

EDITORIAL BOARD

Editor-in-Chief:

Mladen Banovic, PhD, Merit Media Int., Croatia
mladen.banovic@transformers-magazine.com

EXECUTIVE EDITORS

Michel Duval, PhD, Hydro Quebec, Canada

Jean Sanchez, PhD, Utility, France

Jin Sim, Jin Sim & Associates, Inc., USA

Juliano Montanha, SIEMENS, Brazil

Craig Adams, TRAFIX, Australia

Arne Petersen, AP Consulting, Australia

Michael Krüger, OMICRON electronics GmbH, Austria

Zhao Yongzhi, Shandong Electrical Engineering & Equipment Group Co., Ltd, China

Art Director: Momir Blazek

Photo: Shutterstock.com

Front page: Cover image courtesy of Neil Glasson - Callaghan Innovation

Language Editor: Marina C. Williams

ADVERTISING AND SUBSCRIPTION

Marin A. Dugandzic

+44 20 373 474 69

marin.dugandzic@merit-media.com

TRANSFORMERS MAGAZINE

Transformers Magazine is published quarterly by Merit Media Int. d.o.o., Setaliste 150. brigade 10, 10 090 Zagreb, Croatia. Published articles don't 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.

Subscription rate:

Print Edition: \$96 (1 year, 4 issues)

Digital Edition: \$54 (1 year, 4 issues)

Online Edition - full access: \$19 (1 year, 4 issues)

Online Edition - free access: Free of charge for registered users

www.transformers-magazine.com

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 91 222 8820 Croatia

Contact: +44 20 373 474 69 UK

VAT number: HRO9122628912

www.transformers-magazine.com

Bank name: Zagrebacka banka

Bank identifier code: ZABAHR2X

Bank IBAN: HR8023600001102375121

Director: Marin A. Dugandzic

This issue is printed with the support of Ministry of Science, Education and Sports of the Republic of Croatia

www.transformers-magazine.com



Dear Readers,

In discussions that I have with people from all over the world on a daily basis, I'm frequently asked: How do you see the future transformer business? Is the market going to grow, or not? These questions are not only related to transformers, but also to materials, components, service, etc. People ask this knowing that I work with various teams and that I probably have a good understanding of the market. What I always point out in response is that there is a difference between having an insight into the current state of affairs and forecasting, particularly today living in the world where one political decision can easily impact, let's say, one third of the global transformer market. And even with a good grasp of the market, forecasting is quite sensitive and it always implies uncertainty. Nowadays, there are many market reports available, but people are either reluctant to read them or they are simply unsure which report they can rely on.

Fundamentally, most of the reports forecast market growth in the next period, and while my aim is not to analyse these reports here, I would like to share the impressions that one gets combining the publicly available information.

There are two drivers supporting the market growth in the near future. A large part of the infrastructure equipment in developed countries has reached end of the designed life time, and a big part of it is approaching the end of the life time. In developing countries, there is a growing demand for electricity, which drives investments in the grid. These two drivers cover practically the whole world and they have been discussed for some time now, but what has been evident recently, and Transformers Magazine has been following it closely, is a big number of huge grid investment announcements. Only the breaking news that we have published in the first quarter this year cover nearly

USD750B of investments! Although we are aware there will always be some project delays, this is still more than a good reason for optimism.

In addition to this, many other drivers, like pressure to decrease losses and noise, to extend the life time and increase the reliability and physical security, to monitor more closely the condition of the equipment, to have the ability for early fault detection, to simplify handling of transformers, components and materials throughout their life time, etc. – all this creates new opportunities for growing transformer-related business.

In effect, I'm receiving information about great products and solutions all the time. Many of them are presented in our magazine, and I firmly believe all those who communicate their products well have a solid reason for optimism.

This issue of Transformers Magazine brings three interesting interviews, as well as several technical articles and advertorials. Topics range from superconducting to physical security. All pieces provide more than 90 pages of technical- and business-related content, and I hope you will enjoy it.

In January we marked the second anniversary of our presence online. This April we mark the second anniversary of our print magazine. I wish to thank all of you for your comments and advice, for publishing with us, subscribing and advertising. I hope we will continue this journey together.

Have a pleasant reading!

Mladen Banovic, Editor-in-Chief