Tagungsgesellschaft mbH ENERGIE

MVV Regioplan

Online-workshop

Advanced Issues of High Voltage Lines

11 and 12 March 2021 at the Karlsruhe University of Applied Sciences

Thursday, 11 March 2021

09:00 **Greeting, opening and introduction to the workshop**
Markus Palic

09:05 **Digital Twins - Network information of high voltage overhead lines and underground cables**
V. Patzwaldt

Fundamentals of GIS-based network documentation - Transmission asset information today and tomorrow - Network planning with GIS - Digital data and applications for network management - Asset, load and production management with digital data

10:30 **Coffee break**

11:00 **Fittings for HV overhead lines**
K. O. Papailiou

Production – Design – Tests – Installation – Field inspection – Tests on aged fittings

12:30 **Lunch for the in-person participants**

14:00 **Design of HV and EHV overhead line towers**
R. Schmidt

Types – Steel grades and joints – Protection against corrosion – Connections of cross-arms to the tower body, joints, anchors, attachments and reinforcements – Tower leg to foundation connection – Earthing – Tower erection – Tower body extensions – Access roads

15:30 **Coffee break**

16:00 **Design of HV networks – Grid connection of HV underground cables and overhead lines**
G. Schultz

Design and operation of HV and EHV networks – Grid expansion in Germany – Basic and expansion planning – Conceptual issues and grid operation – Connection of DC lines – Converter technology

17:30 **End of presentations of the first day**

Friday, 12 March 2021

09:00 **Bird protection issues of HV lines**
K. Schmitt

Bird sight basics - Multispectral photography as a tool - Scientific and statistical evidence of the effect of bird protection products - Installation by drones

10:30 **Break for Coffee**

11:00 **Quality assurance for HV overhead lines**
R. Schmidt

Factory acceptance tests – Packing – Tests on site – Excavation and foundation pit, tests of concrete steel reinforcement – Quality of ready-mix concrete – Pre-assembly of towers and insulator strings – Conductor stringing and sagging

12:30 **End of the work-shop - the online participants will receive certificates of attendance by mail**

Your tutors:

Dipl.- Ing. **Markus Palic**, former CEO NEW Netz, Geilenkirchen / CEO TagungsgesellschaftEnergie, Karlsruhe

After his master´s degree in electrical power systems, Markus spent more than 30 years in various positions in power utilities. He was CEO of a regional utility, being mainly involved with power system economics, grid expansion and construction projects. Throughout this period, he was teaching classes on “Power system economics in liberalized markets” at the University of Applied Sciences Aachen, Jülich campus.

Dipl.- Ing. **Volker Patzwaldt**, Manager, System Operation, MVV-Netze GmbH, Mannheim

After his master´s degree in electrical engineering, Volker spent many years in the planning and construction of networks and was responsible for network documentation in a major regional utility company. After the spin-off of the network company NETRION from MVV, he became manager of the Geo-Information-Service. Today he is manager in the MVV-Netze GmbH and responsible for system operations with the tasks network management and GIS data management. Numerous lectures on GIS and NIS at continuing education workshops. Member of various committees at VDE/FNN and DVGW.

Prof. Dr.- Ing. habil. **Konstantin O. Papailiou**, former CEO PFISTERER Holding AG and former Chairman, CIGRE Study Committee Overhead Lines (B2), CH-Malters

Konstantin received his doctorate degree from the Swiss Federal Institute of Technology (ETH) Zurich and his postdoctoral qualification as lecturer (Dr.-Ing. habil.) from the Technical University of Dresden. Until his retirement at the end of 2011 he was CEO of the Pfisterer Group. From 2010 to 2016 he was Chairman of the CIGRE Study Committee “Overhead Lines” (SC B2) and has been teaching OHL courses at Stuttgart University and TU Dresden for many years since.

Dipl.- Ing. **Reiner Schmidt**, Senior Consultant, Dettenheim

Reiner holds a master´s degree in civil engineering and worked as manager in a major TSO specializing in Tower design, Conductor mechanics and OHL planning for over 30 years. Since 2010 he has been active as consultant and as lecturer in OHL courses, in particular for young engineers. He is also member of various DKE-Working Groups.

Prof. Dipl.-Ing. **Guntram Schultz**, Karlsruhe University of Applied Sciences

After his master´s degree in Electrical Power Guntram has been working in the department of network development of a major TSO in Karlsruhe. In 1981 he was appointed as full professor at Karlsruhe University of Applied Sciences for „Planning and Operation of Electrical Power Systems, Protection and Renewable Energies”. He is also active in the training and continuing education of young engineers.

Dr.-Ing. **Klaus Schmitt**, CEO and consultant, Weinheim

After his studies and PhD degree in electrical power engineering at the Technical University of Darmstadt Klaus started working for BBC, later ABB, in the department for load dispatch systems and network security design. He became group manager and division manager design of load dispatch systems and later joined Rheinelektra Technik / RWE as General Manager Technology. He has been CEO of a technical consultancy company since 1996 and since 2016 he has been cooperating with Hammarprodukter AB as scientific and technical consultant for bird protection products.

Who should attend?

The workshop provides the fundamentals of HV electrical power systems and is as such suited for newcomers in this field but also for experienced engineers who are looking for an update. It includes the “best of” lectures of previous seminars and provides the participants with a sound overview but also with detailed knowledge of the main issues of High Voltage Transmission. Participants typically work for a power company, an overhead line contractor or an equipment manufacturer.

The workshop will take place as live event in the German language and also as online-seminar. The latter can be booked in German or in English (simultaneous translation by K.O. Papailiou and G. Schultz).

Registration fee:

980.- Euro (in English only online)

Event format:	The workshop will take place as a **hybrid event** in an in-person and an online version in German. The online version is **also available in English.**
Presentations:	The presentations will be given by the speakers in person while being physically present in the auditorium and they will also be streamed live.
Online event:	English participants will be able to follow the event via live stream remotely using an access code, which is strictly limited to the person who has acquired it. As soon as a participant is online using this code, further access with this code is not possible! The presentations will be synchronously translated from German into English. The presentation slides are bilingual. Questions and comments can be asked or made in writing via a chat. These will be introduced into the live event by the moderator and answered or explained by the speakers. This way, online participants can take part in the lectures without any restrictions.