



Insights to Action: Leveraging Data for Enhanced Power Quality

Elspec UGM 2024

September 16 to September 18, 2024 | Hilton Fort Worth Hotel | Dallas, Texas

We are pleased to invite you to the **Elspec User Group Meeting 2024**, taking place from September 16th (with a Welcome Cocktail on the evening of September 15th) to September 18th, 2024, in Fort Worth-Dallas, Texas.

Note: our Agents are invited to stay for another full day of trainings & knowledge on September 19th.

This year's agenda is packed with engaging discussions on the value of data-driven power quality analysis for understanding grid behavior, identifying trends, predicting potential issues, and exploring the intersection of AI, research, and problem-solving in compensating power with real-world applications.

Throughout these days, industry experts from across the globe, alongside specialists from Elspec, will gather around to swap insights. We will introduce our latest innovative products and will set aside time for case studies from our agents and customers. It's gonna be a knowledge roundup with a touch of wild west flair!

So dust off your cowboy boots and tip your hat, 'cause it's time to etch these dates on your calendar - September 16th to 19th, 2024!

Agenda (Summary)

Sunday September 15th		
19:00-21:00	Welcome Cocktail in the hotel Lobby	
Monday September 16th		
08:30 – 08:45	Gathering	
08:45 – 09:00	Welcome	Mark Rodgers, ENA
09:00 – 09:45	ELSPEC- Present and Future	Oren Harary, Elspec
09:45 – 10:45	<p>Machine Learning-Driven Power Quality Insights Using Real Field Data. This session presents a novel approach to improving the stability and reliability of the smart grid amidst the increasing prevalence of power quality disturbances (PQDs) caused by power electronics and inverter-based resources (IBRs). By integrating synchronized phasor measurement units (PMUs), digital fault recorders (DFRs), and power quality analyzers (PQAs), this study develops a real-time PQD classification method using machine learning and AI techniques, using data from the Australian power network.</p>	Dr. Manoj Angus, SmartGRID Technologies & Power Quality Solutions
10:45 – 11:15	Coffee Break	
11:15 – 12:00	Utilizing Sapphire for the identification of unexpected ground protection faults due to switching transients.	José Starosta, Ação Engenharia
12:00 – 13:00	Lunch	
13:00 – 14:00	<p>Growing challenges with Inverter based generation and low short circuit capacity. This session will delve into the challenges of low short circuit capacity in inverter-based generation. Explore issues such as islanding mode transfer, voltage dips, and oscillation interactions. Join us for a concise examination of these challenges and their implications for the energy landscape.</p>	Helge Seljeseth, Statnett
14:00 – 15:00	<p>Understanding the value of Power Quality and Modern Technologies. This session will provide the attendees with recent Real-world statistics of the cost of poor Power Quality in the U.S. from DOE. EPRI. I will explain how technology has changed over the past 35 years and how Power Quality has made its way to the forefront of what most businesses need to remain competitive in their respective markets. From nonlinear loads creating harmonics to proper grounding, I touch on several aspects of Power Quality that I've seen and resolved in my 35 plus year career and over 8,000 Power Quality studies for some of the world's largest companies. I will discuss Real-World case studies.</p>	Mark A. Shirah, CPQ, Cardinal Power
15:00 – 15:30	Coffee break	
15:30 – 16:30	<p>AI-Enhanced Machine Learning for Fault Analysis in Power Systems Using Sequence Components and Optimally Placed PMUs. This presentation introduces an advanced machine-learning-based fault detection, classification, and localization technique for active distribution networks (ADNs) using strategically placed phasor measurement units (PMUs). By leveraging voltage sag characteristics and sequence components, the method enhances real-time fault analysis, even with large-scale renewable energy integration. Improved fault location accuracy is achieved through coordinated synchronized PMUs and traditional two-terminal methods, facilitated by cloud computing and optimized ADN segmentation workflows, offering substantial benefits to distribution system operators (DSOs) & ensuring more reliable power delivery.</p>	Dr. Manoj Angus, SmartGRID Technologies & Power Quality Solutions
16:30 – 17:30	<p>Why Statnett are using Elspec measurement system? Uncover the rationale behind Statnett's selection of Elspec for our measurement system. Explore the utility of features such as continuous waveform recording and seamless data extraction for third-party software integration. Join us as we delve into how Elspec enhances our operations at Statnett.</p>	Helge Seljeseth, Statnett

Tuesday September 17th		
09:00 – 10:00	Elspec's Exclusive Product Launch	Asaf Laifer, Elspec
10:00 – 11:00	Power Quality analysis, Simplifying the Process - From planning to execution, understand the path and tools for a successful PQ analysis.	Eric Hubbard, ENA
11:00 – 11:30	Coffee break	
11:30 – 13:00	Medium Voltage Projects	Aviad Peretz, Elspec
13:00– 13:30	Time for final arrangements and boarding the buses	
13:30 – 19:00	Wild West Activity including Lunch & Hosted Dinner	
Wednesday September 18th		
09:00 – 09:45	Quality PQSCADA Software - Introduction Training	Asaf Laifer, Elspec
09:45 – 10:45	<p>Mechanical and Electrical Component Troubleshooting through Signature Analysis.</p> <p>Portable power meters are routinely used to look up stream to detect issues with incoming power or ensure compliance at the point of common coupling. What if instead the meter was used to look down stream? Just as electrical harmonics in a circuit can be detected and displayed, mechanical harmonics can be detected and displayed as well. In the presentation I will be demonstrating the process of investigation and detection of mechanical and electrical component faults.</p>	Dan Voss, Cargill
10:45 – 11:15	Coffee break	
11:15 – 12:00	Untangling Complexity: How High-Resolution Data and Customized MV Solutions Tamed Operational Challenges in a Major Canadian Paper Company?	Jamshid Naseri, ADM Engineering
12:00 – 13:00	Lunch	
13:00 – 14:00	<p>The Evolution of Power Quality: 30+ Years of Technical Innovation and Business Dynamics.</p> <p>Explore over three decades of Power Quality history, delving into the technical advancements and business drivers that have shaped the field. Discover the pivotal events and trends that have influenced engineering, measurement standards, and solution development. Uncover the geographical and economic motivations behind investigating root causes and implementing cost-effective solutions. Learn about the evolution of electronic equipment technology and its impact on the Power Quality market.</p>	Terry Chandler, Power Quality Thailand & Power Quality USA
14:00 - 15:00	Project Examples from the Field.	Dan Voss, Cargill & Mark Rodgers, ENA
15:00 – 15:30	Coffee break	
15:30 – 16:30	<p>Shaping the Future: Advancements in PQ/QOS Measurement.</p> <p>Discover the key aspects of future technology that will revolutionize PQ/QOS measurement and drive innovation in solution development. Learn how these advancements can lead to improvements in PQ/QOS environments and reduce costs through enhanced measurement accuracy and efficiency. Join us in envisioning the future landscape of PQ/QOS, where cutting-edge technology paves the way for a more reliable and efficient electrical infrastructure.</p>	Terry Chandler, Power Quality Thailand & Power Quality USA
16:30 – 17:30	Time for Questions - All Experts panel	

Thursday September 19th		
09:00 – 10:00	PQBI	Asaf Laifer, Elspec
10:00 – 10:45	Elspec Blackbox: Discovering the Undiscoverable. Revealing Critical Insights into Power Quality and Electrical System Behavior.	Christan van Dorst, HyTEPS
10:45 – 11:15	Coffee break	
11:15 – 12:00	In the Shoes of a Sales Agent: Strategies, Challenges, and Ways to Succeed	Alberto Dajles, Power Projects
12:00 - 13:00	Lunch	
13:00 - 14:00	Developing Power Quality Solutions from the Ground Up	Aviad Peretz, Elspec
14:00 – 15:00	Advanced Training – PQSCADA Sapphire	Asaf Laifer, Elspec
15:00 – 15:30	Coffee break	
15:30 – 17:00	Here for You - Concluding the day and Discussing Agents' Questions	