ETS: What drove your interest to work in the power sector?

John:

I always had a fascination with electricity. Even as a youth, I spent a lot of time with electricity and learning about it and always just really drawn to the technology of it. My father was an electrical engineer, and I was fortunate to start my work in the electric utility space at a very young, very early age even actually out of high school had the opportunity to go work for a local electric utility and just immediately fell in love with the industry, with the people that I encountered, with the technology and really was just attracted to that. I began studying electrical engineering, and as I completed my college studies, went to work again back in the utility sector. I continued that work and have been able to really be very fortunate to have learned this industry from the ground up, to have been very hands on with it all along the way, to have been very involved in the operational aspects of utilities. Dealing with storms and outages and working to keep reliability up and then progressing into the management side of the business and really focusing on fine-tuning utility organizations now, really a remarkable time in our industry, where we have so many more tools to do that. We've got the best of a traditional bulk electric grid now with a whole new suite of tools and offerings that we can work to really optimize the infrastructure.

ETS: How do you spend your free time in Central Texas?

John:

My wife and I have 3 daughters, and we spend almost all of our time with our kids making sure that they're having a great time in and around the swimming pool and such over the weekends and just really enjoying Central Texas, getting out and getting some barbecue. Catching in some of the sights and really thankful to have the opportunity to live here in Central Texas and to raise a family here.

ETS: Who's your favorite college football team?

John:

Of course I'm a Tennessee Vol. We've not had, from a college football standpoint, it's been a little rough patch over the last several years, but we're in a comeback year. Things are looking really good for the Vols this year. When I first got here to Austin and Central Texas, I told everyone I'm a UT grad and of course everyone immediately thought the University of Texas. No the other UT, the other orange. We're going to see where the Vols go this year. They're off to a great start and a tough schedule the next few weeks ahead, that includes Texas A&M, so it'll be a great lineup here in the next few weeks to see how SEC football plays out.

ETS: Who is Pedernales Electric Cooperative? What are the Key Benefits of the Cooperative Model?

John:

PEC is the nation's largest, fastest growing electric cooperative. We're here in Central Texas in the Texas Hill Country. We serve an 8,100 square mile territory, and we have a very fast growing region. PEC today serves over 280,000 end consumer meters on our territory in our system. PEC was founded in the late 1930s like many electric cooperatives with the help and assistance from then Congressman Lyndon B. Johnson who was a local rancher. The co-op has really grown over the last 70 to 80 years, has grown phenomenally in terms of its relationship with its membership and the way that we deliver electricity to our end consumers.

PEC is part of a national network of electric co-ops. Electric co-ops are about 70% of the nation's land mass. There are over 900 electric co-ops. Those co-ops collectively own, operate and maintain about 40% of the nation's distribution infrastructure. What's really remarkable about that is that as technology focuses more and more on the edge of the grid and the distribution side of the electric infrastructure, that's really moving right into the core focus of the electric co-op network. PEC is really excited about the future of technology and what we can do for our membership.

Electric cooperatives are not-for-profit member-owned entities. Co-ops were formed by like-minded individuals that wanted to ensure that rural parts of America received adequate electric service. Those principles shine through today still in our business model. We work very hard to engage with our membership. We work very much to make sure that our members are well informed about the operation and the decision making that the co-op is facing and the direction that the co-op is moving in. We also return any excess revenues back to our membership as a not-for-profit entity. Our drive is to make sure that we provide very high quality services, that we achieve very high ranks and marks regarding member satisfaction and that we do that in a very fiscally responsible manner returning any excess dollars back to that membership to make sure that those dollars go back into their pockets.

ETS: PEC's recently announced community solar program is certainly a gamechanger, why was it important for PEC to take a leadership stance with this project?

John:

We're currently underway with a 15 megawatt community solar deployment. We were very precise in terms of the way we approached this project. We wanted to make sure that we had an offering for our membership that was interested in renewable energy that may not first and foremost have an

appropriate rooftop or maybe the space to install their own array. A lot of homes and businesses fall into that category where it's just on a practical location for the installation of on-premise solar. We see community solar as an opportunity for those members to participate in an aggregate, an economy of scale deployment that actually provides a really low cost way to get involved with solar.

Because this is a utility driven project, we get the benefit of the sighting and the partnerships affiliated with the sighting of these locations. Utilities and PEC can deploy the infrastructure at a location on the grid where it's going to be most beneficial to the grid itself and actually benefit all consumers and all owners of the co-op. Right now we're working through the sighting determinations, and we'll be spending the next many months in the actual roll out on construction of the platform. We'll be working now on the tariffs and the business mechanisms, if you will, that will allow PEC to align that solar production with the end consumer. That'll be very interesting revisions and opportunities for our tariffs that we think will start to open the door for some new options.

Part of our community solar initiative is really focusing on how do we get the best of both worlds here. When solar is deployed behind the meter, and those costs have come down dramatically. We have about 1,400 PEC members that have installed solar on their roof or at their ranches. Those costs are still a bit challenging. We're doing what we can do with our loan program to bring down that cost and to make it an easy speedy interconnection. Over time I think we'll continue to see those costs drop.

You can also look at large utility scale solar such as West Texas Solar and there are certain risks with those deployments. It involves the delivery of that electricity back to the load centers here. Community solar is really nicely positioned in between those 2. It's positioned on the grid where it can benefit the grid and benefit all the membership. It's scaled adequately to bring down the cost well below what a member might be able to accomplish on their own rooftop at a smaller scale, and it's also being deployed in a way that helps us really hedge against some of the rising transmission and some of the rising peak energy costs that we could experience in ERCOT. We've designed our deployments to make sure that our membership gets an economic benefit out of this deployment and that it's also well aligned with the communities we serve and that those communities have an opportunity to help be a part of the sighting and the selection of the locations so that communities that want a partnership and have that technology near them may be able to offer up land and the space to do the projects.

ETS: PEC is projected to have about 400,000 members by 2030. How do you think the energy consumers of the future will be different from those of today?

John:

The industry speaks of disruptive technologies frequently. I think from a consumer owned co-op perspective, there really is no such thing as a disruptive technology in my mind. If our member owners are interested in investing in technologies, we have an obligation to partner with them and to match that to meet that if you will. We cannot do that in a fashion that is disruptable to other consumers that don't make that same decision, but if you look at emerging resources and distributive energy resources and technologies like electric vehicles, those are grand, they're great opportunities for electric co-ops. They're opportunities for us to really optimize the assets that the members have already invested in. Our grid is really equally capable in many regards of reverse energy flows. It's equally capable of transactions from home to home or home to business as it is from central station service down to the end of the line. What we have to make sure is that we balance these things well. Central station service has brought us phenomenal prosperity in this nation. It has brought us great economy of scale. It has brought us unprecedented reliability. We cannot disrupt that in any way. We have to be careful to balance the interests of members and consumers at the end of the line that want to invest in these technologies and to do that in a very smart way.

We think this is a great opportunity. I think it's a great era ahead of us for electric co-ops because in the way that we operate our business, we're inherently interested in making those partnerships work and to work well. Where electric vehicles are concerned, it could increase off system or off peak. Electric vehicles could increase off peak energy sales. That's a good thing for electric utility. It helps optimize the throughput of the infrastructure, but it has to be done wisely. We have to be careful that charging electric vehicles isn't necessarily happening on top of summertime peak because then that becomes a greater challenge at 100 plus degrees.

For distributed solar, we think that's a good thing for our membership and for our grid provided that we make sure that we do it in a way that enhances reliability and helps lower costs, not raise any type of operating costs on the grid.

Energy storage is something that we're very excited about. Very anxious for that technology to become fully economical. It works today, but the deployments are few on the grid in terms of sheer numbers and really interested in seeing the economics of storage drop to a point where utilities and consumers are investing more rapidly in those systems. That will be a real enhancement. We'd have to do it right, but that could be a great enhancement for reliability and cost realizing that the grid can be pressured at certain times of day and year, the coldest of cold, the hottest of hot. Then energy prices can be pressured during those same

periods. Energy storage really stands as a great resource to help smooth out those fluctuations, and it can be a resource that I think is going to help benefit the co-op dramatically.

ETS: What advice do you have for the new graduates interested in a career in the power sector?

John:

For our new graduates, this is a great time to be getting in the energy space and the power sector. Really a remarkable intersection of bulk, strength and systems that have really carried the grid. They're going to continue to carry the grid along with really edge technologies and precise sensors and technology that are being applied to the grid. Those are coming together. This doesn't happen overnight, but over the next many years, we're going to continue to see the merge of edge resources and very strong central station and grid resources. I think it'll be a remarkable time for graduates to look into the energy space.

There are so many areas of complexity. The utilities are going to need a lot of resource in terms of knowledge and capability. We're going to be looking to strike that right blend. We've got a demand for engineers and folks in finance and IT as the grid becomes more technological. We've got a tremendous demand for electric line workers that are applying their skills to a more complex grid, for our member service staff and our professionals there that are working to solve increasingly complex issues with increasingly complex rates and to help guide consumers. It's going to be a demanding environment, but I think it's going to be a very rewarding environment for those individuals that choose the power sector as a career path.

ETS: What's the greatest challenge facing the energy industry?

John:

Working for an electric co-op, many of us have long commutes. I have a really extensive drive across the Texas Hill Country, a beautiful drive here to Johnson City. I'm a PEC member. I live over in the Cedar Park area. I'm commuting about 65 miles each way everyday. Of course I'm on the phone much of that time talking with staff and various things. I spend a lot of time flipping through the channels, catching up on everything from local politics to national issues and catching a few tunes along the way and really try to make the best of that time so that when I walk through the doors here at our headquarters, I'm really ready to roll in the mindset of working on the day's issues and ready to tackle whatever comes next here at PEC.