

Rachel Johnson ([00:07](#)):

Welcome back to co-op energy talk. I'm Rachel Johnson, the member relations manager here at Jerry land electric cooperative. Uh, this is the second part of a two part series where we're digging into all things, power supply. If you missed the first part, I recommend you go back and listen to it. In that episode, uh, our general manager, Tony Anderson, and the president and CEO of Wolverine power cooperative, Eric Baker. And I talked about a lot <laugh>, but mostly we talked about the ways that, uh, volatility and natural gas markets and also significant investment in infrastructure, including electric transmission in Michigan are impacting electric co-ops and their members. In this episode, part two of this two part series, we continue our conversation with Tony, Eric, Tony, and Eric, and get kind of their perspectives on the future of electric generation, transmission, and distribution in Michigan, and what it will mean for the long term reliability of our grid.

Rachel Johnson ([01:01](#)):

So play, listen in as Tony and Eric and I discuss power supply in Michigan. So in our, uh, last podcast, we talked a lot about what was kind of driving the trends in power supply costs. Right now we talked about natural gas volatility. We talked about, um, major investments we've been making in Michigan and transmission. Uh, I guess what I, I wanna start off by talking about right now is if you were to kind of look into a crystal ball and look out into the future, um, can you just really briefly talk about what you see in the next five to 10 years in terms of volatility in the Mico market, which is the market we're in? Are we in a good place or, or do we have to prepare for more volatility going forward?

Eric Baker ([01:41](#)):

Uh, I think we're gonna have, have to prepare for more volatility. Um, the, uh, uh, again, it, it sounds like I'm a coal advocate and I'm not, I'm, I'm, I'm really agnostic as to the, the way we create electricity. But one of the good things about coal among its many challenging aspects, but one of the good things about coal is I guess there's two good things. One is you can look out the window and see your fuel supply for the next 30 days. You, you can't do that with any other, any other asset other than maybe a nuclear plant. Um, the other thing with coal is pricing with coal tends to be very, very stable. It might move a percent or two in a year, but in natural gas, it's up and down and up and down. And I think it will continue to be that that way.

Eric Baker ([02:29](#)):

The second bit of that is most of the power that's, that's replacing that in our future will be more of renewable power. And so that creates even more extremes because you have periods in the daytime like you have in California, where you've got too much generate of solar power. So it's almost free. And in some cases, prices are negative. We see that in the upper Midwest and Tony's old stomping ground in the Dakotas where there are times of the day where you will be paid to take, to use electricity. They can't get all the generation they have to market. Um, so you've got these intermittent resources with wind and solar that will create deeper troughs and low pricing, but then create more scarcity, which will create higher prices in other times of the day, month and year. And so I think we're gonna see more price by volatility probably going forward.

Rachel Johnson ([03:21](#)):

And ultimately it's all tied to the amount of power you're producing at the time that there's a certain amount of power people wanna purchase, right? Like that's the, that's the, the simple math of our job is how, how much do people want at what point in time and how much am I producing at what point in

time? Mm-hmm, <affirmative> historically, we've had a lot of control over the second half of that equation. And so we've been able to, whether it's a coal plant or a natural gas plant, we turn it on when we want it and we provide power and people wanna use it. But in the future, what we're seeing is volatility essentially on both sides of this market, right? An intermittency on both sides of this market. And so one of the things that a lot of utilities are looking at is to what extent can we partner with our, our customers for an investor utility or members for a co-op and help to create more certainty on both sides of this equation, right? Or help to, uh, have available demand when I have available supply that I wanna do something with it, et cetera. So I wanna talk a little bit about what role, the idea of demand management might play in the future and any predictions on kind of what we can do with demand management. And, and I'll, I'll let both of you kind of take that and run

Tony Anderson ([04:29](#)):

Well at cherry land. We're, we're exploring that right now is how, what can we do to promote the sale of electricity and at the same time, uh, level our demand, you know, and I'm struggling with that answer right now, because I don't see people wanting to change their behavioral habits from, you know, we all get home at the same time. We all wash our clothes at the same time. How, how am I gonna get somebody who works from eight to five to wash their clothes in the off-peak time from one to four in the, no, I don't have an answer for that. We're, we're working on that answer, but today I don't know what it is.

Rachel Johnson ([05:08](#)):

Well, I think there's a lot at stake in this, because what we're seeing in Eric, you can certainly, um, talk to this more than I can, but, uh, for a lot of utilities, long term planning, a portion of that is an assumption about the ability to <affirmative> control the other side of the meter in some way. Yeah.

Eric Baker ([05:27](#)):

These, these are, these programs have, uh, have been around for a long time and they've tended to be not particularly, um, not, not particularly productive, especially at the residential level they've had, we've had some success with, with different pricing, windows and time of use windows with industrial and commercial customers, but they have tended not to be very effective at the residential level. And I think it's a lot of it goes to, to Tony's point when people get home, that's their sanctuary and they've, they've evolved their life. They don't tend to wanna make their personal decisions around energy policy. It's, um, speak,

Rachel Johnson ([06:11](#)):

Speak for yourself. That's all I do that you, I

Eric Baker ([06:13](#)):

I've, I've, I've grown up in this business. I've worked in the, my entire career. And when I go home that I just don't really want to think about demand response or, or that. And so in the traditional sense, I don't think those programs are super effective. Now here's the O other side of the coin as we get more and more distributed computing power in the world. I don't think it's the individual customer in your case, the member that will make that decision. I think the, I think appliances will become smarter and our job will be to get the price signal to you so you can get it to your members. And the last rate design we did started to set the stage for that, so that we can deliver to you more price signals. So that ultimately I think the, the appliance will make that decision.

Eric Baker ([07:04](#)):

So a perfect example is today you could charge your electric car right during the middle of the day during the peak window. And I'd be very happy. There's plenty of power to go around today. If in the future, though, I think what we're gonna do is send you a signal somehow that will get to the customer and the customer's, um, car will decide when it thinks it should charge based on the optimum price profile you've sent them, and it will charge either at midnight or it'll start charging right now, and it'll make those decisions as soon as you plug it into the wall. And I think we'll have more and more of smart grid, smart appliance sort of things happening, whether that happens three years from now or 13 years from now, that's where it's pretty unclear for. Um, for utility executives is the technology ready and our customers ready for them. Yeah,

Tony Anderson ([07:55](#)):

That, that means everybody has to have a smart fridge, mark dishwasher hooked to the internet, hooked to the internet and, and more and more people need EVs, you know, EVs the easiest solution and the whole future, cuz we could, we could program those in off peak times and, and I'm not worried about EVs at all. I'm I'm when I worry it's about the everyday stuff, the washing clothes and washing dishes. And how do I get that off peak? I, I don't see a lot of that happening either.

Rachel Johnson ([08:24](#)):

Well, when we design the technology that can let my washer know when to wash the clothes, if it could also dry and fold them, I would really, I would be a hundred percent on board. I will sign up for that rate program right away. But no, I think this is a, I think you both made a really important point when we talk about, and we've been very, very aggressive with promoting electric vehicles here at cherry land. And a lot of times when we talk about that, the immediate response we get from the public is, well, you're we all hear about is these kind of tight power supply markets and, and how, how, how will we possibly power them? But this is the beauty of it. And you hinted to this, Eric, at the beginning of this podcast, we have times when we have a lot of electric generation available to us, EVs potentially become a good place to put that, right, because they're sitting in your garage overnight when not a lot of other things are on.

Tony Anderson ([09:11](#)):

Yeah. We're gonna build generation for peak periods and that generation is gonna sit there in the non peak periods. So how do we make the best use out of that generation in the non-PE periods is one of the keys to our future. And EV's helped do that

Eric Baker ([09:26](#)):

With the investment that our members have allowed us to make and the flexible, um, and, and clean peaking assets that Wolverine has now quite literally, overing could triple its sales to members and not have to build another fossil fuel plant if we could utilize that energy, um, more effectively in the shoulder periods and off peak period. So, um, there's a lot of additional energy, um, capacity within our, our network, not just with Wolverine, but in the market to, to do more electrification. And I, and I think that's really important. We've tended to think about conservation programs, energy efficiency programs in Michigan, it's energy optimization, and then it changed to, uh, electric waste reduction. I think I got the, the, the history of that run, but in the nomenclature, but we always think it's usually talked about in the context of saving electricity, using less electricity.

Eric Baker ([10:24](#)):

And in fact, the law has been written around how much can you demonstrate less sales? And I really think that's a public policy mistake long term in beneficial electrification, you will sell electricity. The key is using it more efficiently with the grid that we've already built with the peaking assets that we've already built to optimize that such that we can fill in the gaps with renewable resources like solar and wind. And, and it's not just about reducing sales, it's about optimizing a grid that has tremendous cap and really tremendous flexibility. If we electrify more devices that have historically been gas or, um, fossil fuel powered. Yeah.

Tony Anderson ([11:08](#)):

What, what people need to realize is that the peak demand that we build so much generation for is only a couple hours a day that leaves us 22 hours of the day, that we could something else with that generation, if we had the opportunity. And that's what we're trying to do when we talk about beneficial electrification

Rachel Johnson ([11:25](#)):

And, and Tony, you've talked about this and said it in probably 50 managers columns, but in addition to that, the more kilowat hours we have to spread our cost across the better we're able to manage our costs for everyone, which is ultimately the, the, of the topic of this podcast. How do we help manage costs for

Tony Anderson ([11:40](#)):

Everyone safe, reliable, affordable, the member wants affordable. I, I can give you more affordable if I can sell more kilowat hours

Rachel Johnson ([11:48](#)):

At times that benefit everyone. Yeah. And I

Tony Anderson ([11:50](#)):

Have 22 hours of a day available to sell more kilowat hours. And so how do I get more done in those 22 hours?

Rachel Johnson ([11:58](#)):

And so certainly, um, technologies that may not exist today, but that at some point in time, allow us to help manage when things that are otherwise kind of operating in the background in your home anyway, are operating new technologies like electric vehicles. I would also add a plug that the only path to a carbon free transportation future is the electrification of vehicles. So it has an added environmental benefit if we're hooking 'em up to our grid. Um, but the, the third thing that we hear a lot, and I wanna give you both the chance to respond to is that distributed generation, such as net metered solar can help decrease the need to build new generation decrease the number of kilowat hours. We need to move across our transmission system, especially during peak times. Um, can you just kind of re kind of react to the role that you think distributed generation might have in, in this conversation and helping to control power supply costs?

Tony Anderson ([12:48](#)):

Well, what, when people talk about solar helping at the peak times, they're talking about lunch to, I honestly, lunchtime is in our peak around here. We're traditionally 12 months outta the year. We're gonna peak between five and 7:00 PM. The sun's going down at that point all times of the year. Yeah. We have good sun in the summertime at five, but it's still diminishing. And so it just doesn't cut it. Solar doesn't help me on my peak. Most of the time, 90% of the time, it doesn't help me on my peak and wind is unpredictable. You know, we peak in July, our, our year long peak, our year round peak is highest in July. That's our lowest wind month. So I'm, I'm not big on solar and wind for helping it peak periods.

Eric Baker ([13:36](#)):

I agree with Tony. I, I think I, I think in, in areas where you have difficult access to power, uh, I think, um, small solar projects make sense. I think for some utilities where costs have gotten totally out of control, it might be more cost effective for you to self-generate some of that power. The concern is most of those very few that I'm aware of actually allow the customer to detach from the grid. And so they, they want the trailing system there for all those hours when it just really, isn't very effective way to make electricity with a solar panel alone. They want you there when it's really hot, when it's really cold, when it's really dark. Um, when it's really, you know, we have snow fog or snug or whatever that's called. <laugh> when, when, when I have over a thousand megawatts of fossil fuel generation online in Michigan, like we did last February during the polar vortex.

Eric Baker ([14:32](#)):

And we in several hours generated not one kilowatt hour of solar power, we have to keep the lights on. It's a, it's a public safety issue. It's, it's our mission. And, and so, um, I'm, I, I just want to be a part of an adult conversation around, around renewables and fossils. It's so easy to pick a side, declare your colors that says, if you like this, then you're, you're bad. If you're like, if you like something else you're bad. And, and then we fight about this and it's really, we know renewables are part of our future. We're trying to balance the cost of that and to take all the good that we can get out of that we don't have to do that as a lifetime utility planner. It sh I shutter and it makes me really sad to see, we don't need to jeopardize the grid to introduce many more carbon free assets. We need to have some recognition though, of the fossil fuel role, very limited role, but a vital role. We can't take a blackout for 30 days in a polar vortex event. When it's 20 below zero in Michigan, we can't do it. And a rooftop solar with four hours of battery storage for one day, won't, won't fill that. So a how we transition this over the next 15 to 20 years, I think is gonna require real honest communication about that.

Tony Anderson ([15:58](#)):

When will we get to the point where batteries can, uh, help us during the peak where the solar energy at noon can charge a battery that we can utilize from five to 7:00 PM? How far away are we from that?

Eric Baker ([16:09](#)):

If we have technology today, that can do a pretty good job storing electricity today and using it for two to four hours within the same day, pretty good technology. What we don't have is a battery that can run eight hours, 10 hours, 12 hours, 24 hours. And certainly nothing that can run 30 days straight. So that's the weakness we have technologically right now. There's nothing today that allows us to store energy for more than just a couple of hours. Yeah.

Tony Anderson ([16:39](#)):

Effectively battery storage might be a future podcast to dig deeper into.

Rachel Johnson ([16:45](#)):

I like that we can do that. Um, but Eric, you said something I think is, is really important. And I, it can't be said enough. I, I think that sometimes these conversations get to the point where they, they become like a battle and you have to be on one side or the other. Yeah. But I think the most productive thing that can happen for us in our membership is we can view it as the partnership that it is like, we really are all in this bathtub together. Right? Yeah. Like we all, we all, we are all dependent on the same grid and to the extent that we can be rational and look for reasonable solutions, that the, there are solutions out there that I think do accomplish the bulk of the goals set on all sides of these conversations. But where I think things get really derailed is when it becomes a, a com some sort of a competition as opposed to a partnership with our members and the way we've.

Rachel Johnson ([17:27](#)):

And I think it is, we, we did this kind, we were a little bit ahead of the curve rightly and re restructuring our rates for our, a distributed generation. But I think those rates are reflective of the right partnership approach, which is if you're gonna sell something outta the grid, I'm gonna figure out how to kind of pay you what I would be paying anyone else, selling something onto the grid. But if you're gonna buy it from me, you have to buy it from me at, at, at the same cost as everyone else. And I, I can't sell it to you at the cost. I sell it to everyone else. And I

Eric Baker ([17:51](#)):

Think that's an important point. Uh, Rachel, because the, the facts are that, that small scale home projects cost somewhere between two and four times what we can do a large scale solar project for, and Wolverine's been negotiating on several pro for a number of months, and we know those costs. We also know the cost of rooftop, solar, or even small distributed, um, community solar projects like we did at Len's office. Like we did on M 55 near, near the Wolverine headquarters. And the economics are real, it's, it's much more expensive to do smaller scale than it is larger scale. And it invites other challenging conversations about land use and, and all of that. But economics are economics mm-hmm <affirmative>. And we, we still have a cost mission that we're really proud of as cooperatives. It's not the only thing. It's also reliability and, and, uh, being responsible to our environment in this beautiful place that we live in here in Michigan with UN unimaginable, um, access to fresh water and scenery and woods, and all of that. Nobody wants to jeopardize that. Uh, but this, this is a real balance and, and, and we want to keep costs down. We want be responsible, and we want to keep, we want to keep people on the lights, even in a, the 30 day polar vortex,

Rachel Johnson ([19:11](#)):

We sure do. And I, and I wanna talk kind of end on, on that note in a second, but just to reiterate that, I, I think we all agree that the future we're headed toward it, there's there's volatility on the horizon. And one, some of the best tools we'll have to manage that volatility are gonna require a stronger partnership partnerships between Wolverine and cherry land, which obviously naturally exists due our business model, but partnerships with our members as well, commercial, industrial, and residential members. And I think that our business model as co-ops is uniquely positioned to be successful in that world. And so, uh, while, while it's not fun to have these conversations, at least we're willing to have these conversations. And I think I, I have a high degree of confidence in optimism. Um, but we've kind of talked around in, in both of the podcasts we recorded on this issue, reliability and, and kept pointing out that many ways.

Rachel Johnson ([20:00](#)):

Our members are really lucky. They haven't had any real reliability issues in Michigan, and certainly not on the, um, cherry land and Wolverine system, but the us has experienced some significant electric system and reliability issues this year, whether, um, we could go back to Texas in February, um, hurricane Ida wildfires in California, there's just plenty of reliability issues to point to how would, and I want both of you to weigh in on this as kind of our, our final remarks, how would you rate Michigan's grid and its vulnerability? And then also it's kind of overall reliability.

Tony Anderson ([20:33](#)):

I I'd read it pretty high in my experience at Cherryland knock on wood, no tornadoes, no ice storms. You know, we get some weather, we get some snow, some cold. And as we talked in the previous podcast, our transmission greatest solid. So I think our, our reliability here is very good and will be very good going into the future. I, I don't worry about reliability at chair land or in Michigan in general.

Eric Baker ([21:02](#)):

I, I wish I could say I don't worry about reliability cuz I've, I've, I'm more pessimistic about the future of reliability in Michigan's electric grid today than I ever have been in my career. Um, so let me score it with how I would view our strengths and weaknesses in Michigan, because I think there, it's a sort of a tale of two cities on the strengths in Michigan. Um, we're we are a top tier transmission state. Um, we have a very robust intrastate transmission network. It's well built. It's well maintained. Um, and I think we're among best in class in terms of our transmission network. And that's a, that creates reliability for us, for storm, um, storm resilience and, and all of that. So I, I think that's really good. So our train ends mission network is good. We also have a very robust network of interstate gas pipelines that are all within the state of Michigan.

Eric Baker ([21:55](#)):

And we have the most with the largest amount of underground gas storage facilities, anywhere in the United States, even more than Texas. So we have a network that other utilities would, would be, are very jealous of because I, I, so I I'm with Tony in the regard that I think we have the best chance of any to, to Wade through a lot of, um, turbulence sees that are, that are coming at us. Here's the weaknesses as I see it, or the sort of the downsides. Um, we have poor interconnections to the outside world. So if you contrast Michigan to someplace like Missouri, Missouri is interconnected with three different four different markets, uh, almost five different markets has dozens and dozens of transmission line interconnections to other states and other regions. We don't have that in Michigan at all. And that that's a concerning issue, long term, um, early retirements of coal plants in Michigan, concern me.

Eric Baker ([22:49](#)):

There's a distinct carbon benefit to Michigan. That's real. The math is real. I get that. We also aren't equipped to deal with rapid retirements of coal and still keep the lights on. And we're not, we haven't filled that hole yet. And, and until we do, we're gonna have some serious challenges in Michigan. I think the last thing is that we have a market design and that we could have an entire podcast on this, but we have a market design that essentially does not pay generators to be there, to keep the lights on. And until those things are solved, I think we're going to create false economies that drive more generation out the door and, and we risk not having enough generation long term.

Rachel Johnson ([23:31](#)):

Thank you for that. And thank you both for your time. You know, one of the things I'm very proud of at the co-ops is that we do take talking to our members about issues that impact them seriously, and we don't hide. And so this is something that clearly is having an impact today on our members bills, but also something we'll continue to monitor on their behalf on the future or in the future. And I really appreciate both of you taking the time to discuss this today. Happy to be here. Thanks Rachel. So that was cherry land general manager, Tony Anderson, and Wolverine power cooperative president and CEO, Eric Baker. If you're interested to learn more about any of the topics we talked about in this special two part of co-op energy talk, head on over to cherry land electric co-op to read up on Tony's manager's column, his most recent manager's column on the power supply cost recovery. If there are any topics you'd be interested in exploring in future episodes, we're always looking for ideas. So let us know by messaging us on social media or emailing us at PR cherry land electric dot co-op. Thanks again for listening. I'm Rachel Johnson, the member relations manager here at she Lynn electric cooperative. Please join us next time for more co-op energy talk.