



Dear readers,

The latest edition of Transformers Magazine reflects the spirit of progress and collaboration that defined our recent Industry Navigator 2025 conference, held in Dubai from 9-11 April. As always, we bring you timely insights, expert voices, and critical thinking on the challenges and opportunities shaping the future of the transformer and power grid sector.

The edition opens with an exclusive interview with Peter Novak and Simon Ostroznik from Kolektor ETRA, who discuss their strategic partnership with Maschin-fabrik Reinhausen to advance digital solutions in transformer technology. This conversation is a compelling example of cross-company collaboration aimed at accelerating innovation. We also bring an interview with Richard Ladroga, the CEO of AI Advanced Electrical Systems USA who shares insights from his 40-year career in electric power systems.

Technological evolution is also the focus of several expert columns on insulating liquids, highlighting the renewed interest in vegetable-based esters. We continue with the nuanced relationship between dielectric strength and temperature in transformer oils - adding depth to a critical topic for engineers in the field, as well as a technical exploration of the volt-time curve in transformer insulation, drawing on probabilistic modelling and Okabe's studies.

From dielectric strength to growth of AI, this issue combines technical depth with strategic insight

Other articles explore the interface between emerging technologies and infrastructure. John Wanjiku examines how the exponential growth of AI and data centres is reshaping energy demand and grid design, while Fiorenzo Stevanato and Andrea Tonin highlight the value of online moisture monitoring systems as a proactive diagnostic tool for transformer maintenance.

Edvard Christoffersen provides a data-driven analysis of the strained but growing transformer supply chain, while Bruno De Wachter and Fernando Nuño rethink energy performance expectations for distribution transformers in the light of circular economy principles.

Of course, we bring extensive Industry Navigator conference coverage with an event report and the TCC report which provides unparalleled insights from the industry leaders synthesising the rich dialogue that took place during the session and includes insights from Transformers Magazine's Workforce Challenges research. The Industry Navigator 2025 conference in Dubai was a pivotal moment for the T&D community. It brought together leaders from pioneering companies and featured 29 presentations, five expert-led workshops, and a rich social programme. Discussions addressed five core challenges our industry must tackle: ageing assets, talent shortages, sustainability mandates, the time required to develop expertise, and a looming retirement wave that could take 30% of our experienced workforce in just five years.

Can we meet growing grid demands with shrinking expertise? Industry Navigator says yes - with collaboration

The conference acted as a catalyst for ongoing initiatives and highlighted the impact of our research projects. Delegates overwhelmingly rated the event as relevant, well organised and inspiring, with over 98% confirming the usefulness of the content to their work and the same number expressing their intention to return.

A highlight of the event was the Awards ceremony. Tony McGrail (Doble) won both the Best Article and Best Author awards, while the Industry Champion Award honoured seven exceptional individuals for their leadership in driving collaborative initiatives within our industry - more in the post event report.

As we look ahead and prepare the next wave of industry research, we invite you - our readers, partners, and contributors - to stay engaged, ask bold questions, and help shape a more sustainable and resilient future.

Let's move forward together, guided by knowledge, empowered by collaboration.

Mladen Banovic, PhD
Editor-in-Chief, *Transformers Magazine*

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