

Preface

Future Power Grids Conference 2024

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The Future Power Grids conference took place in Berlin in January 2024, bringing together a diverse group of participants. With 120 onsite attendees and 35 online participants mainly from Germany, the event served as a platform for sharing knowledge, discussing the latest innovations, and exploring solutions to the challenges facing the energy sector. The conference was a great success, fostering valuable connections and inspiring meaningful discussions among experts, industry leaders, and researchers from various fields.

At the last edition of the conference in January 2023, a lively discussion spontaneously emerged between the panelists and the audience regarding whether the speed of the energy transition – more specifically, the expansion of renewable energy sources in the electricity supply – needed to be tripled or even quadrupled. This led to deeper conversations about whether and how this goal could be achieved, and what measures are required from technological, regulatory, and market perspectives.

We are confident that together, we can generate even more ideas to achieve this goal. However, this brief episode illustrates the significant challenge ahead. The search for solutions, stepping out of our comfort zones in technical discussions, and drawing inspiration from the ideas of others are essential tools – and the *Future Power Grids* conference has been providing all of this for many years.

The papers presented at the conference were included in the conference proceedings, hosted on the TIB platform, ensuring wide accessibility and recognition within the academic and professional community. Being published in the conference proceedings is crucial for researchers and professionals alike, as it offers a permanent record of their work, enhances their visibility, and contributes to the advancement of knowledge in their field. Firstly, publishing in the proceedings ensures that the research reaches a global audience, making it accessible to peers, stakeholders, and potential collaborators worldwide. Secondly, it strengthens the credibility of the work by providing an official and peer-reviewed platform for the dissemination of findings. Finally, inclusion in the proceedings offers a valuable reference point for future research, contributing to the ongoing development of solutions and ideas in the energy sector and related disciplines.

We look forward to continuing the search for solutions next January, reconnecting with many familiar faces from past editions, and hopefully welcoming new participants as well!