



# AI LEADERS PODCAST TRANSFORMATION OF THE UTILITIES INDUSTRY USING AI VIDEO TRANSCRIPT

**Speaker 1** [00:00:00] This is where air and data driven decisions actually help utilities reinvent themselves.

**Lee Barrett** [00:00:12] Hello, everyone, and thank you for joining us in another episode of our AI Leaders podcast. I'm Lee Barrett, our Northeast Applied Intelligence Lead within Accenture. And today, I'm very excited to talk about the transformation of the Utilities industry using AI and very fortunate to have you with us. Would you like to introduce yourself?

**Abhijit Bhatwadekar** [00:00:32] Thanks, Lee. Hello, everyone. I'm Abhijit Bhatwadekar and I head up data and analytics for PPL Corporation.

**Lee Barrett** [00:00:40] Well, fantastic and thank you for joining us. So, I think the utilities industry is a very interesting space, especially with the evolution with artificial intelligence and everything we're seeing in the data and analytics space. Can you talk to us about the state of the utility industry and what you're seeing in terms of the adoption of AI?

**Abhijit Bhatwadekar** [00:01:00] Yes, sure. So, when you think of utilities, right, you would think that you'll go to your room and you flip a switch and that's you know, the power comes on. That's the extent to which utilities are most known for. And as an industry, the overall

industry is behind or laggard in terms of adoption. Traditionally, power generation and consumption has been just one way. We get power generated at the plant and then utilities take that and deliver power through their transmission and distribution networks. But over the past few years or even past the decade or so, the energy flow now is considered to be decentralized and diversified. Lot more areas where power is generated and sourced. And now the grid has to effectively manage and maintain that flow. And as the trends are changing and as power sources are changing data and AI become key to managing this variety of sources as well as the power generation and consumption and, the way in which you would manage this whole group aspect. The other area is the fundamental shifts have also occurred where, you know, we are not looking at just the utility, managing the power on their schedule. But now customers are also demanding a change and a shift in their demands and consumption. So, all that becomes extremely critical in terms of leaving everything together, a diversified experience. And for these things to occur, data and AI are kind of key pillars to make these things happen.

**Lee Barrett** [00:03:05] That's really interesting, especially as you think about how that grid is changing and the disruption that you're seeing with the, I'll say, the virtualization of the



grid and then how you have to kind of meet the customers and where they are and with their schedule. So, as you think about that and the evolution of the grid, maintaining that efficiency, connecting to the customers, what does good look like, and can you share some examples of what you've been able to accomplish?

**Abhijit Bhatwadekar** [00:03:38] Yeah, that's a good question. You know, when you look at the industry, the power industry has been based on capital assets, investments. So, what I mean is the more assets a utility deploys, the more money it makes. So, when you have in the transmission or distribution network, if a new community comes up and you install new poles and wires, the utility industry tends to make money off of that. But if you take a step back and if you complement that kind of a setup with more of performance-based metrics, so which means, sure, we have invested in capital assets. But what if we were able to manage those assets in a much better manner, in a way that we can actually track the performance and then we can use that performance to drive down the costs of maintaining the infrastructure. So, a couple of examples that we have actually looked at and we have implemented is we have used AI and ML to predict the load forecast of our grid. So once we have the entire network set up, we predict what our daily forecasts are going to be and that becomes a critical factor in determining how to go to source as well as distribute the energy across our grid and to ensure that we have optimal coverage for all of our customers. Another area that we are also investing in is we have relays and sensors on most of our distribution network, and that's that has helped us prevent outages and also detect faults so that, you know, before an outage occurs, we have already caught the fault. We have sent crews out to examine the fault and then take care of that fault before it becomes an outage. So, you know, using data AI in machine learning, we have made significant progress in taking care of the performance aspect of our infrastructure, which in turn helps drive down the costs for maintaining our grid.

**Lee Barrett** [00:06:06] That's really interesting, especially as you think about the proliferation of smart devices and sensors and the capabilities

of networks to pass data. It really does make sense how you're able to use AI to reduce the operational costs and also get into that predictive component and also predictive maintenance aspect. I guess, as you think about the utility company. What does it mean for a utility company to reinvent itself? You know, you hear about all these industries being reinvented and we have our digital natives. What is that reinvention look like for a utility company?

**Abhijit Bhatwadekar** [00:06:43] So traditionally, utilities have almost like a one-way relationship with customers, right? Like I mentioned earlier, it's power generated at one source and then transmitted and distributed. That one-way relationship is almost over. All the customers now want utilities to pivot and become trusted advisers in terms of their energy and consumption habits. Right? Everyone has pretty much majority of the customers have smart grid or smart thermostats in their homes, and they continue to invest in energy appliances. So, all these new energy sources and the consumer demands and even the climate change are some of the forces that are affecting this stable industry. So now how does the utility reinvent themselves? So, the utility, you know, utilities then have to think about being digital in how they perform their business. Right? We also have to be transparent to the customer and showcase how power is being utilized throughout the grid. We also want to make sure that all these moving aspects within the grid fit nicely into the puzzle. This is where AI and data driven decisions actually help utilities reinvent themselves. Like we discussed right? The grid modernization in terms of using sensors and smart controllers. They are helping us work more efficiently. We can send crews when we need to. The outages are minimized and that basically brings back a happy customer. We also are working on providing kickbacks to our customers based on good behavior, optimal utilization of their power and so on. So, all this is... All these shifts are occurring. And this basically means our utility companies need to set up the infrastructure as well as the .



supporting systems and then mind that data and use AI to actually manage this entire intricate network of off relationship.

**Lee Barrett** [00:08:58] I love the idea of a utility company becoming a trusted advisor to its customer. And you kind of got into the idea of, you know, how are you going to drive that adoption of your recommendations, the incentive structure, and the need to build that trust? And then you also talked a little bit about the infrastructure to gather the data, to mine it, to drive those types of insights. I hear that and I think a lot about our clients that have gone down these digital transformations and often, you know, the skills required to do that, the infrastructure or legacy infrastructure and modernizing their platforms has been a heavy lift and may be more difficult than anticipated. I'm curious to hear from your perspective. Where have things been harder than maybe you initially anticipated or expected, and where did you expect maybe to gain more traction out of the gate?

**Abhijit Bhatwadekar** [00:09:57] You know, when we look at the utility industry, it's a fairly regulated industry and it's a critical part of our infrastructure. And so changing the mindset towards a digital and a data driven future for the utility and to also see what's possible with data and AI has been harder than expected. The industry tends to be just risk averse. Right? So, to take risks that are outside the ordinary has been significantly harder than what I had expected. So, on the flip side, what has worked...The couple of acts that have been in discussion. Right? The Infrastructure Job Act, as well as the Inflation Reduction Act, those acts have significantly increased investments in advancing generation transmission and distribution technologies as part of those investments. They're not basically massively rehauling how the utility industry things. And specific to data and AI there are kickbacks provided in terms of how digital and how advanced a utility is in terms of managing the network using data and AI. So, some of those have gained traction toward the utility industry and what we're now seeing is every utility pretty much embracing change and moving the needle to a digital future and all this, you know, behind the scenes, they would need AI and data to actually make that happen.

**Lee Barrett** [00:11:44] That's interesting. Obviously, massive investments will help you gain traction and it's good to hear that those types of investments are being made. This was a very interesting conversation, obviously. I want to thank you for taking the time to talk to us about the transformation of the utility industry and the adoption of AI. And I want to thank our listeners for tuning in. Obviously, it was great to have you on. Thank you.

**Abhijit Bhatwadekar** [00:12:11] Well, thank you for having me.

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