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**JULIA HAMM INTERVIEW**

Hi and welcome to Grid Talk. Today we have with us, Julia Hamm, the CEO and I believe the founder of the Smart Electric Power Alliance. Hi, Julia, how are you?

A: Hi, Marty. Good to see you. I'm doing well.

Q: So, we understand you're undergoing a transition and you're going to be leaving SEPA so we thought we want to be among the first to conduct an exit interview. How do you find the industry today and what excites you about what you've been able to accomplish at SEPA in the last two decades?

A: Oh my gosh yeah, well, it has been a long time. I first started working with the organization all the way back in the 90s, in 1999, when at that point in time the organization was focused on solar and photovoltaic specifically before there even was really a grid-connected solar market in the U.S., so in those early days we were focused on helping develop that market and really jumpstart things through a public/private partnership with the Department of Energy that help fund the first 1,100 grid connected PV systems and specifically working with electric utilities to help them learn about the technology and the various applications that it would likely have in the future as part of

the energy system. And it's just been amazing to watch what's happened over the course of those decades since then...more than two decades since then. With SEPA being focused so largely, again originally in the solar space but really in the past seven to eight years, much more broadly on everything related to decarbonization as it relates to the power sector. I think the biggest transformation that has been the most exciting for me to watch is the mindset of the electric utility space specifically and really for in those early years dabbling in renewable energy technologies, thinking about what options might be available for their customers but really not having clean energy and climate change as a core part of the business and that really is totally the opposite of what that case is today where electric utilities consider clean energy a core part of their mission and it is just not a part of their mission but utilities are now playing an active leadership role in helping to decarbonize not only their own business operations but also working proactively with customers, others in their supply chain and really across the whole economy in order to accelerate decarbonization.

Q: How ubiquitous would you say that is? Is it just a quarter of all utilities? Is it the largest? Where does this change of culture reside?

A: Yeah, it's a great question so anyone who's really familiar with the U.S. utility industry knows that there are a lot of electric utilities; there's over 3,000 electric utilities in the U.S. Many of those are very small rural electric co-ops or municipal utilities and so when we talk about the numbers, it's hard to say how many of those 3,000 plus are really at this point of taking a leadership role but what I think a good data point to really show where we are in this transformation is that as of today, 73% of all U.S. electric customers are served by utility that has a public target for a hundred percent carbon reduction so I'd say that's pretty significant; 73% of all customers now are served by a utility that is committed to significant carbon reduction in the near-term.

Q: As you know there's been debate in recent weeks triggered by a Supreme Court decision on the extent to which a government agency can lead this transformation. Are you here to tell us it's irrelevant and that the industry is changing on its own regardless?

A: Well, I'm not going to say that anything is ever irrelevant but I do not believe that it would be the primary driver and this would be happening regardless. Federal policy over my couple of decades of experience, Federal policy can certainly help accelerate things but this is happening with or without Federal

policy drivers, without federal regulation requiring it to happen. At this point, it really is about the economics; it's about customer expectations; it's about investor expectations and there are so many more significant drivers that means that we really are past the tipping point. This is not something any longer that needs to be driven by policy and regulation.

Q: So, if you in the coming weeks were to sit down with your successor at SEPA, what half-dozen or three or four issues would you say to that person that he or she needs to pay most attention to?

A: Yep, that's a great question. Well, at a really high level, it's an easy question to answer because the way SEPA organizes its work is in to what we call Three Pathways and those three pathways, the first is Regulatory and Business Innovation and that's recognizing that the way that our regulatory structure was designed more than a hundred years ago was in a very different time; technology was very different—large central station power plants without all the technologies we have available today. So, we need to continue to see an evolution in electric utility regulation that really provides incentive for utilities to do things differently that allows them to earn revenues in a whole new way and also that the utilities themselves that their

business models themselves continue to evolve so, that's all that this first whole category is on like..

Q: So, before...Julia, before you move to two and three, how would you grade state regulators right now? The rap there has been they change jobs so frequently by the time they develop the expertise they need, they're on to another job. Do they have the depth of bench in state commissions to really do what's really needed?

A: I would say it depends on the state. Some states have much larger commission staffs than others. There are some states where they're very well resourced but those are the exception. I think the way that you articulated it, Marty, is right. Most of the state public utility commissions are under resourced. They may have staff members who are around for a long tenure but the commissioners themselves turn over very quickly so I think that there really is room for improvement just in terms of some in the sort of processes...finding ways...and it is very hard given the pace of change in our industry but especially for commissions that are regulating more than just electricity, right? I mean, in many cases the commissions are regulating electricity; they're regulating water. They may be regulating transportation and maybe even other things and so, that's a lot on one regulator's plate to be able to keep pace and really continue to be educated about

the changes that are happening with technologies, with new ways of operating the electric grid and planning the electric grid.

Q: So, basically are you saying that the gridlock or the fact that a lot of state commissions are hamstrung is going to make this pathway hard for utilities to negotiate?

A: Well, I think it always has made it hard, right? and this is not to place blame on the regulators, on the commissions themselves, right; this is a resource constraint largely and so, but, I think one of the things that I know we've spent a lot of time thinking about at SEPA and many other organizations as well, is thinking about what are some of the ways in which we can speed-up some of the regulatory processes that have historically have taken potentially up to two years when the utility is filing to do a new project with a relatively new and emerging technology or a new pilot for a customer program. If it takes two years to get approval of that, our space is changing so quickly that what was proposed two years ago may not any longer be the thing that the utility may think is best for customers any more. So, really think about how do we speed up...and the regulatory process is slow by design. We do need to be thoughtful and be sure that we have all the opportunities for stakeholders to be engaged and provide input but we need to find that right balance of the due diligence, the stakeholder engagement and speeding things up to

make sure that policy and regulation is actually keeping pace with the change of technology.

Q: Okay, down Pathway One. What's your next one?

A: Yeah, so the second one is actually a very good transition right into grid integration is the second Pathway and I mentioned a moment ago about needing to change the way we plan and operate our electric grid so a lot of the grid integration issues that we're dealing with have to do with a lot of those planning functions, a lot of those operating practices as well as keeping pace, really understanding what the new technologies are that are available to utilities. And also, critically important in grid integration is thinking about resilience and really thinking about resilience at a system-wide level. One of...this sort of connects the dots on a couple of things that I've just mentioned but historically the industry has thought and planned in a very siloed way for example between transmission and distribution. We need to think much more holistically and be doing transmission and distribution planning together to really make sure that we're optimizing the system and making investments in the right way that are going to be best for customers, limit stranded assets in the future and really be able to optimize the increasing amount of carbon-free resources that are coming onto the system, so...

Q: So, what's that likely to look like in an urban area or a suburban area? Do you see more distributed generation as this grid integration takes place? Is there going to be a radical transformation? A slow transformation? How do you see it playing out?

A: Well, I hate to use the phrase but, "All of the above." In terms of is it going to be more distributed energy or more larger scale plants? I think it's going to be a combination. I think in different parts of the country, it's going to look different. The pace of change is going to be different in different parts of the country. We've seen that very clearly with rooftop solar. We've seen it with battery storage; we've seen it with electric vehicles. Different states and even within a state, different parts of the state, the pace of adoption of new technology can be drastically different and that actually is one of the things that utilities often are most challenged by is that now with all of these new technologies, they actually need to be able to become experts at forecasting consumer behavior and being able to forecast which customers, all the way down to a neighborhood level, down to a feeder level, which customers are most likely to adopt what technologies when because that has a drastic implication on what investments the utilities should be making in the distribution system. So, that's this whole new area for



utilities. It's not a skillset that historically they've needed to have. When we had large central station power plants and the power was just delivered to the customer one way; end of story. It was largely a single decision maker in the process and now, every customer is also a decision maker that's doing things that have direct implications on the system.

Q: So, if it's time we inject here the whole of discussion of electrification of transportation, I have to...

A: Well, you know, Marty, that is our Third Pathway, electrification...

Q: Okay, let's go.

A: Yeah, perfect segue because our Third Pathway is electrification and obviously, it should go without saying...the Three Pathways we have, there is significant crossover at intersections between all three of them but we have still found a useful way to organize our thinking and our work so, electrification is the Third Pathway we're currently focused the majority of our effort at this point in time is focused on transportation; however, increasingly also beginning to focus on the building side of things and really beginning to think about what role the utilities have in building electrification in addition to transportation electrification and so there is so much happening particularly in the transportation electrification

space, but one of the thing that we're increasingly spending our time on which ties back into the grid integration Pathway is around planning and really beginning to help the industry think about what conversations need to be happening when, particularly with fleet owners about when they plan to electrify their fleets in order for utilities to be able to get the grid ready and ultimately not be in a situation where companies that have large fleets of vehicles decide to electrify them but haven't communicated with the utility early enough in the process so that once those vehicles show up, the grid in some cases if that communication hasn't happened, the grid may not be ready to be able to accommodate all of that charging. So, we're really starting to spend a lot more time thinking about what is the planning process need to look like when it comes to fleet electrification and what is the role for utilities to be playing in that?

Q: So, planning by who? Would it be state regulators? Would it be FERC? Would it be utilities or all of the above?

A: Yep, all of the above, yeah.

A: I mean, it is...it really is true that I think not just with electrification but with everything that's part of the electric system. We need to see an increased level of coordination at the

federal, state, and local levels far beyond what we have historically seen.

Q: So, who's going to initiate that? I mean, who has that picture and is there anybody driving that transformation?

A: Well, I don't know that it's going to be any one entity. I think that a lot of players in the space need to be part of that conversation. Certainly, I think that is an important role that increasingly SEPA can help play because our membership is so broad and does operate at all three of those levels. I think there's an important role that we can play but there are many other organizations as well. I don't think one organization or one government agency can cover the breadth of what needs to be done to make sure that that coordination is happening appropriately at all three levels.

Q: So, if President Biden and the Speaker of the House and the head of the Senate called you and said, "What piece of legislation would you like?" What would legislation need to look like to get this coordination rolling because we're talking about auto manufacturers that have already targeted dates when they're not be making fuel-powered cars any more, fossil fueled powered cars. This is coming fairly fast. Is there any legislation that you see; do you see an agency being created to spearhead this?

A: Marty, I'm actually going to take a pass on answering that because at SEPA, legislation is not a place that SEPA has historically focused its efforts so I am just not personally the best person to speak to about what the optimal legislation would look like to accomplish that.

Q: Okay. So, as you look at these three buckets do you think that the industry as well as SEPA is at some kind of crossroads and its going to be marching in a different direction fairly fast?

A: I think we already are. I don't think it's a matter of there is now going to be some big shift. I personally again sort of having the perspective on looking back over the past now of almost 2½ decades to me it feels as though that shift happened in the 2019 timeframe. That's really when we began to see the big wave of utility commitments to decarbonization happen and the pace has been picking up steadily ever since then. But to me that late 2018, early 2019 was the tipping point where I felt like the real shift happened and now we're in execution mode. We're no longer in the mode of needing to convince people that this needs to happen. We are in the mode of figuring out how do we get this done, and it's not going to be easy.

Q: So, if I'm reading the clippings correctly, you started as President and CEO of SEPA. You were 27, is that correct?

A: That is correct. Yeah, if anybody wants to do the math, I started as the CEO in 2004 at 27. I actually had started working there in 1999 when I was even younger than that but yes, I've been running the organization since I was 27.

Q: So, my question is, in the subsequent 2-2½ decades, you've changed. You've met lots of different folks across the industry. Full disclosure, I had the benefit of being on a trip to Japan where we studied solar-powered deployments in Japan as a media representative. What kind of...how do you process your sense of this network of folks that you've developed and what do you personally feel about the journey you've been through the last 2½ decades?

A: Gosh, you make me thing hard and long here, Marty. Honestly, I think the network of people, the network that I've built is probably the thing that excites me the most, right, and it's the thing that makes me wake up every day and be excited to go to work. I love connecting...in particular, I love connecting people and ideas so nothing sort of makes me feel more accomplished than a day when I have a conversation with somebody and they say something to me and I can say, "Oh my gosh, do you know so-and-so because I was just talking to them and they're having the same problem or they dealt with that same problem months ago and had a really good solution to that. Can I connect you with that

person?" So being able to have such a broad and deep network and be able to connect people with each other is again, the thing that I think was one of the most motivating factors for me over the course of the two decades running SEPA.

Q: So, without doing the math, you're a young woman. What's your next challenge? What do you want to do next?

A: Well, it's a combination of things, I mean, honestly, it's been an intense two decades. I'm ready to slow down so I'm actually, as you know, speaking to you the day before I move into a new home in Marco Island, Florida so I plan to spend a whole lot more time not working than I have the past two decades once I leave. I do expect to still be around at SEPA for a number of months until my replacement is hired and onboarded but once I do leave, I'm not going to do nothing. I'm not going into full retirement but my plan is to contribute and really continue to address climate change but in a very different way and serve on a small handful of corporate boards where I can make a direct contribution to companies that are committed to the same vision and mission essentially that SEPA has but really doing it through a specific product or service that the company is offering, so again...

Q: Let me direct you to two that you're on or have been on and whether you're going to stay on. You're chair of the Clean Energy Leadership Institute. What is that and why do you like that?

A: Yeah, so CELI is a nonprofit. It is an amazing organization that is focused on really preparing the next generation of clean energy leaders and making sure that that's done in a diverse, equitable and inclusive way. So, the flagship program of CELI is a fellowship program and so essentially it's focused on early career professionals who are the best and brightest in our space or are looking to enter into our space to really make sure that they have a very sound foundation of knowledge and understanding about all of the different issues because essentially the original premise when the organization was founded was there's lots of people for example who were deep experts in solar finance but they didn't understand how an electric utility worked. Or they were a deep expert in energy storage technology but they didn't understand how energy storage interplayed with other clean energy resources. So really the fellowship is designed, the curriculum is designed to make sure that these early career professionals see the big picture; I can see how the pieces of the puzzle fit together.

Q: So, you have also been on the advisory board for the Puerto Rico Electric Power Authority, PREPA. They've had a lot of

problems rebuilding after a hurricane and there've been political problems since. What's your involvement there and how do you see that project evolving?

A: Yeah, well, so that my involvement is not ongoing and I was involved...I was on the Transformation Advisory Council for the electric utility in Puerto Rico from right after when Hurricane Maria happened in the fourth quarter of 2017 for just about two years after that, but it's been three or four years now since I've been involved so my involvement has not been ongoing but I still, of course, watch what's happening; continues to be a challenging market to work in but it is exciting to see the progress that's being made in particular as it relates to microgrids in Puerto Rico. It is obviously, literally it is an island so they have some unique constraints that states on the mainland don't have in terms of their resources and so there are a lot of very rural parts of Puerto Rico where microgrids are a very good solution for them and cost-effective solution so it's been great to see the microgrid development really beginning to pick up, in addition to a whole variety of other things; large-scale solar development and other large-scale clean energy resources as well.



Q: So, six months from now if a headhunter calls you and says, "We have a large investor-owned utility in City X that needs somebody with your profile to be CEO," what would you tell them?

A: *Laughing.* Oh, Lord. I would be very flattered and honored to take the call but I would refer them to some other very qualified people. *Laughing.* However, if they need someone who has this phenomenal perspective and I would have to serve on their board, that would be an immediate yes. *Laughing.*

Q: We're going to charge you for that little request.

A: *Laughing.*

Q: Is there anything you want to tell us in parting about your career and what you've been thinking these last few days as you've told your staff and talked to your husband about what's next?

A: I just cannot emphasize enough how not only how proud I am of what SEPA has accomplished but how excited I am about SEPA's future. This is not about me sort of leaving an organization that's sort of reached its peak and that's not at all what's this about. This is an organization that has done so much good, has so much impact and has the opportunity to really significantly increase the impact even more from here forward and I am so excited for a new, fresh, energized leader to come in and be able to see...again, I'm so proud of what I've accomplished. I've done

amazing things for the organization. But no matter how good a CEO is, after 20 years...you're probably missing some things that someone else might see that you don't, so I'm just so excited for the organization. I will always support the organization in any way that I can. Be there to not only be a cheerleader but to actually help in anything that's needed. I'm so passionate about the organization and I really am excited about its future and I just can't wait to see what comes next for SEPA post-Julia.

Q: Okay. Thank you, Julia.

A: Thank you, Marty.

Thanks for listening to Grid Talk. We've been talking to Julia Hamm, who is stepping down as the CEO of Smart Electric Power Alliance. Please send us your feedback or questions to [GridTalk@NREL.gov](mailto:GridTalk@NREL.gov) and we encourage you to give the podcast a rating or review on your favorite platform. For more information about the series or to subscribe, visit [SmartGrid.gov](http://SmartGrid.gov).

END OF TAPE