, not as we wish they were so we're dealing constantly with the kind of arguments and fights that take place on energy and climate issues and net zero energy transition and we are trying to find ways to get beyond them and the thing I would say about that is if you sort of move beyond what you read in the headlines or in the newspapers on energy and climate-related issues and actually get into the substance of the work and the challenges of what's going on from a policy perspective or in the marketplace, there's actually a lot of agreement amongst all the stakeholders in terms of where the challenges are and what some of the solutions might be, and that's kind of where we focus at the BPC is trying to

find those areas of alignment and putting together the political and policy formulas so we can get things across the line. At the BPC we work on a number of issues from health policy to immigration policy and economic policy in addition to energy and what I find is among all those tough issues, policy issues that the country is facing, energy and climate is actually one of the more bipartisan issues and is becoming more bipartisan over time, which I think is maybe a surprise to many people out there who don't follow these issues closely. And that's evidenced not just; the proof of that is not just me saying it but looking at what's happened over the last four or five years. It used to be the case that if you wanted to have a conversation with a member of Congress from the Republican Party related to climate policy, that was very hard to do even four or five years ago. In the last few years, we've seen significant legislation connecting to energy and the energy transition come out of Congress in a bipartisan manner. The Republican Party has an all kind of platform now. Arguing about the challenge anymore about the problem that we face, we're talking about really what to do about it and that's a much healthier place and so there is reason to be optimistic although I don't want to sugarcoat it. There are a lot of political challenges associated with these issues and that is inhibiting further progress but I think there are important

things that have been done that we need to implement well and that's what we're talking about here, and then also, more that needs to happen.

Q: Sasha, to what extent is that attributable to the fact that maybe a disproportionate share of these benefits are flowing to red states?

A: Well, that is certainly the case. When we think about the energy economy it's really the lifeblood of our overall economy and that's the industrial system; that's the power sector; it's the parts of the country that are building things and using lots of energy and that happens to be in large part in parts of the country that are red states and conservative states and so when we think about where the dollars will flow from this federal spending that we just described, most of that will go to those areas, and so they see the economic benefit associated with these policies and that's a good thing for buy-in from Republicans and Democrats and I think to get at the point you also asked me to touch on which is the resiliency of these policies even if there is a political change in November , I think it helps sort of with the durability of these policies because these states, these regions and the political officials that come from these regions see the benefits and don't want to lose them. In fact, they want to sort of build on them and so I think that's going to help us

over time as we continue to implement these programs and then look to the next set of policies that are going to…

Q: Okay, so let's segue now to other more popular, perhaps more intractable problems. There have been articles, most recently in *The New York Times* in the last few days that one aspect of the Inflation Reduction Act, the desire to use tax credits to pump up demand for EVs has been working fairly well. But there still are persistent problems with the supply chain and permitting side of the fence. Just to give a yardstick to our listeners and to help frame your analysis, last year 32 gigawatts of solar paneled wind turbines and batteries were added to our energy grid, but when the Inflation Reduction Act was passed, the hope was to add 46 to 79 gigawatts in 2023 and 2024. There are projects pending that would bring it up to 60 gigawatts a year. I'm going to ask you how do we get from 32 to 60 but to keep us all honest, the goal here is to add 70 to 126 gigawatts from 2025 to 2030 to really achieve what we're trying to achieve here, so I'm going to ask you to talk a lot here, and maybe I should ask you five or six questions, so let's start with, why is it 32 and can we get it to 46 or 79? And then I'm going to ask you towards the end of our conversation, how do we get to 70 to 126? And jump in on the permitting side because I see you've written some articles on it.

A: Yeah.

Q: What's the fix there if we have bipartisan buy-in and the capital? How do we get down to the states and change the permitting process?

A: Yeah, well so these are really important issues that you're raising because it's clear to those of us that are paying attention either from the policy standpoint here in DC or if you're a project developer out somewhere in the country trying to get a project done that the economics of the projects are certainly very crucial to that moving forward in the system we've created here today but they're not the only thing that's needed for success and so when we look at the incentives that have been put in place from the IRA that are designed to make clean energy broadly more cost effective so it can compete in the market and get financing and get built and displays higher emitting technologies that are in the system right now, that's a great first step. But we're not going to realize the benefits of those tax credits if we can't get the projects built and connected to the grid. And what we're seeing now is the challenges associated with connecting to the grid and getting permits to build these big facilities; that is slowing us down and so the number that you just recited I think first of all, encouraging because they are large, I mean, there's a lot of money flowing into the system and renewables and other clean energy technologies are getting a

foothold in the market and they're scaling very rapidly. This is great news but the challenge is that we're not moving fast enough or we're not moving as fast as we could be, right? It depends on what we're trying to accomplish. If you look at the administration's goals, we need to be moving faster and if you look just at economic opportunity that was created by the IRA, we see that we could be moving faster and not just for wind and solar really but for all energy infrastructure, for transmission lines that are technology agnostic. They don't care what electrons come onto the lines but we need them. We know that the modern energy economy that we're moving towards is going to be more electrified than it is today because it's cleaner, it's more efficient, it's more cost effective but we are having a lot of problems with interconnection, with public pushback, and lack of support for the projects at the local level and this is slowing us down so we know we need to do more.

Q: So, you've articulated the problem. What is BPC doing to try to get past what new thinking, what new strategies are starting to emerge?

A: Yeah, so these non-cost factors to the energy transition and the modernization of the energy system really are our number one priority right now. The single biggest thing we can do to help realize the benefits of the laws that have been passed is to make

it easier to build projects and that doesn't mean sort of taking apart all of the environmental protections that we have in place for facilities. There's an enormous amount of inefficiency in our system and just old ways of doing things that were perfectly fine one or two decades ago when we weren't building all of the things that we need to be building today that worked okay but we need to change now; we need to modernize and so we are really focused on what we call as a "umbrella issue permitting reform." How do we modernize the way in which large facilities can get their permits and their approvals so that they can move forward. There's an enormous amount of not over regulation in the sense that we're trying to do much from an environmental protection standpoint. We don't want to lose that. What we want to do is just make it easier to get through the process. Now, it can take up to five to seven years, sometimes even a decade to get a permit for a transmission line or for a large energy facility and at the end of the day, the permits come; they just take too long and that creates a lot of cost inefficiency and other things and there are very straight-forward things that we can do to reduce those timeframes, reduce the litigation periods; make it more…the agency reviews, work more in parallel rather than in serial; just basic good governance that we can put in place.

Q: So, who do you need to talk to? Is it the public utility commissions? State legislators? How do you do it?

A: So, the challenge here is that there is so many different sort of touchpoints in the permitting system. Right now, at the BPC, we're focused on what can the federal government do? It's not the only thing that needs to change but it's the first place to start and so we are working with many experts on these processes who are familiar with the agencies that have a role in this. We're working with the private sector that understands very well at what they're being asked to do and trying to learn from those players so we can improve the process and importantly, we're working with members of Congress that are trying to do something about it. And this is where; I'll just make a final point here , this is where I see a real opportunity because it has historically been the case that the private sector, energy companies and Republicans have been advocates for permitting reform but Democrats and maybe the environmental community have really been less open to the idea because they see it as; the Democrats in particular and the Progressives in particular have really not had a problem with it taking a longtime to build energy facilities because most of those energy facilities that were being built were natural gas and oil and other things and they wanted to kind of use the permitting system to limit that

investment because we didn't have any other climate policies or any other tools at our disposal to try to hold that back and so that has been the situation for a very longtime but now the politics have changed because with the IRA and with the investments that come to clean energy through the Infrastructure Law, it has become very clear that clean energy projects which we are going to need an enormous amount of to actually make a dent in our carbon emissions, they're facing the same permitting challenges that we saw in the conventional energy industry facing for decades and so they need these reforms as well and that creates a political opportunity now to try to make some changes and that's what's happening on Capitol Hill and the BPC and my team here is very involved in trying to help put forward the ideas and create the political coalitions that can get some of these common sense smart reforms enacted into law.

Q: So how much of this resides at the Federal Energy Regulatory Commission?

A: Well, they have a big role, not the only role but they do have a big role in kind of helping to improve certain pipelines and transmission lines and creating the market structures for a lot of this but there's also there are permits that are required for large projects the NEPA process, which is the National Environmental Policy Act that has just become extremely

cumbersome and needs to be kind of reevaluated with a modern sort of perspective and so there's lots of process things around interagency reviews of permits that can be improved so FERC has a role, other agencies have a role because they have to kind of… they have their say in permits and we need to try to get them all organized around a common goal which is environmental protection but also efficiency in approval so we, the work that we are doing at the BPC is really organized through a project we're calling our Smarter, Cleaner, Faster Taskforce so we want to be smarter about it and we want to help build faster in the service of cleaner. Those are not necessarily intention; we just have to be smarter and strategic about it and that's where we think the opportunity is.

Q: So, what share of the potential benefit could be gained by redesigning the grid so that transmission lines are not, which nobody wants in their back yard, are not quite as essential? Where, I mean, are you working on the technology side as well as the policy side to upgrade our existing transmission lines so they can accomplish more? Do we need to put in place policy incentives to unplug coal and natural gas and plug-in renewables at the site where those polluting sources now are at?

A: Yeah, well so, we are doing a bit on the technology side. There's so much happening right now that I think really the way

to look at this is we need to be doing all of that, right? We need to be creating the regulatory systems so that more transmission lines can be built because we know that where many of these renewable resources are, they are in places where there isn't a lot of demand for electricity so if we're going to harness that energy potential, we need to be able to take those resources and bring them to the demand centers; that requires transmission. We're going to need new transmission lines. We also need to think about the way that we oversee and regulate our different grid systems around the country and we need to modernize that. It currently takes over four years, sometimes longer, to connect a project that you're going to develop, connect it to the grid because of the backlogs in the queues so we need to make that much more efficient.

Q: Just on that one point and I'll let you continue, how much of that is at the ISO level and what are causing these grid interconnection delays?

A: So, most of it is at the ISO level which are sort of the smaller grids that are run as a system. We don't have one national grid here in this country; we have many different smaller grids that are run independently and then they in most places they connect with each other and so the rules governing how projects can connect to the grid are slightly different

depending on where you are in the country but the backlogs are a real serious problem, and it has to do with the process of what a developer needs to do to connect and how the transmission upgrades are paid for; who's responsibility is it; if it's surveying; if the investments that are needed to connect the project have a bigger benefit, should more people share in those costs? It gets very arcane very quickly but the point is, we can do better. We're leaving a lot of money on the table and a lot of technologies off the grid because of these antiquated systems so that needs to be rethought.

Q: Is it being rethought? Are there…is progress being made?

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A: Well, that's kind of an open question depending on who you talk to. We're not doing enough.

Q: We're talking to you; go ahead.

A: Yeah, yeah and so my view is we're definitely not doing enough, I mean, we're…we've sort of come to the point now where we appreciate the problem and that's kind of new, right? I mean, before there was just a lot of sort of keeping, we keep doing things the way we've always done them and I think at this point there's an appreciation now that okay, how can we do this better so those conversations are now starting but it takes time to turn a tanker, right? and so that's happening now. I don't think it's

happening quickly enough and so, can incentives be put in place to really speed things up and can we do better at connecting different grid regions so that if something is coming online in one part of the country, you can actually more easily flow into another part of the country. Those are some opportunities that we need to really kind of take advantage of.

Q: The ISO has marched to the FERC drumbeat, right?

A: I mean, they are; yes, they do connect there.

Q: So, to what extent do your friends in Congress put pressure on laws in place that requires FERC to get its act together in this regard?

A: Yeah, that is certainly on the table as we look at what kind of federal package could be put together here to improve things, right? and so, the authorities and the instructions to FERC will be a I think, a key part of this.

Q: So, this conversation is absolutely very important and you've been very lucid. We probably could have this conversation every other month and bring people up-to-date.

A: Right, for the next 10 years.; no doubt about it.

Q: So, let me for your parting shot ask you to comment on something I imbedded in a question 10 minutes ago which is, the goal is to get us to 70 to 126 gigawatts each year of clean stuff being added to our electric system or more than double the rate

that we're doing it now. Can we get there by 2025? Are you optimistic?

A: So, the next few years will see I think modest progress so 2025 I think is; it will be better than 2024 but I don't think we're on the pace really to see those numbers increasing at the rate that they need to be. I'm much more optimistic as we look to 2030 and then beyond because it's easy to overestimate what we can accomplish in a year and underestimate what we can accomplish in a decade. I think we can really…the improvements that we make to the system, to the economics of technologies, to the whole infrastructure and regulatory system, those improvements will be compounding, right? so we will see the benefits really start to grow over time and I'm very optimistic about what we'll see a decade from now although I think the pace today is too slow.

Q: Um hum. Would you like to What do you like about your job?

A: Well, I like to get to have conversations like this where we're thinking about the future and really trying to find solutions, right? I'm not in the business of throwing bombs or advocating for a particular outcome or a technology. I'm looking at, okay, what are the goals? What's in the best interest of the country, and how do we get there? And that's really kind of a fun place to be so that's what I like about the Bipartisan Policy Center.

Q: Thank you, Sasha.

A: Thank you.

We've been talking with Sasha Mackler at the Bipartisan Policy Center where he is Executive Director of the Energy Program.

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