



## Dear readers,

The April edition of Transformer Magazine marks exactly 12 years since the publication of our first ever issue. The articles and features in this edition reflect a shift that is becoming difficult to ignore: it is not demand that is the issue, but delivery.

Across the industry, activity remains strong and optimism remains high. Manufacturing capacities have been expanding and grid investments are accelerating. Expectations are becoming more realistic, since more and more people are becoming aware of strains and the geopolitical risks. Also, what used to be seen as temporary disruption in the industry is now revealing itself as something more structural.

We open the issue with an interview with Miguel A. Osuna-Perez from Hitachi Energy, who explains how the rise of AI-driven data centres is changing the scale of power infrastructure. The move from megawatts to gigawatts is not just a matter of size. It is changing how projects are planned, how quickly they need to be delivered, and how critical reliable power has become.

That same tension runs through the Industry trends column. It looks at why supply chains remain fragile despite strong demand and continued investment. The conclusion is not particularly comfortable. These pressures are not short-term. They come from how the value chain is structured, from materials and components to workforce and production capacity. In such conditions, visibility and coordination matter just as much as expansion.

At the same time, this edition brings the focus back to fundamentals.

In his column, Tony McGrail makes a simple point that is often ignored. Facts (numbers) need to be checked. Small errors in assumptions or calculations can lead to consequences that are far larger than expected. As systems become more complex and margins tighter, there is less room for approximation.

Several technical contributions build on this.

The article by Zoran Radaković and co-authors presents a detailed thermal-hydraulic network model that moves closer to real operational use. It shows how temperature behaviour can be modelled with

a level of precision that supports decisions not only in design, but also in operation and planning. In parallel, Bhaba Das looks at the relationship between sensors and analytics, arguing that neither creates value on its own. Only when they are connected to actual asset management decisions do they start to matter. A contribution by authors from BEST examines how stray losses in high-current LV exit regions can create localised thermal stress on transformer tank walls.

This connection between data, engineering, and execution appears throughout the issue.

From advanced thermoplastic materials presented by Syensqo, to synthetic ester fluids developed by NYCO, to structured data approaches introduced by OMI-CRON, the direction is consistent. The focus is shifting towards repeatability, traceability, and long-term performance.

The same applies on the manufacturing side. In the interview with Oğuz Sönmez, the discussion highlights how process control and drying technology, developed together with Sistem Teknik, are becoming central to consistency and reliability.

Safety is evolving in a similar way. In the interview with Mélissa Djarmouni from Sentric Safety Group, the focus is on how tighter timelines and more complex systems are changing expectations. Solutions need to be dependable, but also adaptable.

This issue also brings attention to the wider industry environment through several pre-event features. EP Shanghai 2026, IEEE PES T&D Conference & Expo, CWIEME Berlin, and CIGRE Paris Session all reflect the same reality. In a constrained environment, alignment across the value chain is no longer optional.

This edition reflects a broader transition: the industry is moving from growth to execution. In this phase, the key question is not how much demand exists, but how reliably it can be delivered.

With best regards,  
Dr Mladen Banović  
Editor-in-Chief

## TRANSFORMER MAGAZINE

ISSN 1849-3319 (Print) ISSN 1849-7268 (Digital)

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**Online edition - free access:** free of charge for registered users  
[www.transformer-magazine.com](http://www.transformer-magazine.com)

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Transformer Magazine is published quarterly by Merit Media Int. d.o.o., Setaliste 150, brigade 10, 10 090 Zagreb, Croatia. Published articles do not represent official position of Merit Media Int. d.o.o. Merit Media Int. d.o.o. is not responsible for the content. The responsibility for articles rests upon the authors, and the responsibility for ads rests upon advertisers. Manuscripts, photos and other submitted documents are not returned.

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Publisher: Merit Media Int. d.o.o.  
Setaliste 150, brigade 10,  
10 090 Zagreb, Croatia  
Contact: +385 1 7899 507  
VAT number: HR09122628912  
[www.transformer-magazine.com](http://www.transformer-magazine.com)  
Bank name: Revolut  
Bank IBAN: LT343250038251836452  
SWIFT / BIC: REVOLT21  
Intermediary BIC: CHASDEFX  
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