



Dear readers,

The October edition of *Transformer Magazine* arrives at a time when the industry is under both pressure and momentum: supply shortages, ageing fleets, and the accelerating energy transition demand innovation at every stage of the transformer value chain. In this issue, we bring you a wide range of perspectives which reflect how our community is responding.

We begin with innovation. Maschinenfabrik Reinhausen's new VACUTAP® VI on-load tap changer, discussed through the experience of Elpro-Energo Transformers, sets a new benchmark in simplicity and performance. Weidmann takes us behind the scenes of its technical services, showing how careful insulation design and consulting ensure reliability from the very start.

Leadership perspectives anchor this edition. Sandeep Chakravarty, President of Pennsylvania Transformer Technology, speaks about vertical integration, supply constraints, and workforce challenges in the US market, while Diego Hernandez of Hitachi Energy highlights the indispensable role transformers play in both traditional nuclear plants and emerging small modular reactors.

Several contributions deal directly with pressing operational questions. Tony McGrail and Richard Heywood revisit case studies that challenge the reliability of health indices, reminding us that numbers must always be grounded in expert interpretation. Bhaba Das shows how online condition monitoring can align the technical and economic end-of-life of ageing assets, supporting better investment decisions. Ellie Gabel addresses the transformer shortage, outlining procurement and life-extension strategies that can mitigate risk and safeguard operations.

Complementing these are articles which illustrate how industry leaders are shaping the future. Siemens Energy demonstrates how its DRY, REG, and CLEAN solutions extend lifespan and cut emissions. Hitachi Energy's GARIP Eco bushings point the way to SF₆-free

substations. COMEM and MTE showcase advanced monitoring and moisture management solutions, while Tamini reflects on a century of innovation in the face of global energy shifts. BEST's pad-mounted transformers, designed for modern cities, highlight how reliability and sustainability must increasingly go hand in hand.

This issue also features the **Pulse of Transformer Magazine**. We are proud to share that feedback from industry professionals confirms that *Transformer Magazine* is recognised as the **publication No. 1 in our industry worldwide**. Your engagement and trust are the clearest indicators of the magazine's role as a hub for knowledge, dialogue, and progress.

None of this would be possible without the dedication of our expert authors, who share their expertise and insights; our Editorial Board, which ensures quality and relevance; our advertisers, whose partnership sustains our mission; and you, our readers, who inspire us to keep raising the standard.

Another thing I would like to highlight is the return of Transformer Magazine's Quiz League. The first round of the League's second season brought together professionals from across the globe in a test of knowledge and speed. The enthusiasm and competitive spirit showed that learning can be both fun and deeply engaging. We look forward to welcoming you to the upcoming rounds and encourage you to join this unique initiative that blends education, competition, and community spirit. Just like last year, valuable prizes await the most successful participants.

We hope this edition both informs and inspires you as you navigate the challenges and opportunities ahead.

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

TRANSFORMER MAGAZINE

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

EDITORIAL BOARD

Editor-in-Chief:

Mladen Banovic, PhD, Merit Services Int., Croatia
mladen.banovic@transformer-magazine.com

EXECUTIVE EDITORS

Michel Duval, PhD, Hydro Quebec, Canada
Jean Sanchez, PhD, EDF, France
Michael Krüger, PhD, OMICRON electronics, Austria
Jin Sim, Jin Sim & Associates, Inc., USA
Juliano Montanha, SIEMENS, Brazil
Craig Adams, TRAFIX, Australia
Arne Petersen, Consulting engineer, Australia
Zhao Yongzhi, Shandong Electrical Engineering & Equipment Group Co., Ltd, China
Barry M. Mirzaei, LargePowerTransformers Inc., Canada
Bhaba P. Das, PhD, Dynamic Ratings Australia, New Zealand

EDITORS

Daosheng Liu, Jiangxi University of Science and Technology, China
Mislav Trbusic, University of Maribor, Slovenia
Dr. Mohammad Yazdani-Aslami, University of Strathclyde, United Kingdom
Dr. Shuhong Wang, Xi'an Jiaotong University, China
Nam Tran Nguyen, PhD, TT Electronics, USA

ASSISTANT EDITOR

Pedro Henrique Aquino Barra, MSc,
EESC/USP - University of São Paulo, Brazil

Art Director: Momir Blazek
Photo: Shutterstock.com
Front page image: MR
Language Editor: Ena Tomićić

ADVERTISING AND SUBSCRIPTION

+385 1 7899 507
sales@merit-media.com

SUBSCRIPTION RATES:

Print edition: \$130 (1 year, 4 issues)
Digital edition: \$65 (1 year, 4 issues)
Online edition - full access: \$20 (1 year, 4 issues)
Online edition - free access: free of charge for registered users
www.transformer-magazine.com

TRANSFORMER MAGAZINE

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.

REPRINT

Libraries are permitted to photocopy for the private use of patrons. Abstracting is permitted with credit to the source. A per-copy fee must be paid to the Publisher, contact Subscription. For other copying or republication permissions, contact Subscription. All rights reserved.

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
Bank name: Revolut
Bank IBAN: LT343250038251836452
SWIFT / BIC: REVOLT21
Intermediary BIC: CHASDEFX
Director: Mladen Banovic, PhD