

MARTY ROSENBERG

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KENNY MERCADO INTERVIEW

Q: Hi, and welcome to Grid Talk. Today we have Kenny Mercado who is CenterPoint Energy's Senior Vice President of Electric Utility. Hi, Kenny.

A: Marty, how are you doing today? It's a pleasure to be here and thank you for including us at CenterPoint Energy. We really appreciate it.

Q: Our pleasure. So, my understanding and correct me if I'm wrong on any of these facts. You have 4.5 million gas customers in eight states but we're going to be focusing on the electric side with 2.5 million electric customers in the Houston area and southwest Indiana, correct?

A: Yeah, that's close enough; that's correct.

Q: Okay, and generation 1,300 of megawatts in Indiana and that's the ballpark.

A: That is correct.

Q: So, CenterPoint fashions itself as a vision of being America's premiere energy delivery company. Why don't you take a few moments and tell our podcast audience what that means to you?

A: Yeah, we're very fortunate, we've lived our vision for over 15 years as our company was put in place back post-deregulation

in the state of Texas way back in the early 2000 timeframe. And, around 2008, we had an idea to invest in a digital platform utilizing the smart meter and the systems of backhauling the data within that smart meter platform. And we went forward with that plan with the support of the regulatory commission in Texas and with our local communities and with the help of a smart grid investment grant from the federal government, Department of Energy. We were able to accelerate an investment in smart metering and a distribution-intelligent grid bringing a more modern platform into the marketplace, which enabled us to kind of open up a new era of technology in the space that we serve. A very competitive market space that we serve here in Houston, TX and so that was a really important milestone and we completed that work back around 2012-2013. And since then as we continue down the leadership journey, we have worked hard to increase the digital technology advancements in our intelligent grid, in our customer-facing platform serving our customers, and in our mobile management of our workforce; our crews in the field such that whatever we do within our operations, we can bring those benefits more transparently to the market and enable the market to be successful across our state. So, we're sitting here today; it's 2020 and all I think about is where we were in 2010 and we thought a lot about 2020 many years ago and I never thought 2020

would be so miserable back in 2010, so let's just for a minute, take away the bad that's occurred in 2020 and let's focus on all the good things that are occurring and in our state here in Texas, the competitive market continues to advance. And I would argue that it advanced itself years ahead of many other places. I think we have a leadership model not only in the Southwest region of the U.S., but across the country and across the globe and I believe that there's no place on earth that I'd rather be today than have the delivery business that we lead here in Houston because it's enabling so much advancement. When we talk about low carbon and the future of low carbon, today we can see it much brighter than we could 10 years ago and I genuinely believe that we are front and center in developing, not just our company but our market in Texas, to bring very affordable, very efficient, very sustainable, very reliable service and we will continue to work hard as we modernize the grid to bring a Mother Nature-proof grid to serve our communities in our area. So, I'll stop there and pause for your comments.

Q: Yes, there's a lot to digest there and I'm going to ask you just straight-up; Texas and California are the largest states in this country and they've had significant nightmares recently in terms of power shortages, even after making considerable investments in some of the same digital technology that you've

deployed in Texas. What is the difference there---is it a business model difference; it is a regulatory model difference; is the technology different, or is it the same technology?

A: Yeah, you used the word nightmare. I'm not sure I understand that comment, but I would say that in Texas----

Q: Power outages.

A: Power outages?

Q: Yeah.

A: Okay, tell me more about what you mean; I'm not sure I understand. Let's focus on your question which is around the differences, I haven't worked in California. Don't know all the political policies and whatnot but in the state of Texas, we really do genuinely say that the wholesale market is competitive and the retail market is competitive and so many entities can participate and it enables the real evolution of technology to come to the forefront and we make investments across the supply chain; we make investments that really provide choice to customers so if you're a resident in Texas, you have just a laundry list of choice around what you want to meet your personal needs and your personal expectations. And I think that's really the driving force behind the success in Texas.

Q: So, some states---utilities have gotten further ahead and I'm not particularly making a remark about your situation---but

they've made investments where regulators thought the rewards were too slow to arrive. Do you think that it's a problem of investments in getting into policy not being involved hand-in-hand and have you been involved in that in Texas?

A: I think we've been able to avoid in Texas---you know we're in front of the challenges. We are proactive. The price that we pay for electricity here is reasonably low in terms of what the options that are available to me and at the same time, the ability to have a cleaner supply in terms of how I design my personal choice around my electric rates; I have that flexibility. We've been able to kind of stay ahead because of the investments we make on the generation side have been consistent with the investments we make on the wire side as well as on the retail side so you have really strong experts in the wholesale space, the retail space, and the wire space that are working in a real collaborative way under the guidance and leadership of ERCOT. So, we have opportunities to voice ourselves, provide good input, to provide good collaboration and at the end of the day, I think we're getting good solutions for the customers that we serve.

Q: What could you tell us, our listeners about what the edge of the grid is looking like; the area of tornado communications. To what extent do you think you're---and I think you eluded to

this earlier, the future of the industry is arrival first in your territory? Tell us a little bit about what that looks like.

A: The edge today is---we're seeing a lot of attention in multiple areas. We're seeing a lot of attention in distributed generation and in small solar services. We're seeing storefronts with the ability to provide power locally to the marketplace and have opportunities to use that power to compete in the market. Historically your power was always brought in one way from a large plant down to the consumer. Now, we're beginning to see an increased supply of very small players that are accumulating their value to the marketplace and enabling even more technology to really participate in that market space. It provides a resiliency factor on the backup potential when power is lost. It provides real-time competitive pricing opportunities when the conditions are ripe in the marketplace. We're seeing more battery---we're beginning to see a little more around the battery area where we think we'll start to see more developers bring in batteries at the utility-scale size probably in the near future, probably in the next couple of years. We're definitely seeing a significant increase in utility-scale solar and that solar is being developed inside the footprint of the load centers such as Houston and in probably other cities across the state. And so, we are adding more and more renewable

supplies closer to the load. We're beginning to add more battery supply in the next year or two. And then consumers, at least in the commercial space, so just putting a little bit more resiliency behind the meter closer to their loads to provide them the opportunity to participate. Those are some of the big areas that are occurring here in the near-term.

Q: Is that why you feel so confident that you're really going to take a bite out of carbon emissions in your area?

A: Yeah, if you just look at our market today, we have, I don't know, close to 25,000 megawatts of wind supplying the state of Texas. It will be about 30,000 megawatts in less than a year. That's the largest supply of wind in the world and then solar is probably about 3,000 [megawatts] and it will be close to 6,000 [megawatts] in less than a year. So, when you combine those two alone, that is almost 35,000 megawatts of capacity that within a year, will be available to our customers. And so, that becomes a real important component of the idea of electrification so Marty, let's talk a little more about electrification. If you continue to clean the supply where the wholesale environment is providing more and more sustainable cleaner generation to serve the market then your loads, your industrial loads, your commercial loads and even your residential loads; they're going to drive more electrification

because they're going to want more of that source; they're going to want more of that clean supply coming into their service and so you're going to see the electrification of transport moving faster than most people anticipate and we're already beginning to see some of that here in Texas, especially here in the Houston area. As you electrify transport, imagine how more dependent the electric grid becomes to support transportation in addition to just your electrical loads. So, the opportunity for electrification inside the industrial and the commercial areas will continue to expand as we think a little bit differently and more innovatively about how to reduce the carbon. Everybody has to contribute; it's not a utility area any longer. It's the utility industry, it's the transport industry, it is the industrial industry, it is the building industry. From a collaborative perspective, how do we work closer together to bring that low-carbon future faster than it has been in the past?

Q: Boy, it sounds like load-balancing is going to become a much more complex proposition and it seems like just talk to your side that the arrival of all of these digital tools will make it much easier and to provide the orchestration to have it all happen.

A: Yeah, it still---you know, our grid has been around for over a hundred years; it's still evolving. It is moving at a much more rapid pace today than it has ever in its past. The good thing is that we've got engineering minds that are well-prepared and our planning---you know, the grid of the future---and we have good leadership. We have reasonably strong policies that help us as well. There's a lot of good things that contribute to success and I like to think of our engineers and our operations (the operators) of our grids are very important and have been really critical links to the success; getting us to this point, and those same operators and engineers that we're now hiring---lot of them are coming out of our academic areas and we're bringing them in and they bring a fresh insight on how to think about digital platforms differently than we have in the past; all this has really generating new value as well as new opportunities.

Q: You've alluded to 2020 being a horrible year. Let's talk for a second about both the pandemic and the unending chain of hurricanes that seem to be arriving on the Gulf Coast. To what extent has all of this technology innovation and investments prepared you to better harden your grid and what do you see down the road as other things that could be done?

A: Yeah, that's a really important question. We're on our fifth hurricane; it's now just within 24 hours of hitting the Gulf Coast; the fifth hurricane to hit the Gulf Coast this year and I've been working in this industry for over 30 years and I've never see it here like 2020. And, when you couple that with COVID-19, we're all in this working through COVID-19 together. It is challenging; it's trying but on the other hand, we have worked hard to prepare ourselves for these types of Mother Nature-related phenomena. We've worked through digital capabilities---there's just so much more you can do today, Marty, that you can do remotely, than you could do 15-10 years ago. We can---we know now that our workforce and still today, our customer service agents---are working from home. We know that we are well-equipped with technology to see everything in real-time and to understand data---real big data---in a real-time format, and then we use that data to provide insight on where problems are occurring; how to prepare ourselves; where do we need to solve those problems from a root-cause perspective; how can we get in front of the customer to communicate with them socially and they don't use phones any more so we've got to communicate in their channel, not in our channels. And how effectively can we communicate with them in real-time to reduce their worries and reduce their fears and enable very competent

workers and engineers and operators to do their jobs seamlessly and keep a very important economy moving forward. So, we've been tested; no question about it this year and our peers along the Gulf Coast have been tested from South Texas to Florida and definitely in Louisiana. I was chairman of the largest mutual assistance organization up until July of this year, and our job is to bring crews all around the state and across the states. We bring our trained crews as either receiving or getting in advance to prepare for utilities so they can be committed to restoring services to their customers as quickly and safely as possible. So, we as an industry are highly collaborative and work very well together to reduce that impact of whatever Mother Nature brings to us.

Q: Is a more-distributed grid and increased intelligence just by definition a more secure grid against all these weather disruptions coming your way?

A: It is an all the above answer to that question. That is a part of it. It's not all of it. You need the large generation. You need the small contributors. You need the wires companies. You need your supply chain. You need the government working together. We need our cities and our counties. We need our State and you know, sometimes it's blocking and tackling. Being in Lake Charles a few weeks ago, right after a hurricane, you need,

the first thing you've got to do is clear the roads. You can't get from A to B because there's so much damage from trees and infrastructure and wind-related impact so step one is who's there within the local government to help the utilities---all the utilities---get from point A to point B is very, very important to us. It's an all-in approach where we work very closely with the county emergency operations, our city emergency operations, our state and federal government and then our utility peers.

Q: So, let's turn a little bit in a different direction. You alluded to the fact that you started erecting this digital platform in 2008 and 12 years in, you have 33 billion dollars in assets. As you've deployed state-of-the-art AI and a host of other technologies, is the investment phase going to start winding down a little bit or do you see top-down levels expanded in the coming decade?

A: Yes, we---our overhead systems across our country still need more hardening investments. They still need more modernization of technology. I can only speak for my utility but I'm only about one-fifth of the way there. I've got more and more important investments ahead of me to be hurricane resilient. To be flood resilient. To be wind resilient. There are very important investments creating really good jobs and

providing very important value to our economies and there's still significant work ahead of us in this utility space and in our industry, so we have started. We've created a very good beginning. We have a very reliable and long-term investment plan and we have to keep the journey moving forward to be successful.

Q: What are some of the bells and whistle of new kinds of things that you'd like to roll out in a few years?

A: Yeah, we need to continue to---couple of things. Visibility is very, very important so we need to continue to improve our ability to sense hazards; sensing is really a big deal. We need to be able to advance our ability to protect against those hazards, so digital technology that protects. Being able to see, being able to detect and then we need to continue to put more technology into our equipment that our crews use, whether it's how they drive or how they operate. We need more ability to restore services in a more efficient and safe way with our resources; our people equipment. So those three big areas; better visibility, better protection, and better tools and fleet resources so that our crews can work in a more efficient manner would be examples of what we're working on now moving into the future.

Q: Last question, Kenny. There's been talk, they've been changes to your company and there's a fresh strategy perspective

that's coming. Can you describe what new elements what that fresh perspective might be beyond what we've already talked about?

A: I really can't get into that today. Maybe we can put that on the calendar and agenda in the future, but that's not really something I have a lot share with you today but we can definitely find time in the future.

Q: Well, it's definitely an evolving story and you and your company are on the forefront so we do want to take you up on that and reconvene down the road a bit.

A: Love to do that and again, thanks for including us today and I really appreciate your time.

A: Thanks for listening to Grid Talk and thanks, Kenny. Kenny Mercado who's the Senior Vice President of Electric Utilities at CenterPoint Energy who's sharing his insights about what it's like to be on the leading edge of the utility industry. You can send us feedback or questions here at GridTalk@NREL.gov and we encourage you to give the podcast a rating or review on your favorite podcast platform. For more information or to subscribe, please visit SmartGrid.gov.

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