Mary

Principal Program Manager
at National Grid US

Interview with **Mary Reidy**

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SECRETS OF SUCCESS

Photo: Mary Reidy

Reidy

Collaborative Talents: Foundations for the Future of Power Industry

Mary Reidy has over 30 years of experience in power systems. She is the Principal Program Manager at National Grid US, as well as a member of the IEEE PES. Among her other accomplishments, Dr. Reidy established the IEEE Continuing Education. She directed internal and academic teams that responded to the Federal Government's Workforce Development program (ARRA) on Smart Grid Technology, resulting in awards for both an internal Workforce Development and University Degree programs.

In an interview with Women in Power Systems (WPS) steering committee chair Rachel Linke and associate curator of the WPS community Alan Ross, Mary talked about her background with IEEE, the experience that launched her career and her vision for the future of power systems.

Alan Ross: When I first met Mary, we were talking about IEEE Smart Grid. Within ten minutes we had aligned in our thoughts about the past and what we see for the future. It is a pleasure to welcome her to Women in Power Systems (WPS).

Mary Reidy: That is such a fantastic honor. Thank you so much, Alan and Rachel. It is a pleasure being with you and participating in the WPS initiative.

AR Mary, you have been with the National Grid for a good while and you have seen a lot of change and witnessed a lot of things happening. I was born in Scotland and my son lives in London, so I am very well aware of the National Grid in the UK. But what does the National Grid do in the US?

MR National Grid started in the UK as a result of the deregulation that was occurring in the electric industry under the Thatcher administration. At that time, the company was what you would call a public company or a government company. The Thatcher administration was very interested in seeing how economies of scale could be used, so they developed a business model, introduced it to the business community in the UK, and asked for business people to come forward, take the business model and make it happen.

That is how National Grid started in the UK. Their function was slightly different than what we see here in the US, because in the UK they act as the system operator, which means they are responsible for balancing the load in generation so that electricity can be delivered to the customers that wish to use it.

When they came over to the U.S., they acquired six small New England utilities and then the former Niagara Mohawk, which served most of upstate New York. That is where I was working at the time. Shortly after that acquisition, they were able to acquire two downstate New York smaller utilities that focus on gas operations. And from those beginnings, we are now also branching out. We have a National Grid Ventures group and a National Grid Partners group. We are very interested in becoming a clean company, to really embrace renewables and some of the new technology. Part of our National Grid Ventures and Partners Group will work on innovation and the other one looks at renewable sources of electricity. So, it has been a very exciting career for me.

AR You have been working for a long period of time in the field of infrastructure needed for electrification of transportation. And I know that was part and parcel of the passion of yours then and is now as we start to look at IEEE Smart Grid. You and I are co-chairs of the Smart Grid marketing committee. It is really opening my eyes to a lot of the things that you knew back then and you might get to be able to apply now. So, compliments to you for being there early. It is always best to be first, right?

MR I think so. There is always a lot to learn. But if you surround yourself with interesting and very intelligent people that are excited about building the future, I think it makes a world of difference.

In terms of my career as a woman, I have had so many wonderful examples of supervisors who have spent time with me and helped me to understand the bigger picture.

AR What are the best examples of collaboration that you have come across?

MR At the National Grid in the US, the core part of the business is in transmission and distribution of both electric and gas power, large transmission lines and also distribution lines. When you mentioned the electrification of the vehicles, several years ago I was involved with a working group IEEE called p1809. Originally, we were looking at reductions of greenhouse gases. Electric vehicles were thought of as an alternative approach or something that ought to be considered because, of course, if you use electric vehicles, you are not burning gas or diesel. So, we were looking at that early on.

With smart grid, a lot of the development that was occurring was related to sensors, two-way communication, how to connect the vehicle communication to the electric charging stations, etc. Your point about collaboration was so important because we were dealing not only with the driver in the vehicle and the systems that were in the vehicle that were going to communicate to the charging station, but also the location of the charging stations and then the need to bring in the independent system operators.

Up here in New England or in the Northeast, we actually have two independent system operators, one in New York called the New York ISO and one in New England called the ISO New England. Many times I have seen situations where you have very smart subject matter experts in one particular area. And if you watch them come together, usually in a conference setting or in a meeting where they have a very complex problem, it is just absolutely phenomenal to see the ideas that surface as each of the subject matter experts start to share what they know about that particular area of specialty. They are able to talk back and forth, and the solutions that come out are so much richer and so much more thoughtful, so much more visionary than if you asked an individual to try to develop a solution by themselves. It is really, in my opinion, much more of a heavy burden for one person to shoulder than to collaborate with others and be able to see how much more powerful your solution will be.

AR That is a perfect example. One of the things that you and I both love about IEEE is the fact that all the standards work in IEEE is done by collaborative volunteers coming together with their subject matter experts from academia and industry.

The opportunities are only going to grow, not only for women, but for everyone who wants to think about what the energy utility industry will look like in the future.

Rachel Linke: Mary, I love hearing your thoughts about collaboration. But I would like to take a little bit of a different direction. Your accomplishments are amazing, and as far as your talents and abilities, what is it that drew you into the power industry as a woman? And what is it about it that was appealing to you? Do you see that there is a growing field for women in power systems?

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MR I was a member of IEEE when I was in college, and I was an officer in the chapter that I was a member of when I went to school at Case Western in Cleveland. One of the ideas that IEEE brought to us students was the ability to share not only the studies, the discipline that you had been working on within the academic setting, but you had professors, you had research assistants, grads and fellow dormmates that might be in other disciplines. And the conversations that came out of those were just amazing. We had the benefit of bringing in some subject matter experts, researchers, PhD students that were working on different concepts. They would come into our IEEE meeting and explain what their paper and their lab work was all about, and really where they saw the studies moving forward in the next five or ten years.

From that, you got a very clear understanding that, yes, in fact, they were developing a theory or pushing forward a theory with some application, but they were very honest about the fact that they needed the business community or they needed some of the folks from the legal side of the business or regulatory side of the business to help them frame their particular research if they ever wanted to commercialize it. When I graduated, I had this fantastic opportunity to join Niagara Mohawk as one of a group of 23 junior engineers.

Niagara Mohawk had determined at that time that they were going to need first level managers in about five years because the projections that they had done showed that several of their managers were probably going to retire. They wanted to be very proactive, bring on engineers and allow them to do what they called a planned experience. Originally, the planned experience was going to last about 18 months. And during that time, we would travel throughout Niagara Mohawk service territory, from generation to transmission to distribution, to the legal department, to the accounting department and to the customer end of the business. It was a wonderful experience. People really considering the richness and the understanding of how all the pieces fit together, that is really what I was so fortunate to be part of when I was hired at Niagara Mohawk.

After the planned experience, there was a project that was assigned to us by our regulators to take a look at all of our substations for an environmental assessment of any type of PCB damage that might occur due to a storm or another type of unfortunate event. Our job was to go out and look at the substation area and do what we called a wetlands assessment or an assessment of any protected areas. I think that was very forward thinking back in the day, both from the Niagara Mohawk setting and from our regulators. From that point forward, the doors just continued to open for me at Niagara Mohawk. And then when National Grid acquired Niagara Mohawk, it has really continued.

To go back to your question, Rachel, about opportunities in power, that was the number one driver for me. In terms of my career as a woman, I have had so many wonderful examples of supervisors who have spent time with me, both in my department and also in what I am going to call companion departments, that have helped me to understand the bigger picture. And I think the opportunities are only going to grow, not only for women, but for everyone who wants to think about what the energy utility industry will look like in the future.

RL It sounds like you have had a lot of people that you are able to look up to. And now you are probably that person for a lot of people as well. Have you been able to really speak to the younger generation about the opportunities, for women specifically?

Going forward, I believe the future is going to be extremely bright for people who step out of their one discipline.

MR It is a fantastic and very timely question. When I look at 2021, it is almost like seeing that cycle repeated, where a lot of people are looking at potential retirement in the next couple of years. And we are bringing on new and younger generations. I think those who are interested absolutely get a chance. We will get a chance to mentor each other. Some people are very energetic about learning and are really asking questions and trying to understand. Going forward, I think the future is going to be extremely bright for people that step out of their one discipline, if I can say it that way. You may have a degree in one particular area when you come into the utility industry, but I believe that you have a fabulous opportunity to work with people that are intriguing and whose disciplines are very different than yours.

You might need to sit down with a lawyer to talk about a particular issue, whether it is an environmental issue, a right of way issue,

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or a contract issue; sit down with someone from accounting to talk about impacts of this particular rate on this customer's growth, or talk to a customer focused to understand where customers are really projecting their business to be in the next three to five years. It is a very unique setting. And what I love about it is that the future is really yet to be defined. We know we will have electric and gas utility, but there are so many new developments in terms of technology, innovation, environmental and clean economy that if people are interested in really sitting down and asking themselves the big questions about what the future holds, I think they would be very pleased if they would consider a career in the power industry.

AR Rachel mentioned one of the things that I believe may be unique to Women in Power Systems. Mary, you have master's degrees in engineering and business, a doctorate from the Weatherhead School of Management at Case Western Reserve University, and you are a licensed professional engineer. What you have is the holistic approach that we are trying to bring with Women in Power Systems. And you are probably one of our most classic models. You are in management and you have a different perspective from different areas. There should be more women at your level in the industry. You bring so much more wealth of knowledge than just engineering. And that exemplifies that, at Women in Power Systems, we want to profile different professions and showcase different backgrounds and perspectives.

Is your career in the power industry one that you would consider to be fruitful and one that you would say has been something that you would consider to be remarkably positive in your life?

I think the future in the power industry is bright and I am looking forward to it with anticipation.

MR I think it has been extremely fruitful, it has been positive, but also very challenging at times. As much as somebody like myself likes to plan things out, there will always be a situation where you think you have everything that you need and that you have answered all the weirdest questions. And then there will be a surprise, a question. If you turn the corner, there is just something that you had not thought of. I find that to be just absolutely invigorating. I think the future is bright and I am looking forward to it with anticipation.

RL That is wonderful, Mary. I am excited to have you as one of the women of power systems. Thank you so much for sharing about your life, your career and what you have been able to accomplish, and for being an encouragement for women in power systems. It has been a pleasure to speak with you.

MR Thank you so much. The pleasure is mine. I am very happy to be part of this.

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