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ZEALAN HOOVER INTERVIEW

Hi, and welcome to GridTalk. Today we're going to have a really important discussion with Zealan Hoover who's the EPA Administrator's Senior Advisor for Implementation for a massive amount of spending that's going to be transforming our electric grid and our whole electric sector.

Q: First, let me say, greetings, Zealan. Thank you for joining us.

A: Thanks for having me, Marty.

Q: So, we're talking principally about the Bipartisan Infrastructure Act and the Inflation Reduction Act which have been on the scene for over two years now. Give our listeners an idea of the scale of spending that EPA is going to be administering through these two programs.

A: Yeah, absolutely so, President Biden has charged us as a nation with reducing emissions 50% by 2030 and in the near term a lot of that emissions reduction is going to

come from the power sector and it's also going to be enabled by emissions reductions elsewhere from electrifying other sources of energy and getting them onto the electric grid and at EPA, we have received tens of billions of dollars across multiple programs through the Infrastructure Law and the Inflation Reduction Act to both accelerate grid decarbonization and to get more zero emission equipment plugged into that grid, and so what's really...

Q: So, let me stop you right there, Zealan. You've been around since the Nixon Administration, is that correct?

A: I have been around at EPA...

Q: Not you personally but the EPA?

A: EPA has been around since the Nixon Administration and we have been working to fight climate change for decades.

Q: So, the scale of spending that you're on the cusp of releasing, how's that compare with everything you've been doing since the 1970s?

A: It's really exciting. EPA has historically been a regulatory and scientific agency and those missions are

still core to everything that we do. You may have just seen that we released some incredibly powerful and exciting power sector regulations just last week. But this is a new moment for us to also play in an equally big way as an infrastructure funder so EPA's base budget is about \$10 billion dollars a year. We've received over a \$100 billion dollars in supplemental appropriations. A lot, not all of that but a lot of that is for electric system decarbonization and other climate investments. We also have other some really important investments around water infrastructure and environmental cleanups and so across our portfolio, we are now playing in a big way as a deployer of funds to drive decarbonization that complements our regulatory work.

Q: So, there's a lot to get into and let's start teasing out specific aspects of this funding and have some discussion around particulars. The Bipartisan Infrastructure Act which has given \$60 billion dollars to the EPA; a mere \$5 billion dollars, which is a lot of money, is going to the Clean School Bus Program

Q: Tell us a little bit about the objectives there; why school busses?

A: School Busses are a wonderful program. The administrator has been all across the country to visit some of the hundreds of schools that have received funding already. There are a half a million school busses in the United States. It is our largest public transit system if you think about it that way. Every day, millions of kids get to and from school, on school busses and right now, almost all of those school busses diesel. If we want to get to a zero-emission economy, then we need to transition those to zero emission school busses. In the process, we're not just saving school districts on money on gasoline and maintenance, but there's also some really significant health benefits for the students, the bus drivers, the teachers, the surrounding communities. In fact, there's really good evidence that every time a school district converts a diesel bus to an electric bus, more kids are showing up in school. They're not out sick because they've got an asthma attack or another air quality-induced health issue.

Q: So, if I understand it, \$2 billion dollars has been allocated for 5,000 busses to date, and there are 600 school districts and they're going to start riding this year. Is the \$5 billion dollars on top of that \$2 billion

dollars or is that \$2 billion dollars a subset of that \$5 billion dollars?

A: The \$2 billion dollars is a subset of the \$5 billion dollars. We have a billion dollar a year over five years. We've gotten the first few tranches out and we're going to be announcing the next set of recipients soon.

Q: So, just reflect for a second on what you're telling our nation's children by putting them on electric school busses. What role do you see that playing as we try to convert our society to a more sustainable lifestyle?

A: The kids love them. Like I've said, we've been out in communities all across the country. What we hear most often, they're quieter; they don't have the fumes, you'll hear kids talking about their busses don't smell bad anymore. You'll hear from the bus drivers and the crossing guards and teachers working the bus lines that it's just a much better environment to be working in. and then, of course, if you talk to the school superintendent, there are benefits for the bottom line, too, because the operating costs are so much lower for these electric busses.

Q: And lastly, what do utilities think about them? Does it help them even out their load? Is there an effort to utilize these busses as energy storage or off-peak demand resources?

A: So, we're still in the early days of deployment but there are some really innovative partnerships with school districts across the country and if you think about it, school busses are a great use-case for grid balancing because they run in the morning and at the end of the day, and then they're parked at the middle of the day and so there are school districts that are looking at both recharging in the middle of the day when you've got ample solar, waiting to recharge in the early mornings when grid demand is lowest and then to your point, using them as battery resources is also an exciting opportunity for school districts to potentially monetize additional revenue streams so it's early days and so just looking at the usage profile, there's a lot of opportunity there.

Q: Okay, so that addresses the Bipartisan Infrastructure Act but let's return to the Inflation Reduction Act where I think the bulk of EPA's grid-related activities are going to be centered. I want to focus first on the \$27 billion dollars Greenhouse Gas Reduction Fund. My

understanding is it breaks down to \$14 billion dollars for national clean-financing institutions funding clean-tech programs. Talk about that first, the \$14 billion dollars.

A: Yeah.

Q: What's the objective? How's that going to work?

A: So, just a macro point for the more than \$40 billion dollars that we have in the Inflation Reduction Act. What's exciting about this money is, it is some of the most flexible and innovative funding that Congress has provided through both of these bills we're talking about so what we're able to do is help local communities, states, nonprofit partners be nimble and creative and accelerate the work at our other partner agencies are doing and also plug some of the gaps that are not funded by more programs that are funded, focused on more specific verticals in the decarbonization space, so to bring it back to the National Clean Investment Fund, this is a \$14 billion dollars program where we've picked three partners and these three partners are; I like to use the analogy of Freddie Mac and Fannie Mae, Freddie and Fannie, the home mortgage players because if you think about home mortgage loans, that is a standardized financial product. When you

go to get a home loan, there is standard underwriting guidance; your bank originates it but then they can resell it onto a secondary market, and as a result, we have allowed millions and millions of folks to buy homes who previously would not be able to do so. There's not a similar financial product for heat pumps or solar panels. If you walk into your local bank and you want a loan for a solar panel, they may offer a home equity loan that is quite burdensome to obtain. They might offer an unsecured line of credit that is quite expensive and so what our grantees are going to be doing is they're going to be moving the financial market to maturity around zero emission financing by helping create these standardized products that will make it a lot easier to walk into your local financial institution and get a loan at an affordable rate. At the same time, they will have the authority to make direct equity and debt investments to projects as well so where there are larger products where direct project financing is at-need, they can play a critical role there, too.

Q: So, how is that differentiated from the \$6 billion dollars for Clean Communities Investment Accelerators?

A: Yeah, so the \$6 billion dollars is complementary so with the \$14 billion dollars, we've picked three national partners and they're really going to be playing at the national level to ensure liquidity and financing and to do some of this market-making activity. For the \$6 billion dollars, we've partnered with a number of grantees that serve different networks of community financial institutions so, for example, we have a tribal partner, we have a partner with deep expertise with credit unions, we have a partner with deep expertise with CDFIs and what our CCIA, our Clean Community Investment Accelerator grantee is going to do is, they're going to make several awards up to \$10 billion dollars to individual financial institutions and that money will be used by those financial institutions to "get in the game" of clean energy lending. Right now, there are a large number of financial institutions across the country that have experienced loan officers that are trusted community institutions that have all of the capabilities necessary to start doing clean energy lending except for the specific clean energy expertise, and so, this funding is going to help those individual financial institutions buildup, their again, underwriting standards, policy

documents, hire staff, train people; they can put this money into their bottom line to loan again and so this will then help your local community financial institutions start doing clean energy financing, and then those local institutions can reach up to those national partners, the three we were talking about previously for additional financing and potentially if they want to look to a secondary market to sell off some of the loans they've been issuing and so there will be a, we hope, a virtuous cycle between the two.

Q: I mean, well, the obvious question is will there be expertise at financial institutions to evaluate whether a specific technology makes sense or pencils out absent the federal support? How do they know if this pact is going to work and raise worry to avoid Solyndras, how do we avoid their getting into programs that shouldn't be supported?

A: Absolutely, so this was a major focus of our evaluation and selection process and every one of the grantees had to put together investment strategies, risk mitigation plans and they were assessed by an interagency group of evaluators from the Department of Energy, Treasury, Housing and Urban Development, EPA of course, and others. The good news about these programs is they are

not funding early stage, experimental technologies. There's an important role for that and DOE has a number of programs and offices that play in that space. This is a program about deploying and scaling proven technologies and so, a lot of the Solyndra-style technology risk is not at play here and what's really exciting is that while many of the applicants are new institutions that were purpose-built to apply for this program, they are comprised of experienced organizations with many decades of and tens of billions of dollars of financing expertise under their belts and so, these are savvy, savvy enterprises that know how to make thoughtful investments that drive impact.

Q: Okay. So, in addition to the \$14 billion dollars and the \$6 billion dollars we've been discussing, there's a third leg to this stool; \$7 billion dollars is for low-income solar deployments. Talk about that for a moment.

A: Absolutely, so this is a program that was really championed by Senator Bernie Sanders who had a vision of putting solar on the rooftops of low-and-moderate income households all across America and he fought really hard to get this funding included in the Inflation Reduction Act. The President shared that vision and has been really excited to charge us with implementing it. What we know is

that solar energy is...rooftop solar is a great investment but it is capital-intensive and so because of the financing constraints we were talking about earlier, just all too often, low and middle income households are not able to get the affordable financing that they need for this to pencil out and that's why on average, households with rooftop solar are higher income than the median and so what we're going to be doing is partnering with states, local government, tribes, and nonprofits to standup a program of solar-for-all programs that will collectively serve every state and will ensure that rooftop solar and home storage along with community solar programs are available and affordable and through this program, we're going to be driving huge uptake of distributed energy resources which is really exciting and also great for our emissions reduction impacts, great for the bottom line and we're going to see impact really quickly.

Q: The next area I'd like to turn to, Zealan, is the Climate Pollution Reduction Grants, \$4.6 billion dollars of grants that will be going to states, cities, tribes, to reduce greenhouse gas emissions and I know as of last month, April first, you received an avalanche of applications and my understanding is you're going to act

on them really fast for the federal government by July first or beginning in July. Cities across the country I'm told by cities have been encouraged to ask for as much and \$250 million dollars to be bold and I'm sitting here in Kansas City, not the largest city but not the smallest city in America and they've asked for \$200 million dollars for such things as EV charging stations, solar on municipal buildings, bypass and electric bikes that could be made available to low-income families, food waste recycling and diversion from landfills; a huge, huge diversity of project ideas. The scope of that \$4.6 billion dollars; we're talking about 40; it's not the lion's share of that money but again, that's a sizeable amount of money given DPA's historic programming, this seems massive. Talk a little bit about the vision for these funds would be at EPA and the government, and then I'm going to ask you a question about how you're going to evaluate these requests.

A: Absolutely so I started by talking about flexible funding and this really epitomizes that so there's two parts to the program. First, we provided two hundred fifty million dollars for cities, states, tribes to develop climate action plans then they submitted applications to

implement some of the projects and ideas that were in those climate action plans. Here, right about the avalanche of action plans, Congress provided \$4.6 billion dollars. We've received over \$30 billion dollars in project proposals so we will be funding the best of the best and these applications are spanning all sectors of the economy but there is a really significant power system grid focus and again, we're seeing really innovative proposals that are tailored to the needs of local communities and states because again, we told our applicants to tell us what they need the most and so in some parts of the country that is focused on improved siting of renewables. In other cases, there's an emphasis on behind-the-meter energy storage, right? It's each community and state identifying what they would find highest impact and then putting together their proposals.

Q: So, I understand that the number of applications are massive let alone the \$30 billion dollars ask. Do you have the staffing at EPA go over all of this with a fine-toothed comb or is this something you're turning to other agencies for help with?

A: So, it's both. We have volunteer reviewers from all across the agency. We're also drawing on interagency

expertise and contract support to make sure we're bringing all the necessary support expertise to bear. But we've known that this would be a popular program and so our team has been gearing up for many months to have the necessary reviewers in place so that we can give every application its appropriate due diligence and still be prepared to make the announcements this summer.

Q: So, if you've got \$4.6 billion dollars, you've received asks for \$30 billion dollars. What's your hunch; will there be cities that get nothing? Will all these get something but not everything they've asked for? Will you pick the best from each city? How do you think this will play out?

A: So, we did provide a projected range of awardees across each size of grant and so it's, given the numbers, it is unlikely that everyone will be selected so one of the criteria we care about is both diversity of projects and geographic representation and so, I'm confident and you've seen this with the Greenhouse Gas Reduction Fund, with our School Bus Program, and with the Solar for All, the program we were just talking about, even if every applicant is not selected the benefits will be felt across the country and so through the combination of state

recipients, city recipients, tribal recipients, I'm really confident that there are going to be fantastic climate pollution reduction grant or CPRG projects all across the country.

Q: Let me ask you to reflect for a second on what you just told me about \$30 billion dollars of asks coming from cities and tribes and entities across the country. Might the \$4.6 billion dollars be viewed as seed money and is there merit in your having all of these players begin to develop a list, a wish list of what they'd like to have to do, and might you find a way for non-governmental solutions to find to play a role here and come in behind the EPA and help with other projects that maybe don't make your cut but have merit in their own right?

A: Absolutely, so I don't want to skip over the climate plans. It was a smaller dollar amount, the \$250 million dollars that we put out last year for climate planning but it's a really big deal. There are 45 states plus D.C. and Puerto Rico plus well over a hundred cities and tribes that submitted climate plans. Just at the state level for 23 of those states, this is the first meaningful emissions reduction's planning effort they've done since at least 2018, so planning is valuable. The purpose of these

planning grants was not to just to tee people up for this funding but to set-up cities and states for successes they are planning their broader decarbonization efforts and so, you're absolutely right, the planning that has gone into putting in a request for this funding, even if they don't get funding through this program, they can take those plans to the social sector; they can take those plans to our Greenhouse Gas Reduction fund grantees that we were just talking about. I also hope that given the work we've done; Congress will consider further appropriations to these programs down the road. This has been an incredible opportunity for EPA. We appreciate the trust that Congress has placed in us and we feel like we're doing a darn good job.

Q: Tell me about the work you're doing here and then I'm going to ask you a couple of additional questions to wrap this up, but how involved is Administrator Regan in these efforts? How often do you meet with him? You previously served in the White House as policy advisor for the White House chief of staff. How involved in the White House and how involved is DOE in helping coordinate your strategy?

A: So, Administrator Regan is very involved; we're meeting with him every week on implementation of these

programs. He's out across the country meeting with communities that are receiving funding and working on projects. He's also up on the Hill talking about these programs keeping members of Congress updated on these. As we're talking, this week, he's up for budget hearings, fielding questions and talking about implementation so he's very engaged. The White House has an important role to play. Each of our competition documents is sent to the Office of Management and Budget for review, and they have an opportunity to provide input but it's important to note that the actual selection of the grants themselves is an agency responsibility so that's something that happens within EPA. And throughout every step of the process, we've been working really closely with Department of Energy and with our other partners across the federal family because these projects and programs span so many different areas of expertise and we've been really fortunate that our federal partners have been willing to lend their very best experts for each step of program design, evaluation, and implementation.

Q: So, let me, just because it's important, take you into a different question about DOE. Under the Bipartisan Infrastructure Law, DOE is spending \$65,000,000,000

primarily in developing the transmission grid to enable sustainability. Is there a need to coordinate what they're doing at that level of DOE with the \$40 billion dollars you're plowing into changing our energy grid?

A: We're working very closely with DOE to make sure we're doing exactly that. There are some cases where the programs are overlapping more closely so for example, we've been working very closely with DOE on how our Solar for All grants will interact with all of the work that DOE is spearheading to rebuild the electric system in Puerto Rico and in other places, we are deeper down in the consumer space and so a lot of what we are doing is complementing and supporting what DOE is doing without necessarily interacting at a direct project level so it varies by program but we've got a great collaboration there.

Q: Okay, Zealan, last question I'd like to have you address is, what would you tell the Libertarians that are listening who generally don't like government involvement to this degree in our economy, in our society and think this should be taken by the private sector? Why is there a feeling that the government needs to be this proactive at this time, and how bipartisan is this really?

A: My answer there would be that the private sector is playing a critical role. We are partnering with and enabling them and helping them leverage private sector dollars. We are also identifying projects where the private sector on their own is not going to engage. There are a number of zero emission projects particularly in low-income and middle-income communities where there's actually a positive rate of return on those investments but the rate of return is below the target rate of return for the private sector so private equity doesn't want to show up if the IR is below 15%. There are projects that public and quasi-public investments can actually turn a profit on that the private sector would not invest in on their own so we need to find places where we are complementing each other. We also know that public dollars alone are not going to solve this. We need to use public dollars to leverage and incentivize private dollars and that's why in the Greenhouse Gas Reduction Funds base, we're excited to have picked partners who have plans to get 10X or greater private sector leverage for each dollar that we're providing.

Q: So, the overall \$100 billion dollars that's being spent by EPA and DOE, to what extent do you think the

utility industry is aware of this and appreciates it? And to what extent do you think the American public knows what's coming?

A: My experience has been that the utility industry's broadly aware of it and many of them are taking this into account as they're working on their long-term plans. I think that we have more work to do to make sure that we are reaching a general audience. Folks care deeply about climate change. They want to see public sector action to accelerate decarbonization but they haven't yet seen many of these investments touch down and that's a big goal for us this year as we move from designing competitions to actually funding projects. We want to help folks see what we're doing in their local communities and really make that connection.

Q: Thank you, Zealan. This is absolutely incredible and we want to stay in touch with you as this plays out.

A: Absolutely. Hopefully we can come back later this year and talk about some of the specific projects we've selected.

Q: Great. We've been talking Zealan Hoover, who's the EPA's Administrator's Senior Advisor for Implementation of just about everything.

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