

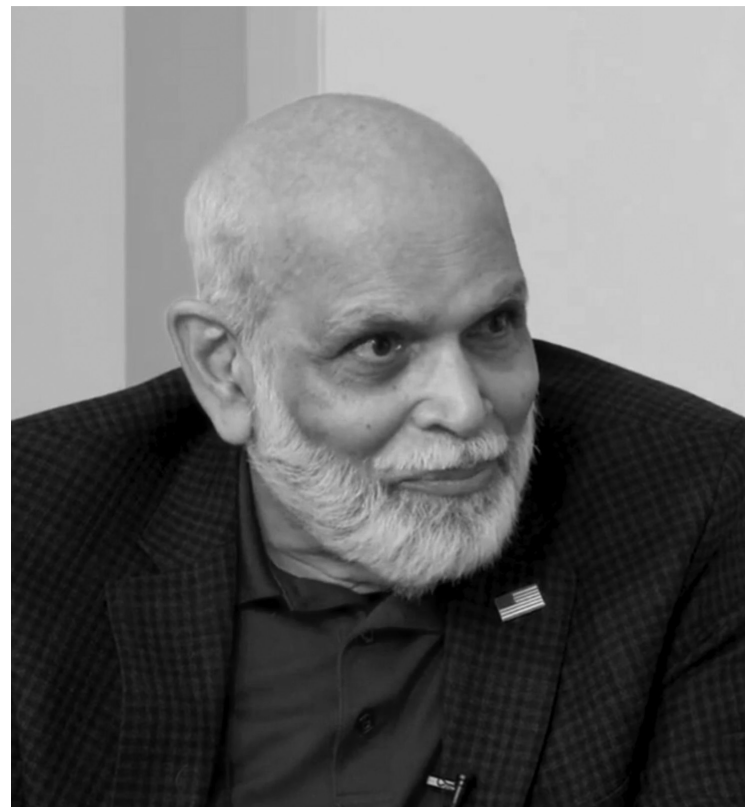
SPECIAL SECTION: Insights from IEEE PES



Power & Energy Society®



Billy Lao, General Manager
DILo Company, Inc. & DILo Direct



Nand Singh, CEO
MinMax Technologies

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Damir Novosel, President
Quanta Technology



Joshua Yun, Senior VP of Sales & Marketing
Virginia - Georgia Transformer



Wayne Bishop, Vice President at Quanta Technology
and Past Vice President of Meetings of IEEE PES



Alan Ross, Managing Editor
APC Media

At the most recent IEEE PES T&D Conference and Expo in Anaheim, CA, we were able to interview industry thought leaders about the value that IEEE PES was to them personally and to the industry as a whole. Below, excerpted and edited for clarity, are many of those responses. We were proud to be a media partner with IEEE PES for the fourth time, including the IEEE PES Grid Edge Conference and Expo, which was held for the first time in 2023 in San Diego, and which will be held in San Diego again in 2025 on January 21-23. We will be there again, creating dynamic video interviews with thought leaders who are shaping the future of the power industry and as you will read from their comments below, IEEE PES is a major driving force for our industry. Enjoy!



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Damir Novosel



Grid edge technologies and solutions aim to create a more efficient, resilient, and sustainable energy system by leveraging advancements at the distribution level and empowering end-users to play a more active role in energy management.

Wayne Bishop

Our first guest was Damir Novosel, CEO of Quanta Technology.

Alan Ross: I know you were the past President of the EAC, the Executive Advisory Council for IEEE PES. That is This Council directs the future of IEEE, correct? You recently mentioned to me your passion for collaboration and the importance of IEEE PES in that process. What do you think the future of IEEE PES looks like?

Damir Novosel: Our industry needs IEEE to provide independent and objective perspective on important energy topics not only to our industry but to society. When I was President of the Power Energy Society along with the Vice President of New Initiatives, Shay Bahramirad, we formed the Executive Advisory Council (EAC) and the Industry Technical Support Leadership Community (ITSLC) to address practical and important industry topics on a fast-track.

There is the misconception that IEEE is too academic—it is not correct as 70% of our members are from industry.

IEEE's practical impact is clear through our standards and regulatory outreach, including partnerships with US NERC, FERC, and DOE and other global organizations. Academia and industry need to work very closely together. But to emphasize the industry, component, we first IEEE creates standards, and that is what IEEE does.

IEEEEAC and ITSLC groups work closely with technical committees and academia to guide the industry in making proper decision, including investments. Very often politics and some business goals influence the discussion, leading us in a direction that is really not beneficial for society. A key role of IEEE is to align carbon goals with technical realities, ensuring that industry advancements truly benefit society.

AR Collaboration is probably my one of my favorite leadership themes. Is it safe to say that IEEE is the glue that causes collaboration?

DN You're absolutely right. IEEE is the glue. That's why I think when I was giving the CIGRE interview with you last year, I mentioned IEEE.

AR And now you have mentioned CIGRE in an IEEE PES interview. Brilliant!

DN These two organizations have different models, but they complement each other very nicely. It is important to mention that the problems we face are global. There are

many players, and even though "I" stands for international, one player cannot solve all the problems. It is a global solution, and you need global organizations like CIGRE, and IEEE to come together to solve problems and define the future.

We are proud that our teamwork with the Parliamentary Society, the Governing Board and others showed that we are really pulling in the same direction. Over 50% of IEEE members, like EAC for example, are outside North America, making it a truly global organization.

The important part is that to have once a year a meeting with global executives that will be global and try to bridge it together. That's the future.

AR We are going to do this again at Grid Edge, right, so I want to schedule our next interview there and get an update. We'll get some interviews there with the global thought leaders.

DN That's a great idea. The key is to promote what we do and communicate the message so all our membership can really hear about it and get more engaged. My plea is to get more people to become engaged, to take leadership roles, to be active. There are so many things to do. We would like to have new and fresh thinking.

AR You've just made a great plea. I really appreciate the fact that IEEE PES not only allows us to do this, but also sponsors us to do this. The next time we're together, we're going to do this again, and we're going to go to the next step in that process. Thank you, Damir.

DN And I really appreciate you and APC Media. Thank you, Alan.

Our next interview was with Wayne Bishop, Immediate Past Vice President of Meetings for IEEE PES and a good friend.

AR I know how passionate you are about IEEE PES, and now as the Chair of the IEEE PES Grid Edge Conference and Exposition in San Diego next year, you remain a committed volunteer leader. Talk a little about what we can expect next year in San Diego.

Wayne Bishop: Built on the huge success of last year's event, we are pleased to announce the 2025 IEEE PES Grid Edge Technologies Conference and Exposition. It is being held January 21-23, 2025 in the San Diego Convention Center and San Diego Gas and Electric is the utility host.

AR Wayne, what is Grid Edge as you define it?

WB “Grid Edge” refers to the technologies, processes, and business models that are deployed at the edge of the electric grid, typically where the utility infrastructure meets the customer premises. This includes innovations and solutions that optimize the generation, distribution, and consumption of electricity. In summary, it’s at the grid edge where so much of the excitement and transformation is happening in our industry.

Key aspects of grid edge include:

1. Distributed Energy Resources (DERs): Such as solar panels, wind turbines, energy storage systems, and electric vehicles that generate or store electricity locally.
2. Smart Grid Technologies: Advanced metering infrastructure, sensors, and communication networks that enable real-time monitoring and control of electricity flow.
3. Demand Response: Programs and technologies that adjust the demand for power rather than adjusting the supply, helping to balance load and reduce peak demand.
4. Energy Management Systems: Tools and software that allow consumers and businesses to manage their energy use more effectively, often in real-time.
5. Microgrids: Localized grids that can operate independently or in conjunction with the main grid, providing increased resilience and reliability.
6. Electric Vehicle Integration: Infrastructure and technologies that support the integration of electric vehicles into the grid, including vehicle-to-grid (V2G) systems.

Overall, grid edge technologies and solutions aim to create a more efficient, resilient, and sustainable energy system by leveraging advancements at the distribution level and empowering end-users to play a more active role in energy management.

AR What should we expect by attending the Conference?

WB Participating in this event also provides a unique platform for Clean Transportation Companies, Fleet Management, and EV charging manufacturers to showcase their cutting-edge solutions in the rapidly evolving electrification landscape. Key topics include:

- Fleet electrification challenges and opportunities

- Development of e-mobility and charging infrastructure
- Evolving policies and regulations shaping the industry
- Technology roadmaps and advancements like bidirectional charging

There will also be an **Electrification Stage on Expo Floor** with panels and keynotes being given by utility executives and industry thought leaders. Our technical program includes more than 100 panels and tutorials with most of them taking place on the Expo Floor to increase your traffic and visibility.

By joining us, you will have the opportunity to engage with industry leaders, utility executives, policymakers, and potential customers, gaining invaluable insights and feedback. The IEEE Grid Edge Conference and Expo is an excellent chance to enhance your brand visibility and position your company as a key player in the energy transition.

AR Thank you, Wayne, I look forward to seeing you there.

WB Thanks Alan and thank the folks at APC media for their continued support.

We also spoke about IEEE PES with Nand Singh, CEO of MinMax.

AR Nand, thanks for joining me. Talk a little about IEEE PES and the value it is an has been to you personally. How did you first get involved?

Nand Singh: I was a student member at joining. IEEE is a tremendous organization. In the power industry, it’s hard to imagine operating without being part of IEEE PES. After 17 years with EPRI, I saw IEEE as our validation platform—everything we did was checked against what IEEE was saying. Quoting IEEE standards brings instant credibility to any organization.

When I quote IEEE, all the research and all the pundits and gurus that talk on behalf of IEEE, it lends a lot of credibility to what you are saying, to what you're doing. Running an organization, IEEE becomes a de facto sounding board for me.

AR What are some of the key values that IEEE brings to you and to industry?

NS The word that keeps coming in my mind collaboration. IEEE acts as the glue for bringing together diverse organizations and



IEEE acts as the glue for bringing together diverse organizations and professionals, including vendors and utilities. Even smaller munis and co-ops can benefit from the IEEE guidelines and findings.

Nand Singh



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Billy Lao



professionals, including vendors and utilities. Even smaller munis and co-ops can benefit from the IEEE guidelines and findings.

IEEE's value lies in its focus on the benefit of society, not just companies or shareholders. As an IEEE PES member, this has been very evident to me.

Oftentimes, people equate IEEE with standards. But we shouldn't forget that they also publish a lot of guidelines as well. These guidelines should be adopted as best practices, turned into proven practices, and shared with customers.

AR Excellent. Nand Singh, thank you so much.

NS Thank you Alan and I look forward to seeing you at our client conference in Dallas.

Billy Lao of Dilo provided input on IEEE PES as well.

Billy Lao: I'm blessed to be a part of the K-Zero working group and I'm also part in substations and the switchgear side. The value of IEEE is the standards and guidelines that we're writing. I'm currently finalizing the SF6 Gas Handling Guide that had to be renewed from 2011. The value is giving a reference that can be read by anyone from a field user to the engineering level on how to safely handle it.

The mobile substation guide offers detailed specifications for mobile substations, including insulating gas, transformers, and gas handling equipment and monitoring. This guidance is invaluable, providing a comprehensive reference to an individual who may not have prior exposure to these topics.

AR So, they are able to turn to these experts without having to talk to each one of them?

BL Yes, right. The document can be accessed electronically or in hard copy and they can develop a specification or create a process on how to safely handle SF6 or other insulating gasses. This addresses a significant gap, as very few people have this detailed knowledge. By creating these documents for individuals who need to know but don't have the ability to go to all these meetings, they can just reach out and access it.

AR One of the things of IEEE PES is for the benefit of society. And Billy, you epitomize it, lifelong learners, lifelong givers. Thank you so much.

BL I appreciate you too Alan. Thank you so much.

Joshua Yun of Virginia Transformer also talked about the value of IEEE PES.

AR Joshua, talk about the value you see from IEEE PES.

Joshua Yun: I've been a member since college—three decades now—and actively involved with the IEEE PES Transformer Committee 25 years ago. There is about 250 of us and we meet twice a year, spring and fall.

It is a very unique organization where people from different backgrounds; manufacturers, consultants, professors, government agencies, and utilities. We meet twice a year, and we don't talk about commercial aspects which are strictly forbidden, but strictly work toward creating standards and guides that could help the whole industry. I'm proud to be a part of it.

The beauty of these standards is that what we bring to the table basically becomes a foundation, a rule, or a building block how everybody should design, build, test, maintain and then repair transformers out in the field. It levels the playing field.

It's challenging for individual companies to address issues like reverse power flow in battery energy storage systems, where power flows in both directions. The IEEE Transformer Committee is developing standards to guide these changes, outlining dos and don'ts and providing essential guidelines. Without that, it will be very challenging for individual companies to come up with their own versions. I think it's a tremendous help, not only to the end user, but also the manufacturers, and everybody who is involved.

AR That's excellent. Joshua, thank you so much for joining.

JY Thanks Alan, I really appreciate it.

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