

Preface

Future Power Grids Conference 2025

Anke Hüneburg¹ and Oliver Franz²

¹ZVEI e.V., Germany

²E.ON SE, Germany

Our event reliably addresses the key challenges in power grids and serves as a comprehensive platform for personal exchange at a professional level among all relevant stakeholders every year.

The rapid pace of developments and necessary adjustments in our infrastructure is also reflected in our daily work. For us, one thing is clear: there is no way forward without open and more intensive collaboration between grid operators, manufacturers, regulators, and academia. Practical and scalable solutions are essential to efficiently integrate the growing share of renewable electricity into the overall energy system.

The 2025 conference focused on crucial topics such as the structure of the future energy system from the perspective of power grids, current issues in system stability and grid operation, innovative technologies for secure grid management, the digitalization of the energy system, and the latest developments and innovations in the energy sector.

We firmly believe that we can all contribute significantly to accelerating the transformation and expansion of our energy infrastructure. These conference proceedings play a crucial role in documenting the insights and innovations presented at the event. They serve as a comprehensive record of the discussions, showcasing the latest research, developments, and practical solutions shared by experts across various fields. By publishing these proceedings, we ensure that the valuable knowledge exchanged during the conference reaches a wider audience, contributing to the ongoing dialogue and collaboration necessary to tackle the challenges faced by the power grid sector. This documentation not only highlights the key results from the conference but also serves as a reference point for future work and a foundation for further collaboration between grid operators, manufacturers, regulators, and academia.