

powering the future

new initiatives for the Society

LAST YEAR, WHEN I HAD THE pleasure to write an article for the “Leader’s Corner” column, I chose to write on what I considered one of the most important long-term goals of the IEEE Power & Energy Society (PES) Executive Board—for the IEEE PES to be more relevant to the practicing engineer in the real world of power and energy. Perhaps my 48-year career in the power industry has some influence on my opinion of what we, as PES, should offer our members. Or perhaps it’s the feedback we receive from members and member surveys or from the members attending conferences. The balance of academia and the practical solutions offered by our conferences is very important to our members.

At that time, we had gotten out of balance and needed to move in a practical direction for our members. In a recent survey of attendees at our IEEE PES Transmission and Distribution Conference and Exposition (T&D), members and nonmembers alike answered the following questions:

- 1) What is it that excites you about the power industry and the challenges it faces today?
- 2) What is it about your job that keeps you up a night?

Question 1 had answers that addressed the latest technology, including smart grid, cybersecurity, renewables, and where was the power industry going. Question 2 resulted in this answer: infrastructure.

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The PES Governing Board is moving on several fronts with its More Power to the Future initiative. This overarching initiative includes the following:

- ✓ cooperation with and support to the Federal Energy Regulatory Commission, the North American Electric Reliability Corporation, the U.S. Department of Energy, the State Grid of China, the European Commission, the North American Transmission Forum, and other regulatory and industry organizations
- ✓ executive advisory boards
- ✓ the fast-tracking of standards, guides, and reports to support our membership with emerging industry topics
- ✓ education initiatives including tutorials and webinars on emerging topics and standards and the Next Generation Energy Educational Initiative platform, to name a few
- ✓ IEEE Smart Grid and Smart Cities initiatives led by PES
- ✓ IEEE PES industry executive advisory committees (EACs) for each Region
- ✓ conference advisory boards
- ✓ industry-focused workshops, organized by local Chapters
- ✓ generation, transmission, and distribution conferences and exhibitions outside Regions 1–7.

In this article, I will provide information about the conference advisory boards and generation, transmission, and distribution conferences, and my col-

league Dr. Shay Bahramirad, PES vice president (VP), New Initiatives, will address EACs.

When it comes to meetings and conferences, many conferences have existing steering committees that direct the operations and strategy of that conference: the PES General Meeting, IEEE Innovative Smart Grid Technologies (ISGT), and T&D North America conferences all have established steering committees and all use local organizational committees for the actual running of the conference. What we are now establishing are conference advisory boards for the Regions responsible for the overall strategy of PES conferences in that area. This would receive input from the EAC of the Region and also from Chapters and members about the number and type of conferences in the Region, such as what should be the focus of the conferences and the best marketing and branding approach for the Region’s conferences. The life cycle of conferences focusing on a specific technical aspect would also be addressed. An example of this might be that the ISGT is maturing in some Regions due to existing infrastructure, while in other areas this may not be the case.

With the interface of the EACs and conference boards, PES will have a conduit for faster and higher quality feedback from the membership as to the region’s needs. This would allow PES to better serve the members and bring enhanced value to their membership.

This initiative is underway and many of the boards, both executive and conferences, are being established. If you

have any feedback and would like to be involved, please let us know. Our goal is to get more industry involvement in PES and more feedback from industry and members to better meet the needs of our members.

It is our challenge to show results. With that said, we expect more panels and discussions on real-world issues at our conferences, additional solution-orientated presentations, and increased participation at all levels from PES as well as Chapters, papers, publications, conferences, and management.

We are tracking the number of utility and industry personnel at our conferences and reviewing our conference programs for more solution-orientated presentations and papers. We are also seeking suggestions and ideas to help us continue to add value to our global membership. We will keep you informed and report back as to the impact of this initiative. If you would like to be involved in this effort, are interested in participating on one of these boards, are aware of someone

who should be on one of these boards, or have any comments, questions, or suggestions, please let me know.

Powering the Future

by Shay Bahramirad

The paradigm for energy generation delivery and end use is rapidly changing. Distributed energy resources are starting to become viable alternatives to the centralized generation plants and beginning to impact generation companies as well as transmission and distribution utilities. Simultaneously, the grid infrastructure is gradually aging, requiring increased investment to maintain its resiliency and reliability. Emerging cyber and physical security threats combined with the increasing severity and frequency of weather-related events require ever-higher levels of security and resiliency for the transmission and distribution infrastructure. Moreover, customers' expectations for service reliability and quality continue to rise, fur-

ther challenging the status quo. From the perspectives of utilities, generation companies, technology developers, solution providers, and academics, these changes are both challenges and opportunities with the increased competition to provide these new grid benefits for the end customers.

Technology development, accompanying standards, workforce development, and innovative strategies and business models will be among key areas of interest for PES. These drivers for change mean that the power and energy sector is seeing growth that it has not experienced in a long time, maybe ever. With the increase in the size of the industry, PES is becoming ever more relevant, increasing in membership across the globe. To make a meaningful difference, existing and new members need to have skin in the game by becoming active PES members and contributors who further push the boundaries of our Society and our industry. Our members bring a diverse set of backgrounds, research interests,

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(1) Estimate based on Metglas Transformer Optimization Model

(2) APPA / NRECA Letter to EPA 27th February 2015 – Attachment A – 1st page

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and contributions to the PES ecosystem. For optimal impact, PES will continue to create an inclusive culture that values diverse thoughts, backgrounds, and perspectives to advance energy technology.

With the increasing complexity in technologies, there is an ever-greater need for new multidisciplinary working groups that include experts from power systems, power electronics, and communications. The fast pace of technology development will also add pressure to streamline processes for standards development and review. With more technologies, more standards will be needed to achieve the plug-and-play type of grid integration and to optimize their interoperability.

Given the exciting opportunities and challenges ahead, I cannot think of a better time to be a part this industry. We're on a journey where partnering is more important than ever.

PES members, from industry, academia, and governments around the world, play an important role in advancing energy technology but more so collectively as these challenges cannot be solved in a

vacuum. The PES brain trust is made up of utilities, technology and policy makers, and researchers who collaborate on the complex long-term issues impacting the energy sector. Our industry needs diverse ideas from varied backgrounds to help us achieve our common goal to take the grid to the next level.

With the IEEE PES More Power to the Future initiative, global industry leaders can join forces on critical business issues such as workforce training, security preparedness, technology readiness, standards, regulatory policies, and strategic initiatives to drive innovative solutions. PES provides a neutral platform for energy executives to focus on big-picture national and global issues, giving them the time and the space to get out of the weeds, share best practices, and gain expert insight from volunteers to develop a comprehensive strategy for executing the critical energy improvements we need.

In my role as PES VP of New Initiatives, I created the EAC to provide strategic support to the IEEE PES Board of Directors, focusing specifically on mem-

ber benefits and how members can best leverage those benefits for their professional development, their respective organizations, and the overall industry. The EAC is organized by Region and comprises industry executives from each one. The committee will focus on a number of valuable activities, including

- ✓ keeping members informed of important industry trends and needs
- ✓ tailoring the topics and content of meetings, conferences, and workshops to better meet industry needs and are of more value, according to the Region
- ✓ exploring and developing standards according to what is needed in a particular Region
- ✓ introducing Chapter activities with increased value to local members for furthering their careers
- ✓ creating educational modules according to the level and type needed in the Region
- ✓ providing publications on how to better meet power and energy needs in each the Region.



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IEEE PES board members will participate and be involved in all Society activities individually and through their companies. One of the key outputs of the executive boards is for the leadership to share lessons learned and provide expert guidance and feedback to local conference advisory boards, according to the audience requirements of regional conferences and meetings.

In return for their participation they and their employees will receive the following:

- ✓ access to the latest information on electric power technology
- ✓ an opportunity to significantly influence the development of industry standards impacting their company
- ✓ ongoing PES training and education
- ✓ professional development
- ✓ an increased sense of value, resulting in a workforce stimulated by interaction with peers in the profession
- ✓ an overview of the technical developments and trends for the future.

Their employees will benefit from the increased sense of value received from

their company, resulting in a workforce stimulated by fresh ideas and ongoing interaction with their industry peers.

This approach reaches across all levels of the industry, including upper management involvement in the executive committees, which gives their company access to the extensive range of unique PES activities. Executive involvement and support demonstrate their commitment to their employees' professional development and reinforce the value of PES as the industry body for power and energy practitioners and professionals.

We have formed the EAC for Regions 1-7, and I am pleased to introduce the industry executives who are championing the committees:

- ✓ Juan Bedout, chief technology officer, GE
- ✓ Michelle Blaise, senior VP (SVP), Technical Services, ComEd
- ✓ Mark Carpenter, SVP, Oncor
- ✓ Kevin Curtis, VP, Dominion
- ✓ Kevin Dasso, VP, PG&E
- ✓ David Geier, VP, SDG&E
- ✓ Chris Kelly, SVP, National Grid
- ✓ Lee Mazzocchi, VP, Duke

- ✓ Greg Reimer, executive VP, Transmission, Distribution, and Customer Service, BC Hydro
- ✓ Chris Root, chief operating officer, VELCO, and IEEE PES treasurer
- ✓ Erik Takayesu, senior director, SCE
- ✓ Gordon van Welie, chief executive officer, ISO New England.

The EAC meetings will be attended by IEEE PES leadership, including:

- ✓ president
- ✓ president-elect
- ✓ VP, New Initiatives
- ✓ executive director.

We are very excited about these new developments and how they'll shape PES in the years to come. In 2016, PES closed out the year with ten consecutive years of unprecedented membership growth. In 2017, we are enabling More Power to the Future with even deeper industry and membership engagement, allowing us all to play a role in powering the future!



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