

MARTY ROSENBERG
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Grid Talk #207
CALVIN BUTLER INTERVIEW

Q: Hi, and welcome to Grid Talk. We're here today with Calvin Butler who's the Chief Executive Officer of Exelon Utilities, a massive utility company with ten million customers. He moved into that job a little over a year ago after being the CEO of Baltimore Gas and Electric from 2014 to 2019. Hi, Calvin Butler. How are you today?

A: I'm well, Marty. Thank you for asking.

Q: Calvin, I'd like to start off by talking to you about what electrification in 2021 means to you. There is increased reliance and move towards ever-increasing reliance on electricity. An NREL study has come out and said this transition could lead to potential savings in our energy system on the order of \$800 billion dollars over the next three decades. You are uniquely positioned overseeing utilities and what I would call the ABCs, from a small city like Atlantic City to a medium-sized city like Baltimore, to a major city like Chicago or Philadelphia. What does it mean at those three levels; what's your vision of what's coming?

A: Well, Marty, thank you. In electrification is a focal point for us from a 1) How we serve our customers, which is very

important. 2) Understanding what our customers and other stakeholders, the regulators and legislators, really want the utility of the future to be, and 3) How do we help transition our cities like Atlantic City, Baltimore, Philadelphia, Chicago there and also maintain a product that remains affordable for them to, for people to have electricity in their homes. So, when we think of electricity, it's far much greater than just electrification. So, for us, it's about all those areas: clean air, climate change; and so, we break it down into segments at Exelon Utilities. We think about electrification of transportation. We think of resiliency of our grid. And we also think of how we can bring distributive energy resources to the table and make sure we distribute them reliably to those customers who want solar power; who are looking at installing microgrids, so, it's a much bigger question for us at Exelon Utilities. Having said that, we're committed. We're committed to getting it done, keeping our product affordable, and making sure we're in partnership with all of our stakeholders. Let me give you an example. All studies-those same studies will tell you that electrification of the transportation industry is one of the biggest things that we can do to reduce greenhouse gas emissions to help our environment.

Q: Well, let's do a snapshot today of what transportation is across your utilities. How many EVs would you say you have today? How many busses and vehicles, and what's your forecast for the next few years?

A: I see a steady incline in adoption of electric vehicles. Now the question comes to, will the infrastructure be there to support transportation electrification? Because in our focus groups, one of the biggest concerns arise to range anxiety as you've heard it before. So, what are we doing to help minimize and mitigate that range anxiety? So, I do see an incline and you hear more and more of the automakers talking about, they're not even going to make or produce gas reduction vehicles come 2035. So, they're all moving there.

Q: Wait; GM said that a few weeks ago?

A: I was not. You know, we've been talking about this for well over a decade, so I was not shocked in that pronouncement, but I know there's a lot of steps from now until 2035 to make it a reality, and that goes back; that infrastructure to really help GM as a stakeholder to get there, whether it's GM, Ford, or whomever. What are we doing to ensure that we have a reliable grid because when Marty goes out and buys his electric vehicle, you're now going to be more dependent of the reliability of the system it's on going into your house because now it's not only

charging your iPads and your lights in your home, it's also charging your vehicle so you can get to work the next day so it makes the reliability of the system more important.

Q: So, I'm sitting here in Kansas City which you may know has been very proactive in terms of deploying chargers in advance of the demands that's materialized for them. How are you pacing investments in getting ready for the electrification transportation?

A: Proactively. We're proactively working with our regulatory and legislative bodies in each of our jurisdictions to invest in charging stations and be a partner in that effort. For example, in Maryland; Maryland last year under their Public Conference 44, adopted a methodology that allowed utilities on a pilot basis to install well over 500 charging stations across the State of Maryland at BGE and allowed PEPCO, on a smaller scale too, depending on your size, each of the utilities to do it. Maryland will have the most electric charging stations outside of California and possibly New York. And that was a collaboration of over 40 stakeholders coming to the table and designing a plan. That is how we're pushing this. In Chicago, exact same thing. So, in each of our jurisdictions, we're proactively working to be a catalyst in the solution rather than

just sitting back trying to figure it out, so, I think it's critical for us to be involved.

A: Calvin, to the point of being proactive, you have a rather unique footprint from Chicago across to Philadelphia, down to Delaware and Baltimore, Atlantic City, Washington, DC. Do you see the potential of taking advantage of that to link those cities and make highways between those cities more electrified?

A: I do. You bring up a great point. When you look at our footprint, just think of the mid-Atlantic for a second. Six and a half million customers along the mid-Atlantic from Atlantic City, Philadelphia, Delaware, Baltimore, DC; we are the link between all of them. In working with the governors, the regulators, why couldn't we help set this supercharger system in place of all those jurisdictions to help relieve what we talked about, that range anxiety, and where we put together a comprehensive plan along the mid-Atlantic to get us there? Those are the conversations that we're having and again, our utilities don't have to do it nor or we expected to do it by ourselves but we could partner with other companies to be part of that solution so yes, we're having those conversations.

Q: Cities like Portland are aggressively trying to get fleets of cars out there. Are you working with commercial companies in your service territories to get to electrical vehicle fleets?

A: We are, we are, and I think that all goes into that overall strategy in trying to reduce greenhouse gas emissions. One of the things when you talk about our jurisdictions, Marty, you also know that we serve some of the largest urban centers in the country. And we also know that if we don't address the transportation issue for greenhouse gas emissions, those communities and communities of color are impacted disproportionately on a negative basis. So, we're working with not only companies but municipalities in terms of electrifying their fleet and what we can do to provide capital to get that done. You know BGE, for example, was the first company, first utility company in the country to have an electric bus fleet that we used to shuttle our employees from location to location. Why? Because we wanted to lead by example and we partnered with Proterra to get that done so now, Howard County in Maryland and Baltimore County and Baltimore City are saying, what can we do to electrify our bus fleets? And that's how we have to do it. In addition to that, we're talking to the Amazons, we talking to UPS; what are you doing to the FedExes and saying, you have major hubs in our jurisdictions. Are you interested in how we can partner with you?

Q: So, you also serve Washington, DC and the Biden administration early on said he wants to commit to an

electrified vehicular fleet. Do you see any opportunities to jumpstart that for your DC customers?

A: We definitely see an opportunity and are excited that the Biden administration shares Exelon's goals of advancing clean energy and energy equity. We followed the issuance of the White House's Executive Orders and given our footprint which you've said includes DC, what a great opportunity for us again to be part of those discussions and we're ready to help all of the federal facilities in our service territories. You know, our jurisdictions outside of DC are striving to meet those immediate challenges and for us, it goes to when they convert, not if, now it's when they convert, we have to ensure that our grid is reliable to handle the flows and the influx of increased load from those electric vehicles and we stand ready to meet that challenge.

Q: So, let's just case in point. How long before all the postal vehicles, do you think, are going to be electrified and when that happens, what do you have to do on your side of the fence?

A: You know, to your direct question, the length of time I'm not certain about but I'll tell you what we're doing now to get ready for that reality. What we're doing right now is ensuring that our system is heartened at certain key points for the flow

and we've already started that work because the postal system, in addition to other large companies that I talked about, they're going to have; we've created time of use rates for them. We have to really manage the flow of electricity as it goes both ways because at the end of the day, we don't want to be caught flatfooted. So, we're evolving our practices and what we would do in that scenario you'd just painted out is work with the postal service to sit back and say, here's the time of day that we know the most charging of your vehicles would take place. What can we do to sit back and level that out so you're ready, getting the best rates and we can assure you that on the hottest days of the summer, you won't have any issues and you'll be ready, up and running to meet the needs of your customers. Those are the conversations that we will have and are taking place right now.

Q: So, in your high-level bullet points that you mentioned at the top of our conversation, first you mentioned transport and then the second point you made was the resiliency of the grid. Exelon has deployed ten million electric and gas smart meters; was one of the early adopters. What's next for that technology in the smart grid?

A: What we're doing now in terms of resiliency is we're trying to really sectionalize our entire grid, meaning that if we were

to hardening our substations and by sectionalizing, I mean that if we were to have due to inclement weather, customer outages, we want to limit the number of customers that are impacted and by sectionalizing our grid, we're becoming very good at making sure that we can isolate what happened and get those customers back on sooner; that's one. Two: I think also battery storage is something that's really going to come into effect. As more people move to solar and so forth, battery storage is going to be key. And for the last several years, we've been testing that technology out to ensure that we are able to have reserve capacity when needed instead of investing \$30 to \$40 million or more on building new substations to meet additional growth, where's battery storage going to come into play and I think that's also going to be key as more solar is installed across our system. So, those are the types of things that we're looking at. Really looking at deploying and optimizing technology like smart meters and distribution automation that allows for better outage awareness and response. An example of that is what we're doing in New Jersey. These are all things that are going to be critical to our continued success.

Q: So, when you talk about microgrids, it brings to mind the Bronzeville Project in the south of Chicago. What have you learned from that in the few years that it has been up and how

do you see that rolling out across the utilities that you oversee?

A: Yes. Microgrids are expensive; we know this, but what we really have to do is convey the benefit when we look at how they advance reliability, security, and equity, and not compromise that. Having said that, each of our jurisdictions are different and we need to see how we can minimize the cost of those microgrids so they're not shifted to those who do not benefit from its services. So, when we talk like in Bronzeville, a wonderful pilot to see how it was impacting and what we have learned from there is that we were able to have community impact from far beyond just electricity. We were able to bring technology to those who otherwise wouldn't have had it and to really work on community partnerships on the Southside of Chicago that but for that pilot, we wouldn't have been able to do, but let me give you an example. When we tried it in Maryland, the Commission turned it down initially because of the cost consideration. But what we believe is that when you look at this and target it with hospitals or large manufacturers or essential services, having a microgrid in place as weather becomes more of an issue is going to be critical to ensure that our communities receive the vital services that they need when

we have inclement weather and weather's becoming more and more of an issue on an annual basis.

Q: So, hand-in-hand with microgrids is the third bullet point you mentioned is distributed resources. How-take a minute and talk about solar and wind and how much is out there in your service territories and how do you see that growing?

A: Yes, it's different per service territory because of the weather, the regulatory bodies have really pushed for but in all of our jurisdictions what I can tell you is, they all have a commitment to be a 100% renewable within a 15-to-20-year timeframe. That's their model, right, so I think, I apologize, I don't have the numbers in the back of my head but in Maryland, they're talking about 50% renewable is their term, by 2030. So, with the adoption of these renewable energy resources, solar and the like, is only going to continue to get more aggressive.

Q: So, talk about EmPOWER for a second. Are they looking at offshore wind or what are some of the big projects they're looking at?

A: In Maryland, they are talking offshore wind and I think it took a backseat over the last couple of years. The big driver in Maryland right now outside of just the renewable adoption, is really around energy efficiency. The EmPOWER Program in Maryland is probably been one of the most successful in the country and

as a result of that, customers have benefitted significantly by the utilities partnering with them to reduce their energy usage and in return, really driving Maryland customers to save millions of dollars. That is the biggest driver Maryland is going right now outside of what we've talked about already around electric vehicle adoption and the like.

Q: Calvin, there's been some speculation that Exelon is going to be looking at spinning off its generation from the utilities as other utilities have done. What effect would that have on Exelon Utilities and the topic we're talking about now, the speed of deployment of renewable resources?

A: I don't think it would have an impact on us at all. Our principles of what the Exelon Utilities stands for would remain the same; providing safe, reliable and affordable energy for our customers. That is how our guiding principles operate and the Exelon board as they sit back and consider this and weigh this, they understand and they appreciate the value that the utilities not only bring from providing that service but also the community impact that we have each and every day in all of our jurisdictions so our principles would not change at all, Marty, and we're committed to that.

Q: So, our last guest on this podcast was Tom Fanning and he voiced a belief that the centrally integrated utility of the

past might be the best model for bringing new resources on. Do you have any pushback against that or do you have an alternative view?

A: I don't see that as being the way to go because what has been demonstrated is that competitive market in terms of the price of energy has done exactly what we thought it would do. It has kept the commodity, the electricity, the kilowatt hour at one of the lowest prices it's been in years. Let me give you an example. Despite the capital that we're investing across our utilities we continue to have prices per kilowatt hour that are less than they were a total bill, the total bills remain less than they were 10 years ago. You don't get that without a competitive market. You don't get that in a vertically integrated setting so when Chicago ComEd under its formula rate, ComEd has reduced its customer bills under the formula rate, five out of the last ten rate cases. BGE investing and we've been investing \$6.5 billion dollars annually for the last several years across Exelon Utilities and our rates on average total bills are less than they were 10 years ago. Again, proof that the competitive market is working.

Q: Jumping around a little bit here, but I just want to backfill some information. We talk about electrification. What

does that mean for commercial buildings say in downtown Chicago or a downtown Philadelphia? How do you see change coming there?

A: Well, you bring up Chicago and Philadelphia and let me go back a little bit and just mention DC. DC has a-they're looking at considering legislation now that all new buildings built in the District will be electric-all electric. And I think what you're seeing in Philadelphia and Chicago is more of a higher conversion rate when feasible for them to go all electric so it's a real issue. It is a real issue as cities grapple with how do we clean our environment and really go after it? It's one thing to say new construction. It's another to say existing buildings. What is the cost to convert to all-electric? And that is something we are working on and really looking at ourselves and saying how can we once again be partners in this journey and help each of those jurisdictions get there but it is potential legislation right now in the District of Columbia.

Q: Calvin, I would be derelict if I did not ask you about the pandemic and how it has affected your company and your customers. The economy in all of your territories must have taken a hit like the entire country. How has that affected you? How is that affecting your customers? What do think you'll learn that you'll that you'll be able to do better as a result of what you've come through?

A: Yeah, Marty, you and I could spend a whole hour talking about this, right, because we've learned a lot about 1) How we operate as a business. 2) The impact on our customers and really where we can lean in to help them. I'm proud of the Exelon Utilities out of the gate. We're one of the first group of utilities to put a cease on disconnects. We reached out proactively and all of our governors and all of our chairs said we understand the impact. We're going to stop disconnecting customers even though as we rolled into this timeframe. That was one. What we're seeing also is that it's not just your low-income customers or the customers that traditionally had trouble paying their bills on time. It is those customers now that-who were very good customers in terms of paying on-time, having trouble for the first time ever. Those customers who are living paycheck to paycheck and struggling, and have lost jobs that would otherwise would never have been involved in our system of seeking assistance and the like. And so, what we saw is that we needed to proactively help them understand the process and really navigate them through the system. What we learned as a business is that immediately within the first/second week of March, we shifted 95% of our customer service reps to working remotely. So now those CSRs who are the main interaction with

our customers are now all working from home with the technology to get that done.

Q: Will you ever bring them downtown again or are you going to keep them there?

A: I think it's going to be a mix and that goes to your question, your point. Also, what did we learn? We learned that we could do it but we do believe that the culture of our business is so important for interaction, we will have a hybrid. Do I think a hundred percent of them will be back downtown? No, I don't, but we will have a hybrid and we will sit back and have that rotation going on with them. Fifty-two percent of my employees were still showing up to work every day, Marty. They were keeping the lights on and the gas flowing for our customers across all of our jurisdictions. And keeping them safe was the number one issue. We spent well over \$30 million dollars additional costs in PPE, renting extra vehicles to maintain social distancing. Storm outages; we didn't miss a beat. We had trucks rolling from the Midwest to the East Coast and vice versa to help out. We rented entire hotel floors. We had additional management teams. We traveled to the Gulf Coast all while keeping our employees safe and making sure we got customers back on and we didn't miss a beat. I'm proud to say that in 2020, the Exelon Utilities made the best reliability they've had in

decades and our customer satisfaction was at an all-time high. And this just didn't happen. It was because the foundation was set but we've learned a lot about ourselves and what we can do and what we should do going further, moving into the future. And that's what I'm proud of.

Q: What about loads? As the activity in the urban core's have hollowed out over the last few months, have you seen a major shift in loads and where the electrons are flowing?

A: Yeah, I continue to see a shift, a reduction of load under my commercial and industrial sector; I do. It has been made up by the resident social sector so I.....

Q: Fully or partially?

A: Well, it has been made up in terms of the percentage but the amount isn't quite there because when you lose those large commercial industrial loads, percentage-wise, you'll see a flattening but it's not the same amount of load so it does impact us but what we are seeing also in terms of our capital investment, how we go about in executing that, that has been a challenge and that's consistent across all of our jurisdiction; the commercial industrial to residential.

Q: Calvin, the last question I'm going to ask you is a philosophical question. Your predecessor, Anne Pramaggiore, was a passionate believer of the utility as a platform for exchange

of value of energy for dollars that freed up choice for customers. How has that vision changed or evolved and how do you see yourself implementing that view of where things are headed?

A: I view; there's similarities. I think as one of her CEOs I bought into exactly what we were doing so it's; there's no change there. I think how we communicate is slightly different, Marty. I think I believe in the power of the platform and the power of our platform is across the six jurisdictions that we serve and how do we use that platform? I do believe that Anne articulated it so well is that the utilities are going to be critical as we move into this new era of the energy company of the future. That is what we've; but what I do-the nuance there is how I change it is, we can't adopt the "once size fits all" for Exelon Utilities. We need to listen to our customers. As we were talking today, every jurisdiction has different needs and different approaches. As a company, we have to listen to what those are and then be adaptable enough to meet their needs. Yes, it's a platform play but you have to give the individual utility the flexibility to meet it because that's when you're listening to your customers and being partners with them going forward.

Q: So, the platform in Baltimore won't be the same as Atlantic City or Chicago?

A: Absolutely. But what you get is the power of the platform because of the scale you have but Baltimore BGE will do it differently than Atlantic City Electric.

Q: Thank you, Calvin.

A: Well, thank you. Thank you for having me, Marty.

Q: And thanks for listening to Grid Talk. Our guest has been Calvin Butler, the CEO of Exelon Utilities.

Q: Please send us your feedback or questions to 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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