

Maon, TU Berlin and 50Hertz Begin Research About the Security of Supply for Electricity with IMTRA Project

Berlin, 10th November 2023 – Maon begins a two-year research project called Integrated Models for Transmission and Resource Adequacy (IMTRA) together with the project partners Technische Universität Berlin (TU Berlin) and 50Hertz Transmission (50Hertz). This project aims to develop innovative models for the integrated derivation of probabilistic and deterministic parameters to assess the security of supply in the electricity market. It is supported by the German Federal Ministry for Economic Affairs and Climate Action (BMWK).

In today's dynamic energy landscape, it is crucial to have a comprehensive understanding of the security of supply. IMTRA addresses this challenge by combining probabilistic and deterministic indicators. Probabilistic indicators assess the adequacy of randomly available resources, such as wind and photovoltaic systems, storages or natural gas imports. Deterministic parameters are essential for evaluating the long-range transport of electrical energy from generation to consumption through the grid. The working assumption is that deterministic models for transmission adequacy can be reused as stochastic models for resource adequacy efficiently.

Within the project, technology-specific cluster and aggregation algorithms will be researched by the Chair for Sustainable Electric Networks and Sources of Energy (SENSE) at the TU Berlin. This partnership ensures that IMTRA can develop methodologies beyond the current knowledge. The transmission system operator 50Hertz is another important partner in the IMTRA project, providing insights into requirements for assessments of the security of supply. Maon focuses on the development of the procedure to evaluate the resource adequacy, its validation and practical usability. 50Hertz will develop novel concepts for evaluating the resource and transmission adequacy. This collaborative effort enables a holistic approach to assess transmission and resource adequacy jointly.

One of the targeted key innovations of the IMTRA project is its alignment with increased and until today unmet regulatory requirements. The project aims to enable more accurate and at the same time consistent assessments of the transmission and resource adequacy. This could be achieved by uniting existing methods and datasets through clustering and aggregation into one new integrated approach.

About Maon

Maon is a spin-off of the RWTH Aachen and the TU Berlin. The specialised software company provides a comprehensive web platform that enables organisations to create explainable, accurate, and reliable energy market forecasts. It has been used to conduct millions of simulations by consumers as well as grid, storage, and power plant operators in Europe.

About TU Berlin

Technische Universität Berlin is a member of the Berlin University Alliance, making it one of Germany's Universities of Excellence. The areas covered by its seven faculties are unique for a technical university, bringing together natural sciences and technology, planning sciences, economics and management, social sciences, and humanities under one roof.

About 50Hertz

50Hertz operates the electricity transmission system in the north and east of Germany, which it expands as needed for the energy transition. The extra high voltage grid has an electrical circuit length of more than 10000 kilometres. Within these regions, 50Hertz and its 1600 employees ensure that 18 million people are supplied with electricity around the clock.

Contact Maon

Maon GmbH
Dr. Mihail Ketov
Bismarckstraße 10-12, 10625 Berlin, Germany
info@maon.eu
www.maon.eu

Contact TU Berlin

Technische Universität Berlin
Sustainable Electric Networks and Sources
of Energy (SENSE)
Prof. Dr. Kai Strunz
Einsteinufer 11, 10587 Berlin, Germany
sekretariat@sense.tu-berlin.de
www.tu.berlin

Contact 50Hertz

50Hertz Transmission GmbH
Volker Gustedt
Heidestraße 2, 10557 Berlin, Germany
info@50hertz.com
www.50hertz.com

Supported by:



Federal Ministry
for Economic Affairs
and Climate Action

on the basis of a decision
by the German Bundestag