Wayne Bishop Jr.

Vice President Meetings at IEEE
Power and Energy Society

Interview with **Wayne Bishop Jr.**

Photo: Omicron

IEEE PES
Power & Energy Society®

Wayne Bishop is Vice President of Meetings at IEEE Power and Energy Society and Head of Marketing, North America, for OMICRON Electronics.

Wayne Bishop is Vice President of Meetings at IEEE Power and Energy Society and Head of Marketing, North America, for OMICRON Electronics. Alan Ross spoke with Bishop about OMICRON's unique structure, the value of R&D, changes happening within the industry, and how IEEE PES is preparing for the future by investing in the most important asset of all – people.

Transformer Technology: OMICRON seems to have a unifying culture. How does an international company like OMICRON keep that unifying culture?

Wayne Bishop Jr: OMICRON is very much a unique organization. We have employees from 45 different nationalities working for the company. We have 28 offices around the world and customers in more than 160 countries. It's very much an international company, but we're very connected.

It's definitely a unique culture with a flat organization; we really don't have any hierarchy. In fact, even though I'm the head of marketing for North America, I'm referred to internally as a coach. All of our managers are referred to as coaches. The word boss is never used. We don't even have a headquarters for the company. Our main office, if you will, in Austria, is called the OMICRON Development Center, but we feel as a company that no matter where you work for the company, that's your office. So, there's no sort of mothership or headquarters.

TT OMICRON spends an inordinate amount of money on R&D. Why? What you've seen from all of that expenditure in R&D?

WB One of the things that really attracted me to OMICRON is their dedication to research and development. We put close to between 18 and 20 percent of our revenue every year into R&D, which is really bucking the trend for the industry. Most companies maybe put 2 or 3 percent of their revenues into R&D, but OMICRON is constantly coming out with new products, new software, new hardware, new solutions, all to the benefit of the electric power industry, and to make it more reliable in the future.

TT What changes are you seeing in the area of testing instrumentation?

WB There have probably been more changes in our industry in the last five years than the last 100 years. When I first got involved in the industry back in the early 1990s, customers of utilities were referred to as "rate payers." When you got your monthly bill, it was the "light bill." That's all changed. There's a huge push toward customers at the utility level, and it's no longer the "light bill," it's the "electric bill." The paying customers are actually driving a lot of these changes that are happening.

Of course, a lot of it is regulation, and political changes as well. There's obviously this huge need to reduce our carbon footprint. So, for the very first time last year, the United States saw a greater generation from gas than coal. We've seen a huge influx of solar and wind, and electric vehicles are really taking off, as are micro grids and energy storage.
For me, and for all of us, it's really an exciting time to be part of the electric power industry.

Some would say that back in the early 1990s, it was sort of boring. We had generation, transmission and distribution. And now you have a very dynamic thing that's happening in the industry where suddenly people are putting rooftop solar on and plugging in electric vehicles, so this is affecting the industry, obviously.

There could be reliability issues. A lot of our apparatus is just not made or set up to support these new distributed energy resources (DERs) that are being put on the grid.

A small example: I was just recently at a utility out in California. They told me that the load tap changers on their transformers are normally made to change position maybe four or five times a day. That's what they're manufactured to do. What's happened as a result of putting all these DERs on the grid is that their load tap changers are now changing over 100 times a day! It's just unbelievable.

Wayne's recent visit to a local substation

A lot of our apparatus is just not made or set up to support the new distributed energy resources that are being put on the grid

There are generational changes happening too. What's happening at the utility level is load growth is flat, or negative in some cases. Look at Massachusetts where I live. As a result of energy efficiency and distributed energy resources, we've actually seen a negative load growth.

Energy storage is really going to be the game-changer for our industry. Once we can effectively and efficiently store wind and solar, that will be a game-changer.

Photo: Omicron

TT What will be the biggest change we'll see over the next decade?

WB It's going to be the electrification of our cities and our transportation system. This will make that load growth go up when you have buses and trains and transportation systems electrified. This will also help the environment, so it really has so many positive effects. But again, I just think it's a great time to be part of the industry. We see this at the IEEE Power and Energy Society (PES) where new standards are being put in place to handle these DERs on the grid. Lots of great discussions happening.

TT What can we expect from OMICRON's June Transformer Diagnostic Workshop?

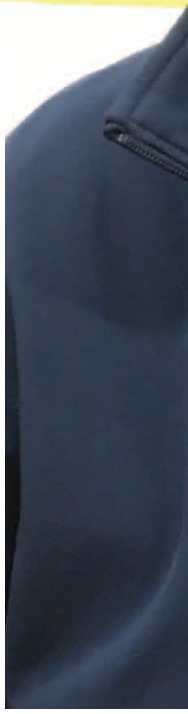
WB One of the reasons why the Transformer Diagnostic Workshop is unique is that it won't be OMICRON giving the presentation. Instead it's going to be outside expert speakers; some of them with 40, 45 years of experience. We'll look at the whole lifecycle of a transformer from specification and factory inspection right through maintenance and testing. Greg Anderson, who has over 40 years of experience in our industry, will be talking about how to write a transformer specification, and what should be included: the good, the bad and the ugly.

Then we will look at acceptance testing of the transformer, transportation of the transformer, and what tests you should be doing. Transformers that are manufactured in, say, Korea, and then shipped to California, for example; they undergo a tremendous amount of stress. We'll talk about some of these tests that utilities are doing on their transformers.

And then once the transformer arrives, the commissioning of the transformer and then of course, the testing and maintenance of that transformer.

We will be talking about the different oil and material test that should be done in the transformer, specifically what happens to the paper of the transformer and maybe some information on dielectric frequency response, which is looking at the moisture content of the paper. We'll also cover the reliability of transformers, and reliability in general, and how that's an important part of our industry.

We'll have a bushing expert come in and also a load tap changer expert.



One of the things that I'm really proud to be involved with is the PES Scholarship Plus program established as a result of the knowledge loss they saw coming in our industry. It offers our electrical engineering students not only scholarships but also a paid internship in the electric power industry.

My Dad Wayne Bishop is my greatest mentor and first introduced me to the electric power industry where he worked for 47 years. He is now retired.

Photo by Wayne Bishop

TT What is your involvement in the IEEE Scholarship Plus program?

WB One of the things that I'm really proud to be involved with is the PES Scholarship Plus program. They established this program as a result of the knowledge loss that they saw coming in our industry. IEEE PES wants to offer scholarships to our electrical engineering students who are interested in power, but we want to take that a step further. That's where the word "plus" comes in. They offer a paid internship in the electric power industry.

They've teamed up with some great companies like Schweitzer Engineering, ABB, OMICRON, and Beckwith Electric and others in the industry, along with utilities that have supplied money to this fund. They also agreed to supply paid internships. And so, as a result, a student might get a $3,000 scholarship, but more importantly they're able to see firsthand what it's like to work in a utility, and to be assigned a mentor and move around that utility.
So far, the response has been tremendous. Hundreds of scholarships are awarded each year and the industry has really gotten behind that. So much so that when I went to the general meeting last year, I looked around and I thought, wow, there's a lot of youngsters here. People in the industry are excited about it. I really see them as the next generation.