

MARTY ROSENBERG
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MONA TIERNEY-LLOYD INTERVIEW

Hi, welcome to Grid Talk. Today we have with us, Mona Tierney-Lloyd, who's head of U.S. Public Policy and Enel North America.

Q: Hi, Mona. How are you today?

A: I'm doing great, Marty. How are you?

Q: I'm good. We're very pleased to have you as a follow-up to our interview most recently with Antonio Cammisecra, who's the head of Enel Grids and it's really rare and a wonderful opportunity to allow our audience to have a deeper dive into one utility that's making a major difference. Of course, to remind everyone, Enel is the world's leading private electricity distribution provider and it's also the world's largest renewable developer. Mona, just tell us in general what does the head of U.S. Public Policy do for an Italian-based electric utility giant like Enel?

A: Oh, thank you for asking that question. So, most of my role is working with a team of public policy professionals that are located across the United States. I'm based in Reno, Nevada. I have another colleague in Las Vegas, one in Oklahoma City, one in Maine, and one in Kansas City, Missouri, and that team of professionals

works in that region to represent Enel before legislative bodies as well as interfacing with government and so, governors' offices and administrative offices, and so, Enel has a very large footprint across the United States. We do renewable energy development, wind and solar; also, utility-scale battery energy storage. But Enel also has distributed energy resources that are represented by Enel X and we also have electric vehicle charging services represented by Enel X Way. So, we have lots of different business lines that are operational across the U.S., and we work to develop good public policy to support those business lines.

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Q: So, you work in all 50 states I take it, as well as at the federal level. How does the diversity of the policies and different approaches complicate your life and how does it make your life interesting?

A: Well, I've been in this profession with Enel and with Enel predecessor companies for; I'll be starting my 15th year soon and have been doing public policy for many years before that. I can say with that history that this is the most interesting time to be in the energy sector that I've ever experienced; it's very transformative and it's really great to see all of these policies become implemented at customer levels and at the grid levels and really become a significant factor in the energy industry. Probably 10 to 20 years ago renewable energy was something that was looked upon as a novelty and now it is really a significant portion of

the grid so it's really great to see these technologies come to fruition and it's also great to see the new technologies being advanced as well; battery energy storage was also a novel concept for a while; now, it's a very integral part of the grid, it's very recognized as being an important element to integrating more renewable technologies and certainly adoption of electric vehicles and the need for infrastructure for that has been recognized in the Infrastructure Investment and Jobs Act, and many states are advancing state policies in support of these technologies as well so it's a really interesting, fun time to be in this business.

Q: So, if Enel is the world's largest renewable developer, how does that carry over in the United States? How close are you to getting to that rung in the U.S. market and how big do you think you'll be getting it in the coming decade?

A: Well Enel is very bullish on development in the United States. We have eight gigawatts of renewable development operational today and we have expectations of adding at least two gigawatts per year of additional renewable development. Most of our new development that we have underway we're also adding utility-scale battery storage alongside of that new renewable development, so Enel is very bullish on the opportunities in the United States and Canada.

Q: Is there any way you can quantify your asset base in the United States? Is there a dollar value that you attach that you report? Give us an idea of how big you are totally.

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A: Yeah, you know we have invested billions, billions and billions of dollars in the U.S. market and I am sorry I don't have the exact number at my fingertips right now but multiple billions; \$8.3 billion dollars is our expected investment just in the 2022-2024 timeframe so that's a significant amount of investment and on our Enel X, our distributed energy resource side, we're managing over \$10.5 billion dollars in energy spend from about 4,500 businesses so multiple billions of dollars that we're projecting to invest in North America over the next two years.

Q: If I read your profile accurately, prior to joining or taking your current position, you were senior director of Western Regulatory Affairs for EnerNOC where you worked on smart energy management. How does that rollover into your current assignment?

A: Yeah, I worked primarily on distributed energy resources with EnerNOC prior to the Enel acquisition and mostly in the western United States. Since the Enel acquisition and with my transition into this role, my responsibilities have expanded to a national platform and also all of Enel's technologies so moving beyond distributed energy resources or including distributed energy resources into our renewable energy development goals and then also with Enel X Way in our electric vehicle charging business line I now encompass all of those different technologies so it's been a great experience for me to expand my understanding of energy beyond

where I was previously to include renewable energy, utility-scale storage and then also electric vehicle charging.

Q: I want to go back and spend a little more time on what you just said a few minutes ago about this being a really pregnant moment in the industry. You have a background where you've been in constellation energy; Enron, San Diego Gas and Electric, so you've been across the landscape in the utility market. You indicated the level of investment that one Italian-based company, Enel, is making in the billions of dollars a year; multiple billions of dollars a year. At the same time the federal government as you alluded to, is committing billions of dollars to flow into infrastructure development in the energy space. How is this going to marry up officially in your mind and how does one leverage off the other? How does the private sector investment capitalize on what the federal government is putting in? At the same time, how does government achieve its objectives in tackling carbon emissions and getting a more robust resilient grid because players like you are stepping up?

A: Yeah it's a great question because as your question indicates, there are many different levels of engagement and different agencies and institutions that are involved in moving forward with this huge and very inspirational amount of money that the federal government has directed towards greenhouse gas emissions reductions and clean energy development so we're extremely grateful to be at

this point in time with government and the federal government recognizing the importance of setting the tone and direction and the investment behind bringing these technologies further into the U.S. economy and the U.S. energy sector. And with any huge amount of investment there's a lot of implementation that has to happen to bring it to reality. We obviously are very excited about this moment in time because we are an experienced company that has been doing this type of development in North America for about 20 years as well as our global experience, so we think we bring a real experienced team to do the development and to move forward. But there's also; implementation is never an easy transition from the policy on the page to actually bringing projects online and so we have to also be able to work at the very local level where we're doing these developments and a large portion of our development today is in the Southwest Power Pool. We're also in the Electric Reliability Council of Texas so that's where a lot of our development is but we're looking to expand that development across the United States in places where we don't have as big of footprint as we have in these other regions so that's one of the areas of...anytime you do a new development in a new place, there's a learning curve associated with that and establishing ourselves to have that same reputation in those other regions where we're maybe less well known that we are in the Southwest Power Pool or in ERCOT. So, that's part of expanding our existing footprint into

these other markets. We're also interested in trying to develop markets in certain places to bring those resources along where they may not already exist and that's one of our policy priorities that we're also working on is to try to develop markets in certain places, like in the West where there isn't a widely organized market but that's a lot of it and then certainly there are still supply chain issues in bringing solar panels into the United States and making sure that those panels are made with fairtrade and labor practices and we're looking at domestic manufacturing of solar panels in the United States as well, so...

Q: So, just on that point, you know there have been flareups and trade disputes in the last year on that. Are you confident that the Biden Administration efforts to really bolster domestic manufacturing is going to make a difference?

A: Well, certainly companies like ours are looking at that and we already have a solar panel manufacturing plant over in Italy and so that's certainly something that Enel is considering but I think it will make companies look at domestic manufacturing for the supply chain reasons that have developed over the course of the last several years, and...

Q: So, are you saying that Enel is likely to start manufacturing solar in the United States in the near future?

A: I'm not saying it's likely, I'll say it's something that we're examining. We're looking at the manufacturing credits and taking

that into consideration relative to our own development goals in North America.

Q: And what about wind turbines?

A: I don't' I don't; I'm not aware of any plans to develop our own wind turbines in the U.S. at this point.

Q: How strong is Enel in offshore wind in Europe and do you see that growing here?

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A: Not strong; that's not an area of focus for Enel in North America so we're focused on land development of our resources.

Q: And let's turn to EVs now because as you know California is leading the way for increased dependence on EVs and many manufacturers are transitioning to no longer manufacturing fossil fuel powered vehicles in the next decade. Do you think the public is aware of the transformation that has to occur in the grid to enable that kind of massive shift in powering transportation?

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A: Well certainly if you speak to electric vehicle owners they're aware of the need for the infrastructure buildout. We're very excited about the Infrastructure Investment and Jobs Act that dedicated money towards the National Electric Vehicle Infrastructure Program and certainly our company, Enel X Way is interested in participating and building out public charging stations to the extent that those awards would happen at the state level. But we're very interested in seeing that happen and certainly states like California and other states: New York,

Massachusetts, Pennsylvania, Florida are looking at state investment in their infrastructure as well so it would be a great marriage of both state and federal funding to really jumpstart some of the infrastructure buildout that needs to happen for the electric vehicle transition.

Q: You mentioned two of our regions. ERCOT of course, two years ago had a massive power failure in February as a result of a winter storm. What's your reading of what policies have been put in place to address that kind of shortfall and what role is Enel playing in possibly helping to ameliorate future weather disruptions?

A: So, one of the biggest policy changes that has occurred in Texas is weatherization. They had a similar event, less tragic, that happened 10 years ago with a similar freeze-up of their gas and electricity systems so weatherization is a very significant factor taking into consideration all regions are experiencing extreme weather events. For Texas to have that kind of a cold snap was unprecedented and for that period of time, and was unprecedented but...

Q: So, when you say weatherization, you're talking about hardening generation and other assets for weather destructions?

A: That's correct. Insulation of gas pipelines, insulating generating stations that rely on natural gas, inspections of other types of generating assets including our own solar and wind facilities to make sure that they're operational when they're going

to be needed so just that kind of coordination with the public utilities commission and ensuring operational, the operational status of the fleet.

Q: You mentioned your interest in developing new markets. Are there parts of the country that have had a more traditional regulatory, state regulatory regime that might not have the degree of penetration of renewables that you think you might be able to make some headway in?

A: Well, we're definitely looking at all across the United States because I mentioned where we have our existing fleet, we're looking to expand beyond those markets in the Southwest Power Pool and ERCOT. Looking into the western United States, the PJM Market, the Midcontinent System Operator, the MISO; looking in those regions for additional development opportunities.

Q: And do you see a lot of it coming or what do you see on the horizon and how much of this is being fed by federal policy and initiatives?

A: We certainly see the federal policy and initiatives as being supportive of those goals but Enel has had expansion goals to move into other markets even before the IRA, the Inflation Reduction Act, and the Infrastructure and Investment Jobs Act were passed so they're supportive, certainly supportive but Enel has had their own goals and aspirations of expanding into other markets for a while.

Q: So, given your experience with policy and regulatory environment, are there any one or two or three changes you'd like to see FERC embrace, and are there any one or two or three changes you'd like to see more state regulatory commissions embrace?

A: Thank you for that question. So, from the federal perspective and some of this are areas that are under exploration by the Federal Energy Regulatory Commission but the ability to bring these new developments of renewable energy on line and have adequate transmission to support delivery of the electricity is one of the big areas that we'd like to see development. There's a lot...there are several studies out there now, all that show we need a lot of investment into our backbone, the transmission system, in order to deliver electricity reliably so that's one of the big areas. Interconnecting these new resources is something that also can take years of study at the system operator level and we'd like to see those processes more standardized and streamlined to the extent that they can be. So, those two areas would be important from a federal perspective and then as I mentioned earlier, we'd like to see a market developed in the western United States where you currently have something like 38 individual balancing area authorities. They need to be better coordinated and interconnected, and do some regional type planning for what their transmission needs are across that large geography rather than having each of those balancing area authorities do their own individual planning.

So, integration of the system, strengthening of the system through additional transmission and then being able to bring these resources on line more quickly through more streamlined and standardized interconnection policies.

Q: So, in the western region, those 38 markets, to what extent has the emerging fire threat from climate change made that even more imperative?

A: Yeah, excellent question. I think it's been pretty apparent that fire is a real danger to our transmission system and to the reliability of our electricity grid. I think the western utilities and the public utilities commissions and the system operator in California are acutely aware of that concern and also very acutely very aware of their interdependency of those groups on each other. All you need to have is the drought that we have in the West where you have extremely low water supplies and hydro being lower than it normally would to put these areas into a critical situation in terms of maintaining their reliability, so being able to depend on each other and support each other with reserves in the western United States and not just be individually responsible for providing electricity I think that creates a lot of heightened reliability whenever these extreme situations happen either lack of water or fire, that you have others that you can rely upon to help provide the grid stability and reduce the likelihood of having outages.

Q: So, you've nicely addressed federal policy shifts that you'd like to see. What about the state commissions in Idaho, Kansas, Arizona, Pennsylvania. All across the country you've got a multiplicity of philosophies you have to deal with. Are there any two or three principles you'd like to see them all embrace going forward?

A: Well, I would say for one thing in the multiplicity of views about energy policy I think the technological advancement in wanting your grid to be a 21st century grid is something that all public utilities, commissioners, and state agencies should be interested in having, for the reasons that we were talking about earlier; reliability, resiliency, and just having the latest technology to be able to provide those services. Even if greenhouse gas emissions isn't the primary public policy in a particular state, economic development is, and where we do a lot of our development is in rural communities that don't attract a lot of other types of big business so we're bringing in investment into those communities to help support schools. Enel has done a really great job in training and education at local community colleges so there's a lot of benefits in having companies like Enel come into these rural communities and develop these projects, so the economic development aspect of bringing renewal resources forward is something I think that all communities benefit from.

Q: Is there any last thought you'd like to share with us about your job and what you think this industry's going to look like in five years that people don't really appreciate yet?

A: Yeah, I would and thank you for that question. I hope that I'm conveying the amount of excitement that I have for this particular point in time. I'm really excited to see where we are in five years. I'm hoping that we recognize the import of developing the transmission assets that we need to bring these resources to bear. I'm also hoping that we have greenhouse gas emissions reductions that are hitting the targets that we expect but I think that in five years, more of America is going to see the benefits of these investments coming from the federal government. I also think we're going to see more technology integration. More solar combined with renewables. More customer-sided integrated technologies like electric vehicle charging, demand response, battery energy storage, and I think we're going to see a lot more of this bringing stability and benefits to the grid and the economy.

Q: Thank you, Mona.

A: Thank you, Marty.

We've been talking to Mona Tierney-Lloyd, who's the head of U.S. Public Policy at Enel North America.

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