TIMETABLE 24TH WIND & SOLAR INTEGRATION WORKSHOP

MONDAY
06 OCTOBER 2025

	ROOM PARIS
	14:00 – 18:30 **TUTORIAL: GRID FORMING – ACADEMIC APPROACHES AND MODELLING ASPECTS** – TO BE BOOKED SEPARATELY – SOLD OUT –

TUESDAY
07 OCTOBER 2025

Workshop Day 1

	ROOM ZÜRICH	ROOM MADRID
	08:30 – 13:05 **TUTORIAL: GRID FORMING – INDUSTRY STATUS AND EXPECTED DEVELOPMENTS** – TO BE BOOKED SEPARATELY –	**08:30 – 13:05** **TUTORIAL: ARTIFICIAL INTELLIGENCE (AI) IN POWER SYSTEMS** – TO BE BOOKED SEPARATELY –
	LUNCH 12:00 – 13:30	

	BALLROOM BERLIN 1–3
13:30 – 15:30	**SESSION 1** WORKSHOP WELCOME & KEYNOTE SESSION
	COFFEE BREAK & GROUP PHOTO (40 MIN)

	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
16:10 – 18:30	**SESSION 2A** GRID FORMING TESTING AND VERIFICATION	**SESSION 2B** POWER SYSTEMS WITH HIGH SHARE OF PV	**SESSION 2C** SYSTEM ADEQUACY 2050	**SESSION 2D** WIND POWER SYSTEM MODELLING
18:30	**POSTER SESSION / WORKSHOP NETWORKING EVENT** – Foyer –			

WEDNESDAY
08 OCTOBER 2025

Workshop Day 2

	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
08:45– 10:40	**SESSION 3A** GRID FORMING ASSESSMENT	**SESSION 3B** INVERTERS IN DISTRIBUTION GRIDS	**SESSION 3C** OFFSHORE WIND CONNECTION	**SESSION 3D** IEA WIND TASK 51 & PVPS TASK 16
	COFFEE BREAK (30 MIN)			
11:10 – 13:00	**SESSION 4A** GERMAN SYSTEM STABILITY STUDIES	**SESSION 4B** INTEROPERA – PROJECT OVERVIEW	**SESSION 4C** DISTRIBUTION GRID ASPECTS	**SESSION 4D** IEC STANDARD FOR RE FORECASTING
	LUNCH 13:00 – 14:00			
14:00 – 15:40	**SESSION 5A** GRID FORMING I	**SESSION 5B** BLACKOUT INVESTIGATION	**SESSION 5C** OFFSHORE WIND POWER DEVELOPMENT	
	COFFEE BREAK (30 MIN)			
16:10 – 18:50	**SESSION 6A** GRID-FORMING-BENCHMARKING-PROJECT	**SESSION 6B** POWER SYSTEM STABILITY & FREQUENCY-DOMAIN MODELLING I	**SESSION 6C** ELECTROLYZERS AND ANCILLARY SERVICES	**SESSION 6D** FLEXIBILITY ASPECTS
19:00	**WORKSHOP NETWORKING EVENT / DINNER** – to be booked separately –			

THURSDAY
09 OCTOBER 2025

Workshop Day 3

Time	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
09:00– 10:40	**SESSION 7A** GRID FORMING II	**SESSION 7B** POWER SYSTEM STABILITY & FREQUENCY-DOMAIN MODELLING II	**SESSION 7C** ELECTROLYZER APPLICATIONS	**SESSION 7D** GRID CODE ASPECTS
11:10 – 13:00	COFFEE BREAK (30 MIN)			
	BERLIN 1	BERLIN 2	BERLIN 3	
	SESSION 8A GRID FORMING AND ISLAND SYSTEMS	**SESSION 8B** ANCILLARY SERVICES	**SESSION 8C** BATTERY INTEGRATION	
	LUNCH 13:00 – 14:00			
	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
14:00 – 15:40	**SESSION 9A** GRID FORMING AND DISTRIBUTION NETWORKS	**SESSION 9B** SYNCHRONOUS CONDENSERS	**SESSION 9C** GRID RESILIENCE	**SESSION 9D** COUNTRY STUDIES
	COFFEE BREAK (30 MIN)			
	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
16:10 – 18:30	**SESSION 10A** GRID FORMING AND WIND POWER	**SESSION 10B** GRID CODE FOR LARGE LOADS & HYBRID POWER PLANTS	**SESSION 10C** HYDROGEN / METHANOL STUDIES	**SESSION 10D** FORECASTING
19:00	**ENERGYNAUTICS LOUNGE**			

FRIDAY
10 OCTOBER 2025

Workshop Day 4

Time	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
09:00– 10:40	**SESSION 11A** PERFORMANCE ASSESSMENT	**SESSION 11B** HYBRID POWER PLANTS	**SESSION 11C** WIND POWER MODELLING I	**SESSION 11D** MODELLLING ASPECTS
11:00 –12:40	COFFEE BREAK (20 MIN)			
	BERLIN 1	BERLIN 2	BERLIN 3	ZÜRICH 1–3
	SESSION 12A STABILITY AND GRID FORMING ASPECTS	**SESSION 12B** STABILITY ASPECTS	**SESSION 12C** WIND POWER MODELLING II	**SESSION 12D** FLEXIBILITY ASPECTS
	SHORT BREAK 12:40 – 12:50			
12:50 – 13:50	BERLIN 1–3			
	SESSION 13 CLOSING SESSION PANEL DISCUSSION			
	LUNCH 13:50 – 14:50			

FINAL AGENDA – AS HELD

TUESDAY, 07 OCTOBER 2025

09:00 Start Registration

13:30 – 14:00	WORKSHOP WELCOME – THOMAS ACKERMANN (ENERGYNAUTICS, GERMANY)

14:00 – 15:30	**SESSION 1 – KEYNOTE SESSION**
> Session Chair	**Thomas Ackermann (Energynautics, Germany)**
14:00 – 15:20	**Presentations (20 min. each)**

- **State of Play: German Energiewende**
  Fabian Huneke (Agora Energiewende, Germany) (Submission-ID WISO25-300)
- **Energy Transition: Current State and Challenges from a TSO's Perspective**
  Michael Heihsel (TransnetBW, Germany) (Submission-ID WISO25-355)
- **CROF (Control Room of the Future) - TBC**
  Cornelius Heck (50Hertz, Germany)
- **System Stability – Another angle: Regulatory Perspective**
  Tobias dos Santos (BNetzA, Germany)

15:20 – 15:30 **Discussions**

15:30 – 16:10 COFFEE BREAK | GROUP PHOTO

16:10 – 18:30	**SESSION 2A – GRID FORMING TESTING AND VERIFICATION**
> Session Chair	**Daniel Duckwitz (SMA, Germany)**
16:10 – 18:10	**Presentations (20 min. each)**

- **ENTSO-E's Report on Technical Requirements for GFM Capabilites of PPMs**
  T. Schaupp (TransnetBW, Germany)
- **How to Get a Certificate for Gridforming Capability in Germany (VDE note "Technical requirements for gridforming properties")**
  D. Masendorf (Energynautics GmbH, Germany) (Submission-ID WISO25-42)
- **Character of the "FRT tester Transformer Cut In" Beyond Established Limits.**
  R. Klosse (EESYST Energie Elektrische Systemtechnik GmbH, Germany) (Submission-ID WISO25-249)
- **Verification of Grid-Forming capabilities of a Wind Turbine using Co-simulation**
  R. Singh, E. Petkovski (DNV, Netherlands) (Submission-ID WISO25-44)
- **Certification Process of Grid Code Requirements by Hardware-in-the-Loop**
  F. Monachesi (UL Solutions, Italy) (Submission-ID WISO25-289)
- **Lab-based Implementation and Verification of New LFSM Requirements in State-of-the-Art Grid-Following Inverters**
  B. O. Winter, S. Walujski, N. Gorkow, M. Gand, B. Engel (TU Braunschweig – elenia, Germany) (Submission-ID WISO25-143)

18:10 – 18:30 **Discussions**

16:10 – 18:30	SESSION 2B – POWER SYSTEMS WITH HIGH SHARE OF PV
> Session Chair	Thomas Ackermann (Energynautics, Germany)
16:10 – 18:10	Presentations (20 min. each)

- **Grid Scale Hybridisation begins in Australia as Renewable Curtailment Increases: Observations from the front line**
  J. Dyson (Greenview Strategic Consulting, Australia) (Submission-ID WISO25-87)
- **Network-Driven Storage: Quantifying the Benefits of a Distributed Battery Portfolio – Better for customers, better for the grid, and better for the system**
  F. Keck (AusGrid, Australia) (Submission-id WISO25-323)
- **High Shares of PV – Texas**
  L. Butler (ERCOT, USA) (Submission ID 347)
- **System and Market Integration of Renewable Energies from the Perspective of a Transmission System Operator**
  M. Salzinger (TransnetBW, Germany) (Submission ID 331)
- **Impact of High PV and Battery Storage Penetration and Electricity Market Rules on Deterministic Frequency Deviations**
  J. Lehner (TransnetBW GmbH, Germany), (TransnetBW, Germany), **M. Glau** (50Hertz Transmission, Germany), J. Dehler-Holland (TransnetBW, Germany), A. Neubauer (TenneT TSO, Germany), W. Wittich (Amprion, Germany) (Submission-ID WISO25-196)
- **Rethinking Wind And Solar Curtailment: Past Trends, Current Situations and Future Estimations**
  Y. Yasuda (University of Strathclyde, United Kingdom), J. Dobschinski (Fraunhofer IEE, Germany), D. Flynn (University College Dublin, Ireland), T. Heggarty (Réseau de Transport d'Électricité RTE, France), G. Heilscher (Technische Hochschule Ulm, Germany), N. Helistö (VTT, Finland), M. J. Koivisto (DTU, Denmark), D. Mende (Fraunhofer IEE, Germany), E. Neau (Électricité de France, France) (Submission-ID WISO25-149)

18:10 – 18:30	Discussions

16:10 – 18:30	SESSION 2C – SYSTEM ADEQUACY 2050
> Session Chair	Hannele Holttinen (recognis, Finland)
16:10 – 17:50	Presentations (20 min. each)

- **Adequacy 2050 - Security of Supply in the Power System**
  M. Moser (TransnetBW, Germany) (Submission-ID WISO25-303)
- **The Relevance of European Cooperation for a Cost-Effective Energy Transition - Deep insights from cross-sectoral energy system modelling**
  P. F. Zelle (TransnetBW, Germany) (Submission-ID WISO25-304)
- **The Role of Battery Storage in the Energy System**
  T. Traber (50Hertz, Germany) (Submission-ID WISO25-348)
- **How to Handle European Grid Complexity and Runtime in PyPSA**
  A. Hösl (Energynautics, Germany) (Submission-ID WISO25-335)
- **PyPSA-DE: Open-source German energy system model reveals savings from integrated planning**
  M. Lindner, J. Geis, T. Seibold, **T. Brown** (TU Berlin, Germany) (Submission-ID WISO25-301)

17:50 – 18:30	Discussions

16:10 – 18:00	SESSION 2D – WIND POWER SYSTEM MODELLING
> Session Chair	Sigrid Bolik (Siemens, United Kingdom)
16:10 – 17:30	**Presentations (20 min. each)**

- **Open-source Implementation of a DFIG Wind Turbine Model Based on IEC 61400-27 International Guideline Using Python**
  J. Jiménez-Ruiz, A. Honrubia-Escribano, E. Gómez-Lázaro (University of Castilla-La Mancha, Spain) (Submission-ID WISO25-124)
- **Power Oscillations Damping by Wind Power Plants: Design, Field Tests Verification and Model Validation**
  G. C. Tarnowski, M. Due Riis, L. Petersen, I. C. Da Costa, J. P. Espírito Santo, R. Afonso (Vestas Wind Systems A/S, Denmark) (Submission-ID WISO25-152)
- **Exchange Of Tool-Independent Dynamic Simulation Models Using The Functional Mock-Up Interface (FMI)**
  A. Constantin, G. Jauleski (DIgSILENT GmbH, Germany) (Submission-ID WISO25-254)
- **Lessons Learned Validating System Operation Limits with EMT in a Radial Network with a High Penetration of Wind Generation**
  B. Labelle, F. Lavigne (Hydro-Québec, Canada) (Submission-ID WISO25-76)

17:30 – 18:00	**Discussions**

18:30 NETWORKING EVENT / POSTER SESSION
- FOYER-

WEDNESDAY, 08 OCTOBER 2025

08:45 – 10:40	**SESSION 3A – GRID FORMING ASSESSMENT**
> Session Chair	**Jens Fortmann (HTW Berlin, Germany)**
08:45 – 10:05	**Presentations (20 min. each)**

- **Grid-Forming Converters under Current Limitation Considering Emerging Guidelines and Implications for Grid Services**
  P. Unruh, **T. Erckrath** (Fraunhofer IEE, Germany), R. Brandl, M. Jung (Hochschule Bonn-Rhein-Sieg – University of Applied Sciences, Germany) (Submission-ID WISO25-253)
- **System Identification-Based Assessment of Grid-Forming Capabilities in Wind Turbines**
  B. Paz (EPRI Europe, Spain), **D. Ramasubramanian** (EPRI, USA) , S. Konstantinopoulos (EPRI Europe, Spain) (Submission-ID WISO25-199)
- **Reviewing Model Validation Practices of Grid-Following Wind Turbines and Evaluating Their Applicability in the Grid-Forming Case**
  E. Teixeira Zapata (Siemens Gamesa Renewable Energy, Denmark | Technical University of Denmark, Denmark), R. Sharma, K. Vatta Kkuni, T. Knueppel, C. Ara Belles, T.Dreyer (Siemens Gamesa Renewable Energy, Denmark), **G. Yang** (Technical University of Denmark, Denmark) (Submission-ID WISO25-290)
- **Power Electronic Grid Simulator to Support Testing of the Grid Forming Converters in Multi-Megawatt Power Range**
  G. Chekavskyy, H. Wiktor, D. Jurkowski (ABB, Poland), J. Eckerle, K. Pietilaeinen (ABB, Switzerland), T. Dreyer, M. Neshati (Siemens Gamesa Renewable Energy, Germany) (Submission-ID WISO25-75)«

10:05 – 10:40	**Discussions**

08:45 – 10:40	**SESSION 3B – INVERTERS IN DISTRIBUTION GRIDS**
> Session Chair	**Leonard Hülsmann (Energynautics, Germany)**
08:45 – 10:25	**Presentations (20 min. each)**

- **Integration of Active Power-controlled Photovoltaic Energy Sources in Distribution Grids by Dynamic Virtual Power Plants**
  H. Schulte (HTW University of Applied Sciences Berlin, Germany), M. Resener (Simon Fraser University, Canada) (Submission-ID WISO25-278)
- **Review of inverters PQ controls to improve LV networks hosting capacity via Monte-Carlo simulations including inverter dynamics**
  Q. Antoine, L. Maudoux (ENGIE Laborelec, Belgium) (Submission-ID WISO25-34)
- **Grid Frequency Regulation Support Capability of Inverter-based Distributed Energy Resources**
  M. A. Huque, C. Brewster (Electric Power Research Institute (EPRI), United States) (Submission-ID WISO25-208)
- **Federated Learning-Based Tuning of Smart Inverter Parameters for Voltage Control**
  N. Kaneko, Y. Fujimoto, S. Takahashi, A. Kaneko, Y. Iino, J. Yoshinaga, H. Ishii, Y. Hayashi (Waseda University, Japan) (Submission-ID WISO25-105)
- **Supporting Manual Decision-Making in Distribution Grid Operations**
  L. P. Wagner (Helmut Schmidt University Hamburg, Germany), F. Strobel, L. Bittermann (PSI Software SE, Germany), F. Gehlhoff (Helmut Schmidt University Hamburg, Germany) (Submission-ID WISO25-35)

10:25 – 10:40	**Discussions**

08:45 – 10:40	SESSION 3C – OFFSHORE WIND CONNECTION
> Session Chair	Andreas Hösl (Energynautics, Germany)
08:45 – 10:25	**Presentations (20 min. each)**

- **SiL and HiL Integration Testing to Support Wind Power Plant - HVDC Grid Interconnection Assessments**
  S. Huang, K. Zarzavatsakis, J. C. Ramos, M. Knudsen, M. Holzapfel, R. Alves, G. K. Andersen, T. Lund (Vestas Wind System, Denmark) (Submission-ID WISO25-230)
- **Energy-Based Sensitivity Analysis of HVDC Control on Offshore Wind Turbine Response Within an Overall Grid-Forming System**
  M. Hildebrandt, C. Neumann, H.-G. Eckel (University of Rostock, Germany) (Submission-ID WISO25-24)
- **Offshore Wind Export Circuit Switching Transient Stresses and Mitigations**
  S. Srinivasan, C. H Polchinski, S. A Deeney, A. R Sparacino (Mitsubishi Electric Power Products, USA) (Submission-ID WISO25-183)
- **Small-Signal Stability Analysis of HVAC-Interconnected Offshore Wind Power Plants**
  D. Moutevelis, M. Cheah-Mañe, O. Gomis-Bellmunt (CITCEA-UPC, Spain) (Submission-ID WISO25-67)
- **Optimizing Cable Design and Risk Mitigation in Offshore Wind Farms Using a Cable Load Prediction System**
  M. Hatlo, K. Sommerfelt, T. Nestli (Unitech Power Systems AS, Norway) (Submission-ID WISO25-135)

10:25 – 10:40 **Discussions**

08:45 – 10:40	SESSION 3D – IEA WIND TASK 51 & PVPS TASK 16
> Session Chair	Jan Remund (Meteotest AG, Switzerland) & Corinna Möhrlen (WEPROG, Denmark)
08:45 – 10:05	**Presentations (20 min. each)**

- **Wind Task 51 and PVPS task 16: Introduction and outlook from the work in IEA PVPS Task 16**
  J. Remund (Meteotest AG, Switzerland) (Submission-ID WISO25-216)
- **Wind Task 51 und PVPS Task 16 Forecasting: Overview of Recent Activities and Next Phase Plans of Task 51 - Forecasting for the Weather-Driven Energy System**
  J. Zack† (MESO Inc., United States), **C. Möhrlen** (WEPROG, Denmark), G. Giebel (DTU Wind, Denmark), C. Draxl (EPRI, United States), H. Frank (DWD, Germany) (Submission-ID WISO25-160)
- **Wind Task 51 and PVPS task 16: How large-scale weather pattern influence short-term solar forecast error?**
  S. Singh, **S. Cros,** J. Badosa, M. Haeffelin (Sorbonne University, École Polytechnique, France) (Submission-ID WISO25-338)
- **Satellite-based Solar Energy Nowcasting across Europe**
  A. Meyer (Bern University of Applied Sciences, Switzerland | TU Delft, Netherlands) (Submission-ID WISO25-344)
- **Panel Discussion on Challenges of Renewable Energy Forecasting with a Penetration Level of 80% or More Renewables in the Grid**
  Moderator: **C. Möhrlen** (WEPROG, Denmark), Panelists: Jan Remund (Meteotest AG, Switzerland), Sylvain Cros (Ecole Polytechnique, France), Andrea Meyer (Bern University of Applied Sciences, CH | TU Delft, NL), Hannele Holttinen (Recognis, Finland), Nickie Menemenlis (Hydro Québec, Canada), Jonathan Dyson (Greenview Strategic Consulting, Australia), Debra Lews (ESIG, USA) (Submission-ID WISO25-190)

10:05 – 10:40 **Discussions**

10:40 – 11:10 COFFEE BREAK

11:10 – 13:15	SESSION 4A – GERMAN SYSTEM STABILITY STUDIES
> Session Chair	Eckard Quitmann (Energynautics, Germany)

11:10 – 12:50 Presentations (20 min. each)

- **System Stability in a Renewables-based Power System**
  M. Pöller (Moeller & Poeller Engineering GmbH, Germany), K. Kritzinger (Agora Energiewende, Germany) (Submission-ID WISO25-299)
- **First Stability Report of German TSOs according to §12i EnWG**
  J. Lehner (TransnetBW, Germany) (Submission-ID WISO25-340)
- **Germany's System Stability Roadmap**
  S. Greil-Düsterhöft (BMWE, Germany) (Submission-ID WISO25-343)
- **Germany's Roadmap System Stability - Highlighting selected challenges, achievements and milestones**
  K. Burges, F. Berger, S. Kippelt (ef.Ruhr, Germany) (Submission-ID WISO25-341)
- **System Stability through Grid-forming Units - Requirements in the Context of the Procurement of Inertia**
  C. Wulkow, M. Schmieg (DIgSILENT, Germany) (Submission-ID WISO25-350)

12:50 – 13:15 Discussions

11:10 – 13:00	SESSION 4B – INTEROPERA – HVDC GRID DESIGN STUDIES
> Session Chair	Carmen Cardozo (RTE, France)

11:10 – 12:30 Presentations (20 min. each)

- **InterOPERA: Enabling Interoperability of Multi Terminal Multi Vendor HVDC grids**
  Tim Schacht (Siemens Energy, Germany) (Submission-ID WISO25-129)
- **Multi Terminal Multi Vendor HVDC Grid Design Studies - Part I: Load Flow Study And Contingency Analysis**
  C. Cardozo, J. Pouget, H. Clémot, B. De Foucaud, P. Rault, S. Dennetière (RTE, France) (Submission-ID WISO25-10)
- **Multi Terminal Multi Vendor HVDC Grid Design Studies - Part II: Dynamic Study**
  J. Pouget, C. Cardozo, P. Rault, S. Dennetière (RTE, France) (Submission-ID WISO25-11)
- **Multi Terminal Multi Vendor HVDC Grid Design Studies - Part III: Transient Study**
  B. De Foucaud, J. Pouget, C. Cardozo, P. Rault, A. Petit, S. Dennetière (RTE, France) (Submission-ID WISO25-12)

12:30 – 13:00 Discussions

11:10 – 13:00	SESSION 4C – DISTRIBUTION GRID ASPECTS
> Session Chair	Jack Gregory (IEA, France)

11:10 – 12:30 Presentations (20 min. each)

- **Predictive Operation of Low Voltage Grids with an Autoregressive Graph Neural Network for Enhanced Resilience**
  M. Linke, J. Maier, M. Arpogaus, G. Schubert (HTWG Konstanz - University of Applied Sciences, Germany) (Submission-ID WISO25-187)
- **Integration of Photovoltaic into Electricity Networks and Markets – Overview of the new IEA PVPS Task 19**
  G. Heilscher (THU,Germany), **D. Mende** (Fraunhofer IEE, Germany) (Submission-ID WISO25-351)
- **Decentralized Agent-Based Optimization for Congestion Management in Low-Voltage Grids Incorporating Legally Mandated and Voluntary Flexibility**
  J. Galys, L. P. Wagner, M. Kilthau (Helmut-Schmidt-Universität, Germany), A. Fay (Ruhr University Bochum, Germany), F. Gehlhoff (Helmut-Schmidt-Universität, Germany) (Submission-ID WISO25-72)
- **Flexibilisation of Distribution Grid Participants with Dynamic Grid Fees**
  D. Huschenhöfer, L. Roth, J. Petzschmann (Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW), Germany) (Submission-ID WISO25-184)

12:30 – 13:00 Discussions

11:10 – 13:00	SESSION 4D – RECOMMENDED PRACTICES AND STANDARDS
> Session Chair	Björn Andresen (Aarhus University, Denmark)
11:10 – 12:50	Presentations (20 min. each)

- **IEC Standard for Renewable Energy Forecasting: Introduction to the Current Working Draft**
  C. Möhrlen (WEPROG, Denmark), J. Zack† (MESO Inc., United States) (Submission-ID WISO25-169)
- **Gaps of Standardization on Meteorological Applications in Power Systems and Potential Solutions**
  S. Wang (CEPRI - State Grid of China, China) (Submission-ID WISO25-189)
- **Grid Compliance of Co-Located Generation and Demand Facilities - a case study of a PV + PtX plant**
  K. Bhatnagar, **F. Martin** (European Energy A/S, Denmark) (Submission-ID WISO25-242)
- **Recommended practises in practise**
  L. Göransson (Chalmers University of Technology, Sweden), H. Holttinen (Recognis, Finland) (Submission-ID WISO25-255)
- **Recommended Practices in practice: How to include wind and solar in system studies**
  H. Holttinen (Recognis, Finland), L. Göransson (Chalmers University, Sweden) (Submission-ID WISO25-147)

12:50 – 13:00	Discussions

13:00 – 14:00 LUNCH BREAK

14:00 – 15:40	SESSION 5A – GRID FORMING I
> Session Chair	Julia Matevosyan (ESIG, USA)
14:00 – 15:20	Presentations (20 min. each)

- **Enhancing System Stability with GFM STATCOMs: A Case Study of the DK2 2020 Incident in the Danish Power System**
  L. Lu, Y. Liao, H. Gong, J. B. Kwon, N. Qin (Energinet, Denmark), M. Larsson (Hitachi Energy Research, Switzerland), H. Zhang (Hitachi Energy, Sweden), R. Heydari (Hitachi Energy Research, Sweden) (Submission-ID WISO25-81)
- **Transient Effects of Faults in High-Voltage Grids Considering the Share of Grid-Forming Generation**
  S. Ratajczak, M. Murglat, K. Jansen, C. Wirtz, S. Krahl (FGH e.V., Germany) (Submission-ID WISO25-185)
- **Frequency-Domain Approach for Quantifying System Strength Contributions from Grid- Forming Resources**
  V. Gevorgian, S. Shah (NREL, USA) (Submission-ID WISO25-346)
- **Observer-Based Virtual Impedance Modelling for Enhanced Fault Current Limitation in Converters with Grid-Forming Open-Loop Voltage Control**
  C. Neumann, H.-G. Eckel (University of Rostock, Germany) (Submission-ID WISO25-258)

15:20 – 15:40	Discussions

14:00 – 15:40	SESSION 5B– BLACKOUT INVESTIGATION
> Session Chair	Deepak Ramasubramanian (EPRI, USA)
14:00 – 15:00	Presentations (20 min. each)

- **Iberian Peninsula Blackout: Analysis and Performance of Nordex Wind Power Plants**
  D. Ortiz, E. Arrechea (Nordex Energy Spain S.A.U., Spain) (Submission-ID WISO25-238)
- **Analysis of the Power System Oscillations before the Blackout in Spain and Portugal on April 28, 2025**
  L. Cai (University of Rostock, Germany), T. Veith (Hochschule Rottenburg, Germany), Y. Hou (Energy Research Institute of Shandong Academy of Sciences, China) (Submission-ID WISO25-228)
- **Ingredients for Stability in Low Carbon Energy Systems from OEM Perspective**
  D. Duckwitz, B. Fischer, T. Buelo, A. Knobloch (SMA Solar Technology AG, Germany) (Submission-ID WISO25-182)

15:00 – 15:40	Discussions

14:00 – 15:40	**SESSION 5C – OFFSHORE WIND POWER DEVELOPMENT**
> Session Chair	**Michael Nortøft Frydensbjerg (Vattenfall Vindkraft, Denmark)**
14:00 – 15:20	**Presentations (20 min. each)**

- **Northern TSOs' Joint Regional Offshore Network Infrastructure Planning 2040**
  A. Orths(Energinet, Denmark), A. Lukaschik (Tennet TSO, Germany), A. Haverkamp (Tennet Holding, Netherlands), A. Andersson (Statnett, Norway), B. Vosse (Elia Transmission, Belgium), J. Klindworth (Amprion, Germany), J. West (EirGrid, Ireland), J. Lemmens (Elia Transmission, Belgium), M. Le Bailly (RTE, France), M. Gallus (Amprion, Germany), M. Hartvig (Energinet, Denmark), P. Nahmmacher (50Hertz Transmission, Germany), S. Schöler (Tennet TSO, Germany), S. Jørgensen (Energinet, Denmark), S. Seim (50Hertz Transmission, Germany), T. Manicom (NESO, United Kingdom), V. Mathiesen (Statnett, Norway) (Submission-ID WISO25-151)
- **Tool For Predesign and Sizing of Transmission Systems for Offshore Wind Power Plants**
  C. Alegre, C. Machado, C. Fray (eRoots Analytics, Spain), I. Saboya, I. Criado (Acciona Energia, Spain), S. Peñate, J. Fanals (eRoots Analytics, Spain), O. Gomis (eRoots Analytics, Spain | CITCEA-UPC, Spain) (Submission-ID WISO25-69)
- **Overcoming Grid Integration Challenges for Offshore Wind in Germany**
  S. M. Ali, B. Schowe-von Der Brelie, J. Doell, J. Richter (FGH GmbH, Germany) (Submission-ID WISO25-166)
- **Decarbonising System Restoration: Leveraging Offshore Wind and BESS for Restoration in Scotland**
  M. Syed, E. Tsotsopoulou, V. Psaras, A. Radovanovic, A. Emhemed (WSP UK, United Kingdom), A. Egea (Scottish Power Energy Networks, United Kingdom | University of Strathclyde, United Kingdom), M. Karabo, D. Barlow (University of Strathclyde, United Kingdom) (Submission-ID WISO25-209)

15:20 – 15:40	**Discussions**

15:40 – 16:10 COFFEE BREAK

16:10 – 18:30	**SESSION 6A – GRID-FORMING-BENCHMARKING-PROJECT**
> Session Chair	**Sönke Rogalla (Fraunhofer ISE, GERMANY)**
16:10 – 18:10	**Presentations (20 min. each)**

- **Grid-Forming-Benchmarking-Project – Part I: The Need for Grid-Forming and a Joint Benchmarking Initiative**
  C. Schöll (TransnetBW, Germany), J. Massmann (Amprion, Germany), F. Rauscher (Tennet TSO, Germany), S. Küchler (50Hertz Transmission, Germany), R. Singer, P. Ernst, S. Rogalla (Fraunhofer ISE, Germany) (Submission-ID WISO25-233)
- **Grid-Forming-Benchmarking-Project – Part II: Comparative Analysis of the Properties 'Voltage source properties' and 'Inertial response'**
  P. Ernst, R. Denninger, **R. Singer** (Fraunhofer ISE, Germany), C. Schöll, T. Schaupp (TransnetBW, Germany), F. Rauscher (Tennet TSO, Germany), J. Massmann, T. Hennig (Amprion, Germany), S. Küchler (50Hertz Transmission, Germany), S. Rogalla (Fraunhofer ISE, Germany) (Submission-ID WISO25-235)
- **Grid-Forming-Benchmarking-Project – Part III: Comparative analysis of the properties 'Support to power quality', 'Oper20ing critical grid events' and 'Controller interactions'**
  P. Ernst, R. Denninger, **R. Singer** (Fraunhofer ISE, Germany), C. Schöll, T. Schaupp (TransnetBW, Germany), F. Rauscher (Tennet TSO, Germany), J. Massmann, T. Hennig (Amprion, Germany), S. Küchler (50Hertz Transmission, Germany), S. Rogalla (Fraunhofer ISE, Germany) (Submission-ID WISO25-245)
- **Envelope-Based Criteria and RMS Open-Source Model for Power Park Modules under Future Grid-Forming Capability Requirements**
  C. Zanabria, **T. Prevost,** V. Costan, E. Mberou, A. Guironnet (Réseau de Transport d'Electricité (RTE), France) (Submission-ID WISO25-270)
- **Converter Driven Stability Screening with ESCR Benchmark Model**
  O.-P. Janhunen, R. Korhonen, P. Partinen, V. Hytti, T. Rissanen (Fingrid Oyj, Finland) (Submission-ID WISO25-51)
- **Differentiation and Verification of Grid-Following and Grid-Forming Converters Based on Test Bench Measurements**
  J. Struwe (University of Applied Sciences Düsseldorf, Germany), P. Hackl (Graz University of Technology, Austria), H. Wrede (University of Applied Sciences Düsseldorf, Germany), R. Schuerhuber (Graz University of Technology, Austria) (Submission-ID WISO25-85)

18:10 – 18:30	**Discussions**

16:10 – 18:30	SESSION 6B – POWER SYSTEM STABILITY AND FREQUENCY-DOMAIN MODELLING I
> Session Chair	Jian Sun (Rensselaer Polytechnic Institute, USA)
16:10 – 17:50	Presentations (20 min. each)

- **Immittance-Based Frequency-Domain Modeling: A Framework to Achieve System Stability**
  J. Sun (Rensselaer Polytechnic Institute, USA) (Submission ID 353)
- **Enhancing Specifications on Damping Capability and Impedance Modelling for SSO and Harmonic Stability Study**
  M. Latinović, S. Höhn, J. A C Garcia, C. Buchhagen (TenneT, Germany), J. Sun (Rensselaer Polytechnic Institute, USA) (Submission ID 354)
- **Multi-Connection Assessment for Impedance-Based Stability Analysis through Power System Impedance Determination in the Frequency Domain**
  T. Würl, B. Weise (DIgSILENT, Germany) (Submission-ID WISO25-153)
- **A Measurement-based Approach for Validating the Impedence Matrix of Grid-connected Converters**
  E. Guest, **M. Neshati** (Siemens Gamesa Renewable Energy, Denmark) (Submission-ID WISO25-46)
- **Assessment of Grid-Stabilizing Capability of System Strength Mitigating Devices via Impedance-Based Analysis**
  A. Karisik, T. Bertes, J. Leung (DIgSILENT Pacific, Australia), B. Weise, **T. Würl** (DIgSILENT, Germany) (Submission-ID WISO25-109)
- **Small-Signal Impedance Modelling of Synchronous Generators with Excitation Control in Hybrid Power Systems**
  A. Galó, **B. Süto,** D. Raisz (Budapest University of Technology and Economics, Hungary) (Submission-ID WISO25-197)

17:50 – 18:30	Discussions

16:10 – 18:30	SESSION 6C – ELECTROLYZERS AND ANCILLARY SERVICES
> Session Chair	Karsten Burges (ef.Ruhr, Germany)
16:10 – 17:50	Presentations (20 min. each)

- **Key Electrochemical and Operational Challenges in Flexibility Provision from Electrolysis Plant in Microgrids**
  M. Ramezanitaghartapeh, M. Ghazavi DozienMonash University, Australia) (Submission-ID WISO25-21)
- **Dynamic Performance of Electrolyser Plant for Participation in Grid Balancing Services**
  M. Rizwan (DNV, Norway), R. Singh (DNV, Netherlands), E. A. Hektor (DNV, Norway) (Submission-ID WISO25-247)
- **Fast-Response Balancing Capacity of Alkaline Electrolyzers**
  M. Dorn, J. Hoffmann, A. Weber, V. Hagenmeyer (Karlsruhe Institute of Technology – KIT, Germany) (Submission-ID WISO25-294)
- **Operating Strategies for Pressurized Alkaline Electrolysis to Increase Dynamic Capability**
  H. Wiggenhauser, F. Razmjooei, A. Ansar (German Aerospace Center –DLR, Germany) (Submission-ID WISO25-154)
- **Detailed Control Design, Modeling, and Operational Planning for an Electrolyzer-Based Hybrid Grid Booster**
  M. Abdaljawwad, J. Hoffmann, V. Hagenmeyer (Karlsruhe Institute of Technology – KIT, Germany) (Submission-ID WISO25-305)

17:50 – 18:30	Discussions

16:10 – 18:30	SESSION 6D – FLEXIBILITY ASPECTS
> Session Chair	James Okullo (ESIG, USA)
16:10 – 18:10	Presentations (20 min. each)

- **The Growing Role of Flexibility in Modern Power Systems**
  J. Gregory (IEA, France) (Submission-ID WISO25-357)
- **Demand Flexibility and Large Loads**
  D. Lew (ESIG, USA) (Submission-ID WISO25-330)
- **Market-Based TSO/DSO Coordination**
  F. Farrukh, G. Milzer, S. J. Sønning, H. Hagen, C. Kanck Ripegutu (NODES AS, Norway) (Submission-ID WISO25-73)
- **Impact of Diversified Supply of Flexibilities in the Transition of a Power System: Japan's Case Study**
  K. Ogimoto, Y. Iwafune, M. Imanaka, K. Kataoka (The University of Tokyo, Japan), H. Azuma, S. Segawa, A. Isonaga, S. Fukutome (J-POWER Business Service, Japan) (Submission-ID WISO25-100)
- **Design and Evaluation of an Integrated Flexibility Market for TSO–DSO Coordination: Insights from the OPENTUNITY Pilot in Greece**
  G. E. Lazaridou (Hellenic Electricity Distribution Network Operator– HEDNO, Greece), D. Melissaris (Independent Power Transmission Operator – IPTO, Greece), I. Palaiologou (Hellenic Electricity Distribution Network Operator– HEDNO, Greece), S. Panidis (Independent Power Transmission Operator – IPTO, Greece), V. Boglou (Hellenic Electricity Distribution Network Operator– HEDNO, Greece), F. Rigas (Independent Power Transmission Operator – IPTO, Greece), G. Milzer, S. J. Sønning (NODES AS, Norway) (Submission-ID WISO25-83)
- **Assessing Balancing and Flexibility Needs in Future Power Systems: A Nordic Case Study for 2030**
  M. H. Bahl, R. Zhu, R. Bramstoft, M. Koivisto (Technical University of Denmark – DTU, Denmark), A. Bouallaga (TotalEnergies, France), K. Das (Technical University of Denmark – DTU, Denmark) (Submission-ID WISO25-227)

18:10 – 18:30	Discussions

19:00 Networking Dinner – to be booked separately –

THURSDAY, 9 OCTOBER 2025

09:00 – 10:40	**SESSION 7A – GRID FORMING II**
> Session Chair	**Bernd Engel (TU Braunschweig, Germany)**
09:00 – 10:20	**Presentations (20 min. each)**

- **Modeling and Analysis of Grid forming Control with Cascaded Current and Voltage Loop**
  H. Liu, **H. Hafezi,** A. Jose, P. Hart, K. Raman (GE Vernova, United States) (Submission-ID WISO25-267)
- **Best Practices: Grid-forming Solution for large Scale Renewable Power Generation**
  Y. Liu, K. Xin, Z. Hou (Huawei Technologies, China), S. Chen, A. Rasic (Huawei Technologies Duesseldorf, Germany), M. Zhao, Z. Shao (Huawei Technologies., China), J. Xu (Huawei Technologies Duesseldorf, Germany) (Submission-ID WISO25-25)
- **Parallel Operation of Grid-Forming Inverters with Different Parameter Setups**
  W. Dirksen, J. Beyrodt, T. Tegtmeier, H. Behrends (German Aerospace Center - Institute of Networked Energy Systems, Germany) (Submission-ID WISO25-201)
- **On Disturbance Propagation and Wide-Area Damping Control of Power Systems with Grid-Forming Converters**
  M. G. Ippolito, **R. Musca** (University of Palermo, Italy) (Submission-ID WISO25-91)

10:20 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 7B – POWER SYSTEM STABILITY AND FREQUENCY-DOMAIN MODELLING II**
> Session Chair	**Jian Sun (Rensselaer Polytechnic Institute, USA)**
09:00 – 10:00	**Presentations (20 min. each)**

- **Enhancing Power System Stability with GFM-BESS: A Case Study on a Real Incident in Denmark**
  H. Gong, **L. Lu,** Y. Liao, J. B. Kwon, N. Qin (Energinet, Denmark), A. B. Montesinos, A. G. Lameiras (Power Electronics, Spain) (Submission-ID WISO25-26)
- **Sensitivity Analysis of a Two-stage PV Plant Impedance-based Model: Assessment of the DC-Side Dynamics Impact**
  G. C Prezotto, E. Gurski, F. E N Morais, **L. F N Lourenço,** M. L V Basto, R. M Monaro, M. B C Salles (University of São Paulo) (Submission-ID WISO25-203)
- **Impact of Converters Fast Control Loops on Power System Stability and Slow Dynamics**
  Y. Lamrani, J. His (EDF R&D, France), H. Fakham, F. Colas (University of Lille, France) (Submission-ID WISO25-13)

10:00 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 7C – ELECTROLYZER APPLICATIONS**
> Session Chair	**Lisa Göransson (Chalmers University of Technology, Sweden)**
09:00 – 10:00	**Presentations (20 min. each)**

- **Grid Integration Study of a 50 kW Alkaline Electrolyser into a Weak Grid with a Grid-Forming Energy Storage System**
  C. Kaufmann (Fraunhofer IWES | HAW Hamburg, Germany | Universitat Politècnica de Catalunya, Spain), S. Ganesh (Shell Global Solutions International, Netherlands), A. Luxa (Fraunhofer IWES | HAW Hamburg, Germany), G. Pangalos (Fraunhofer IWES, Germany) (Submission-ID WISO25-167)
- **Leveraging Electrolyzer Portfolios for Power Balancing in Offshore Energy Hubs**
  N. Taranin, G. De Agostini, S. You, O. Saborío-Romano, N. A. Cutululis (Technical University of Denmark – DTU, Denmark) (Submission-ID WISO25-192)
- **Supervisory Control Concept Analysis for a Multi-Physics Green Hydrogen Offshore Wind Turbine by Co-Simulation**
  A. Luxa (Fraunhofer IWES | HAW Hamburg, Germany), M. Wiens (Fraunhofer IWES, Germany), M. Tümmler (HAW Hamburg, Germany) (Submission-ID WISO25-113)

10:00 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 7D – GRID CODE ASPECTS**
> Session Chair	**Inga Skrypalle (Vestas, Denmark)**
09:00 – 10:20	**Presentations (20 min. each)**

- **Performing Grid Tests to Validate Simulation Models and Converter-Driven Stability Phenomena**
  R. Korhonen, P. Partinen, T. Mäkihannu (Fingrid, Finland) (Submission-ID WISO25-148)
- **Accelerating Grid Connection Approval through Semi-Automated Grid Code Compliance Testing of RMS and EMT Models using Energinet's MTB Toolbox**
  C. Vestergård Lindgaard, M. B B Kristensen, S. B Sørensen, P. Randewijk (Energinet, Denmark) (Submission-ID WISO25-118)
- **Offshore Grid Compliance: Aligning FGW TR4 and TSO Model Requirements**
  J. Döll, M. Ali, B. Schowe, E. Makki (FGH, Germany) (Submission-ID WISO25-264)
- **Designing Grid Connection Requirements for Small-Scale Generation in Developing Countries**
  L. Hülsmann, A. Zomorodi-Moghadam, N. Martensen (Energynautics, Germany) (Submission-id WISO25-325)

10:20 – 10:40 **Discussions**

10:40 – 11:10 COFFEE BREAK

11:10 – 13:00	**SESSION 8A – GRID FORMING AND ISLAND SYSTEMS**
> Session Chair	**Jacob Bollerslev (Energinet, Denmark)**
11:10 – 12:40	**Presentations (18 min. each)**

- **Simulation-Based Analysis of the Interaction Between Grid-Forming and Grid-Following Inverters in an Island Grid**
  T. Weinmann, R. Helmschrott, M. Finkel (University of Applied Sciences Augsburg, Germany), K. Wagner, G. Kerber (University of Applied Sciences Munich, Germany), T. Garn, B. Engel (Technical University of Braunschweig, Germany) (Submission-ID WISO25-60)
- **Resynchronization of Inverter-Based Microgrids Relying on Multiple Grid-Forming Converters**
  B. Tóth, **B. Süto,** D. Raisz (Budapest University of Technology and Economics, Hungary) (Submission-ID WISO25-172)
- **Connecting Grid-Forming BESS to Australia's Largest Northern Power Grid: Technical Pathways and Practical Realities**
  S. Cherevatskiy (Enerjia, Australia), B. Truong (Power and Water Corporation, Australia), H. Lang (Territory Generation, Australia), S. Sproul (Hitachi Energy, Australia), V. Pillay (Power and Water Corporation, Australia) (Submission-ID WISO25-36)
- **Assessment of the Solicitation induced by Grid Forming Control on Battery Energy System Storages**
  T. Prevost, C. Zanabria, D. Brestin, A. Guironnet (Reseau de Transport d'Electricite RTE, France) (Submission-ID WISO25-266)
- **How Much Overcurrent Capability Is Needed for Grid-Forming Converters?**
  Z. Zhang, R. Schuerhuber (Graz University of Technology, Austria), C. Liu (Northeast Electric Power University, China) (Submission-ID WISO25-9)

12:40 – 13:00 **Discussions**

11:10 – 13:00	SESSION 8B – ANCILLARY SERVICES
> Session Chair	Debra Lew (ESIG, USA)
11:10 – 12:40	Presentations (18 min. each)

- **Understanding the Potential of Oscillation Damping using Synchronous Generators and Grid-forming Wind**
  W. Yan, V. Gevorgian (National Renewable Energy Laboratory, United States) (Submission-ID WISO25-284)
- **Ensuring reliability of FCR and aFRR provided by Wind & Solar**
  J. Callec, C. Delaune, S. Ratouit, F. Paugam (RTE, France) (Submission-ID WISO25-159)
- **Power and Energy Allocation for Inertia: Investigating the Impact on the Operation of Residential Battery Storage Systems**
  M. Ferk, C. Ebert, C. Wegkamp, B. Engel (TU Braunschweig – elenia, Germany) (Submission-ID WISO25-276)
- **Plant Design and Performance Metrics of Battery Energy Storage Systems optimized for the emerging German Inertia Market**
  D. Duckwitz, T. Buelo, A. Knobloch (SMA Solar Technology, Germany) (Submission-ID WISO25-181)
- **Providing System Level Frequency Support from Wind Over the Full Operating Range**
  C. Isbister, O. Anaya-Lara, D. Campos-Gaona (University of Strathclyde, United Kingdom), J. Morris (Siemens Energy Wind Power, United Kingdom) (Submission-ID WISO25-250)

12:40 – 13:00	Discussions

11:10 – 13:00	SESSION 8C– BATTERY INTEGRATION
> Session Chair	Nickie Menemenlis (Hydro Québec, Canada)
11:10 – 12:40	Presentations (18 min. each)

- **Price Formation Without Fuel Costs: The interaction of demand elasticity with storage bidding**
  T. Brown, **F. Neumann**, I. Riepin (Technical University Berlin, Germany) (Submission-ID WISO25-231)
- **Optimisation of Trading for Renewable Energy Systems in Combination with Battery Storage Systems Using Reinforcement Learning**
  J. Petzschmann, **L. Schneider**, F. Sehnke (Centre for Solar Energy and Hydrogen Research (ZSW), Germany) (Submission-ID WISO25-174)
- **An Assessment of Joint Hosting Capacities for Storage Connections with Guaranteed Maximum Number of Hourly Curtailments**
  O. Despouys (RTE, France) (Submission-ID WISO25-14)
- **Economic Assessment of Battery Hosting Capacity with Grid-Aware Optimization**
  M. Miller, L. Von Loh, J. Myrzik (University of Bremen, Germany) (Submission-ID WISO25-138)
- **Agent-Based Modelling of Battery Storage Choices for Industrial Decarbonisation in Europe**
  L. Von Loh, **M. Miller**, J. Myrzik (University Bremen, Germany) (Submission-ID WISO25-137)

12:40 – 13:00	Discussions

13:00 – 14:00 LUNCH BREAK

14:00 – 15:40	SESSION 9A – GRID FORMING AND DISTRIBUTION NETWORKS
> Session Chair	Rossano Musca (University of Palermo, Italy)

14:00 – 15:20 **Presentations (20 min. each)**

- **Benefits and Challenges of Grid-Forming DERs: System-Wide Stability and Distribution-Level Impacts**
  W. Wang, S. Das, D. Ramasubramanian, **A. Huque** (EPRI, United States) (Submission-ID WISO25-207)
- **Challenges in Operating Distribution Networks with Grid-Forming Inverters**
  N. Campos, T. Degner, T. Reimann, D. Strauß-Mincu (Fraunhofer IEE, Germany), **B. O. Winter,** N. Gorkow, M. Gand, B. Engel (TU Braunschweig – elenia, Germany), B. Fischer (SMA Solar Technology, Germany) (Submission-ID WISO25-191)
- **Inertia Provision in Distribution Networks: Assessing Low-Frequency Oscillation Risks Among Grid-Forming Converters**
  N. Campos, D. Strauß-Mincu, T. Degner (Fraunhofer IEE, Germany) (Submission-ID WISO25-55)
- **Energy Management Concept of a 200 kVA Battery Grid-Forming Inverter in Island and Distribution Grid Operation**
  C. Bendfeld, D. Stracke, P. Unruh, F. Schnabel, **R. Brandl** (Fraunhofer IEE, Germany), M. Jung (Hochschule Bonn-Rhein-Sieg, Germany) (Submission-ID WISO25-64)

15:20 – 15:40 **Discussions**

14:00 – 15:40	SESSION 9B – SYNCHRONOUS CONDENSERS
> Session Chair	Julia Matavosyan (ESIG, USA)

14:00 – 15:20 **Presentations (20 min. each)**

- **Coordinated Tuning of Fast Outer-Loop Voltage Controllers and Power System Stabilisers for Synchronous Condensers: Insights from an Australian Project**
  A. Bertes (DIgSILENT Pacific Pty Ltd, Australia) (Submission-ID WISO25-224)
- **Deployment of Synchronous Condensers to Enhance Stability and Safe Operation of the Italian Power Grid**
  M. Cioffi (Ansaldo Energia, Italy) (Submission-ID WISO25-19)
- **Static and Rotary Transformers for Renewable Energy Storage Systems**
  N. Schofield, Y. Hu (University of Huddersfield, United Kingdom), N. Zhao, S. Anjum, R. Guo (Lancaster University, United Kingdom) (Submission-ID WISO25-283)
- **Study on how to Model Various Energy Flexibilities Using Energy System Models Reflecting Substation Level and Transmission Capacity**
  H. Hamasaki (Institute of Science Tokyo, Japan) (Submission-ID WISO25-285)

15:20 – 15:40 **Discussions**

14:00 – 15:40	SESSION 9C – GRID RESILIENCE
> Session Chair	Thomas Ackermann (Energynautics, Germany)

14:00 – 15:20 **Presentations (20 min. each)**

- **Stress Testing Methods to Evaluate the Role of Interregional Transmission in Grid Resilience**
  J. Okullo (ESIG, United States) (Submission-ID WISO25-288)
- **Integrating Risk Measures and Cost in Power System Reliability/Resilience Analysis**
  N. Menemenlis, D. Komljenovic, J. Raymond, D. Messaoudi, M. Morissette A. Moeini, J.-M. Meango (Hydro-Québec, Canada) (Submission-ID WISO25-56)
- **Novel Method for Stress Testing Energy Systems under Extreme Weather Events**
  L. Ho-Tran, J. Launer, S. Pfenninger-Lee (TU Delft, Netherlands) (Submission-ID WISO25-186)
- **Best Practices forGrid Integration**
  M. McPherson (University of Victoria, Canada) (Submission-ID WISO25-332)

15:20 – 15:40 **Discussions**

14:00 – 15:40	**SESSION 9D – COUNTRY STUDIES**
> Session Chair	**Tom Brown (TU Berlin, Germany)**
14:00 – 15:30	**Presentations (18 min. each)**

- **Large-Scale Integration of Wind in a Weak and Isolated Transmission System – the Icelandic Case**
  M. Palsson (Landsnet, Iceland), H. Jóhannsson (Efla Consulting Engineers, Iceland), G. Jonsdottir (Landsnet, Iceland), (Submission-ID WISO25-140)
- **Evaluation of Reactive Power Compensation and Grid Losses and in the Nordic Transmission Grid**
  L. Kuhrmann, P. Chen, L. Göransson, F. Johnsson (Chalmers University of Technology, Sweden) (Submission-ID WISO25-116)
- **VRE Integration and Congestion Management in the Peruvian Grid**
  L. Wolff (Energynautics, Germany) (Submission-ID WISO25-334)
- **Strengthening the Transmission Infrastructure for Renewable Energy Integration: A load-flow study of Rajasthan, India**
  H. Kasuvuganahalli Venkateshreddy, S. Thandra, T. V (Center for Study of Science, Technology and Policy – CSTEP, India) (Submission-ID WISO25-120)
- **Empowering Open Access Renewable Energy through Scalable AMR Deployment: Tamil Nadu's Leadership in Smart Energy Transitions**
  N. Chenniappan, A. Gunasekaran, M. Nagaraj M (The Tamil Nadu Power Distribution Corporation Limited, India) (Submission-ID WISO25-15)

15:30 – 15:40	**Discussions**

15:40 – 16:10 COFFEE BREAK

16:10 – 18:30	**SESSION 10A – GRID FORMING AND WIND POWER**
> Session Chair	**Eike Erdmann (Enercon, Germany)**
16:10 – 17:50	**Presentations (20 min. each)**

- **Analytical Wind Turbine Model for Assessment of Structure-grid Interaction in Grid-forming Mode**
  J. Brunner (University of Applied Sciences HTW Berlin, Germany), F. Pöschke (Suzlon Energy Ltd., Germany), J. Fortmann, N. Klaes, H. Schulte (University of Applied Sciences HTW Berlin, Germany) (Submission-ID WISO25-277)
- **Torsional Mode Amplification in Grid-forming Type-IV Wind Turbines**
  H. Udawatte, A. Asbafkan, M. Ravanji, B. Bahrani (Monash University, Australia) (Submission-ID WISO25-219)
- **VSC with Simultaneous GFL and GFM Control for Wind Generator Application**
  E. Watanabe (Federal University of Rio de Janeiro, Brazil), F. K. Lima (Federal University of Rio de Janeiro, | Federal University of Ceará, Brazil), L. A. Lima (Federal University of Rio de Janeiro, Brazil), C. Fernandes, G. Neves, M. Soares (Federal University of Rio de Janeiro | Federal Center of Education Celso Suckow da Fonseca, Brazil), B. Zoghdar, M. El Sied (TotalEnergies, France) (Submission-ID WISO25-94)
- **Providing Grid Forming Functions with Wind Turbine Generators**
  S. Engelken, J. Steinkohl, **H. Soltani,** G. Kamisholt Andersen (Vestas Wind Systems, Denmark) (Submission-ID WISO25-273)
- **Impact of Phase Angle Jumps in the Grid Voltage GFM/GFL Type 4 Wind Turbine Generators**
  J. Ferry, H. Becker (University of Kassel | Fraunhofer IEE, Germany), Q. Gui (University of Kassel) (Submission-ID WISO25-262)

17:50 – 18:30	**Discussions**

16:10 – 18:30	**SESSION 10B – GRID CODES FOR LARGE LOADS AS WELL AS HYBRID POWER PLANTS**
> Session Chair	**Syed Mansoor Ali (FGH Research Association (FGH e.V.), Germany)**
16:10 – 18:10	**Presentations (20 min. each)**

- **Grid Integration of Large Loads**
  D. Stenzel (TenneT, Germany) (Submission-ID WISO25-336)
- **Electrolyzer Grid Code Compliance: An Evaluation Based on PEM Electrolysis and New EU Regulation**
  N. Langenberg, **A. Buratckii,** M. Bendig, S. Schumann (Siemens Energy Global, Germany) (Submission-ID WISO25-322)
- **Prequalification of Hybrid Plant for Ancillary Services: Technical Compliance and Performance**
  L. Perfetto, M. Muroni, F. Baccino (Hitachi Energy, Italy, USA, India), H. Abildgaard (Better Energy, Denmark), H. Bitaraf, U. Roy (Hitachi Energy, Italy, USA, India) (Submission-ID WISO25-6)
- **Integration and Optimization of Hybrid Systems with Photovoltaic Power Plants and Stationary Batteries: An Operational Case Study**
  H. Gentou (Ze Energy, France), D. Renaud, M. Ratnane (Ark Management, France), M. Autiero (Ze Energy, France) (Submission-ID WISO25-164)
- **Localized, Cost-Effective, 100% Renewable Firm Power Generation**
  J. Remund (Meteotest, Switzerland), (Meteotest, Switzerland), M. Perez (Clean Power Research, USA), R. Perez (Clean Power Research | State University of New York, USA), J. Schlemmer (State University of New York, USA), M. Pierro (EURAC, Italy) (Submission-ID WISO25-63)
- **PreFEED Analysis for Battery and Grid Design in Industrial Microgrids - a Mining Use Case**
  T. Loss, **B. Primas,** B. Li (ABB, Germany), S. Thorburn (ABB, Sweden (Submission-ID WISO25-236)

18:10 – 18:30	**Discussions**

16:10 – 18:30	**SESSION 10C – HYDROGEN/METHANOL STUDIES**
> Session Chair	**Aline Luxa (Fraunhofer IWES, Germany)**
16:10 – 18:10	**Presentations (20 min. each)**

- **The Minimal Methanol Backstop for High Electrification Scenarios**
  P. Glaum, F. Neumann (TU Berlin, Germany), M. Millinger (RISE Research Institutes of Sweden, Sweden), **T. Brown** (TU Berlin, Germany) (Submission-ID WISO25-226)
- **Robust Design of Green Hydrogen Production Systems – Mitigating Business Risks from PPA Power Sourcing Uncertainties**
  J. Brandt, A. Bensmann, R. Hanke-Rauschenbach (Leibniz Universität Hannover, Germany) (Submission-ID WISO25-30)
- **Exploring the Impacts of Demand Scenarios and Weather Variability on Morocco's Hydrogen Market and Renewable Transition Pathways**
  E. Duque Pérez, L. Jansen, B. Häckner (Fraunhofer IEE, Germany) (Submission-ID WISO25-272)
- **Optimization-based Energy Management System for Hydrogen Integration in a Grid-Connected Microgrid: A Case Study in the Glass Industry**
  L. Bruno, E. D. Gonzalez-Iakl, E. Prieto-Araujo (Polytechnical Univesity of Catalonia CITCEA, Spain) (Submission-ID WISO25-62)
- **High-resolution estimation of the medium-term supply cost curves for green hydrogen-based commodities at various EU ports**
  L. Jansen, B. Häckner, M. Lindenmeyer, C. Zink, M. Pfennig, E. Duque Pérez (Fraunhofer-Institut for Energy Economics and Energy System Technologies IEE, Germany) (Submission-ID WISO25-280)
- **Modeling and Experimental Investigation of the Power Conversion System for Solid Oxide Water Electrolysis**
  A. Fathollahidehkordi (Aarhus University, Denmark), C. Dannesboe (Haldor Topsøe, Denmark), **B. Andresen** (Aarhus University, Denmark) (Submission-ID WISO25-98)

18:10 – 18:30	**Discussions**

16:10 – 18:30	SESSION 10D – FORECASTING
> Session Chair	Jonathon Dyson (Greenview Strategic Consulting, Australia)
16:10 – 17:50	**Presentations (20 min. each)**

- **Aspects on Remote Sensing assisted Wind Farm Minute-Scale Forecasting**
  J. Arnqvist (Uppsala University | RISE Research Institutes of Sweden, Sweden), J. U. Jørgensen, C. Möhrlen (WEPROG, Denmark) (Submission-ID WISO25-136)
- **LSTM-Based Renewable and Local Energy Forecasting Compared to Commercial Forecasting Tools**
  S. Arnold (UAS Dortmund, Germany), **G. Podann** (UAS Dortmund | UAS Bochum, Germany), C. Faller (UAS Bochum, Germany), A. Kneissler (UAS Westfälische Hochschule, Germany) (Submission-ID WISO25-41)
- **Adaptive Combination of Power Forecasts Using Spatio-Temporal Information**
  A. Lipskij, A. Happ, D. Beinert, A. Braun, T. Westmeier (Fraunhofer IEE, Germany) (Submission-ID WISO25-256)
- **Impact of Synoptic Circulation Types on Power System Imbalance and Associated Forecast Errors in Sweden**
  N. Bäckström (Svenska kraftnät, Sweden | Uppsala University, Sweden) (Submission-ID WISO25-141)
- **A CRPS-Guided Sparse Weighting Approach for Dynamic Integration of Ensemble Weather Forecasts in Probabilistic Wind Power Prediction**
  Y. Fujimoto, S. Okuyama, **N. Kaneko** (Waseda University, Japan), N. Numata, M. Katou, H. Ishii (J-POWER Business Service Corporation, Japan), Y. Yoshida, N. Nishio, J. Suzuki (J-POWER/Electric Power Development Co., Japan) Y. Hayashi (Waseda University, Japan) (Submission-ID WISO25-48)

17:50 – 18:30	**Discussions**

ENERGYNAUTICS LOUNGE

19:00 – 21:00 **Energynautics invites you to celebrate 25 years of innovation for the energy transition!**

– complimentary, registration required –

WEBSITE: https://windintegrationworkshop.org/energynautics-lounge

FRIDAY, 10 OCTOBER 2025

09:00 – 10:40	**SESSION 11A – PERFORMANCE ASSESSMENT**
> Session Chair	**Jako Kilter (Tallinn University of Technology – TalTech, Estonia)**
09:00 – 10:30	**Presentations (18 min. each)**

- **Performance Assessment of BESS and E-STATCOM for Wind Power Support in the Nordic System**
  A. Duque Gomez, A. Wanhainen, A. Gomer, S. Trolle, L. E. Engdhal, P. Harvasson, A. Owens (Hitachi Energy, Sweden) (Submission-ID WISO25-298)
- **Plant-Level Site Tests of Black Start and Short Circuit with Grid-Forming BESS**
  X. Yu, C. Liu, J. Yang, L. Lv, Z. Yang (Goldwind, China) (Submission-ID WISO25-17)
- **Assessment of Physical and Emulated Grid Impedance Ratio in PHIL Testing of Grid-Connected Converters**
  G. Schöpf, P. Hackl, Z. Zhang, R. Schürhuber (Graz University of Technology, Austria) (Submission-ID WISO25-66)
- **Resonant PCF-SVM Method for Harmonic Mitigation in DFIG Converters**
  M. Heidari, M. Schütt, H.-G. Eckel (University of Rostock, Germany) (Submission-ID WISO25-84)
- **A Fast Simulation Method for Harmonic Compliance Assessment of Inverter-Based Resources**
  V. Akhmatov, **M. Iversen,** J. Clausen (AFRY Denmark, Denmark) (Submission-ID WISO25-223)

10:30 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 11B – HYBRID POWER PLANTS**
> Session Chair	**Frank Martin (European Energy, Denmark)**
09:00 – 10:00	**Presentations (18 min. each)**

- **Equivalent Impedance Method to Access the Impact of Multi Wind Parks Connected to the Same Point of Connection to Power System - a case study**
  L. Buscariolli, T. Rodrigues, A. Pavani (UFABC, Brazil), M. Salles, L. Lourenço (USP, Brazil) (Submission-ID WISO25-202)
- **Storage-Conscious Dispatch Strategy for Hybrid Power Plants**
  S. Pouraltafi Kheljan (DTU Wind and Energy Systems, Denmark), M. Moataz El-Seid (TotalEnergies, France), K. Das, P. E. Sørensen (DTU Wind and Energy Systems, Denmark) (Submission-ID WISO25-205)
- **A Comprehensive Review on Technologies, Opportunities and Challenges of Medium Voltage DC Microgrids**
  R. Ben Salah (Hydro Québec, Canada) (Submission-ID WISO25-33)

10:00 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 11C – WIND POWER MODELLING I**
> Session Chair	**Mosen Neshati (Siemens Gamesa Renewable Energy, Germany)**
09:00 – 10:30	**Presentations (18 min. each)**

- **Simulation Tool Independent Interface for Inverter-Based Resources (IBRs) Models – OEM Experience and End-User Perspectives**
  I. C. Da Costa, H. Mirtaheri, J. K. Schwarzkopf, D. Chrystello, L. M. Gouveia, M. Holzapfel (Vestas Wind Systems, Denmark), S. Dennetiere (RTE, France), A. Zuga, F. Hans (Fraunhofer IWES, Germany) (Submission-ID WISO25-125)
- **Enhancing Simulation Fidelity of Offshore Wind Turbines through DLL-Based Black-Box Models**
  N. Darii (Siemens Gamesa Renewable Energy, Denmark | Technical University of Denmark, Denmark), R. Sharma, V. Akhmatov, K. Vatta Kkuni, C. Su (Siemens Gamesa Renewable Energy, Denmark) (Submission-ID WISO25-287)
- **Root-Cause Identification of Small-Signal Instabilities of Converter-Based Power Systems**
  J. Bollerslev (Energinet | Aalborg University, Denmark), Y. Liao (Energinet, Denmark), H. Wu (Aalborg University, Denmark) J. Kwon (Energinet, Denmark), X. Wang (Aalborg University, Denmark | KTH Royal Institute of Technology, Sweden) (Submission-ID WISO25-20)
- **Pan-European Wind Simulations for System Integration Studies: Significance of Resolution, Wake Modelling and Climate Change**
  M. Koivisto, S. Nayak, P. Kanellas (DTU Wind and Energy Systems, Denmark) (Submission-ID WISO25-145)
- **How much electricity is possible to produce in Iceland using wind energy - does it matter for Europe?**
  J. Þ. Heiðarsson (University of Akureyri, Iceland) (Submission-ID WISO25-104)

10:30 – 10:40	**Discussions**

09:00 – 10:40	**SESSION 11D – MODELLLING ASPECTS**
> Session Chair	**Eckehard Tröster (Energynautics, Germany)**
09:00 – 10:10	**Presentations (20 min. each)**

- **Impedance-based Sensitivity Analysis of Wind Turbine Generator**
  G. Mugambi (Vattenfall Vindkraft | Technical University of Denmark – DTU, Denmark), B. Nouri, J. Zúñiga (Vattenfall, Germany), G. A. Raducu (Vattenfall Vindkraft, Denmark), N. Cutululis (Technical University of Denmark – DTU, Denmark) (Submission-ID WISO25-312)
- **Comparison of Different Tools for Dynamic Simulation of Power Grids**
  R. Sattler (University of Stuttgart | TransnetBW, Germany), B. Nold (TransnetBW, Germany), H. Lens (University of Stuttgart, Germany) (Submission-ID WISO25-308)
- **Development and Validation of an Open Source Grid State Nowcasting System Utilizing High Resolution Irradiation Forecasts**
  W. Hense, F. Auschra, K. Belkilani (Ulm University of Applied Sciences, Germany), M. Turpin (Reuniwatt, France), D. Langer (Stadtwerke Ulm/Neu Ulm Netze, Germany), D. Graeber, G. Heilscher (Ulm University of Applied Sciences, Germany) (Submission-ID WISO25-225)

10:10 – 10:40	**Discussions**

10:40 – 11:00 COFFEE BREAK

11:00 – 12:40	SESSION 12A – STABILITY AND GRID FORMING ASPECTS
> Session Chair	Hossein Hafezi (GE Vernova, USA)
11:00 – 12:00	Presentations (20 min. each)

- **Current-Feedforward-Based Hybrid Synchronization Control for Transient Stability Enhancement**
  H. Wang (KTH Royal Institute of Technology, Sweden), X. Wang (Tsinghua University, Beijing, China), I. Jahn (KTH Royal Institute of Technology, Sweden) (Submission-ID WISO25-86)
- **Impact of Grid-Forming Control of Renewable Generations on Power System Oscillation Stability**
  L. Cai (University of Rostock, Germany), Y. Hou (Shandong Academy of Sciences, China) (Submission-ID WISO25-31)
- **Challenges in Small-Signal Stability Compliance Process for Renewable Energy-Based Power Plants and a Framework Proposal for Industrial Application**
  B. Nouri, S. Azarian, J. Zúñiga, M. Dernbach (Vattenfall, Germany) (Submission-ID WISO25-61)

12:00 – 12:40	Discussions

11:00 – 12:40	SESSION 12B – STABILITY ASPECTS
> Session Chair	TBA
11:00 – 12:00	Presentations (20 min. each)

- **Multi-stage Convex Polynomial Regression for Small-Signal Stability in Power Systems**
  K. Agrawal, K. Schönleber, M. Giuntoli (Hitachi Energy Research, Germany), F. Rossi, E. Prieto Araujo, O. Gomis Bellmunt (CITCEA-UPC, Spain) (Submission-ID WISO25-244)
- **Discrete Implementation and Comparative Analysis of the Virtual Synchronous Machine Power Loop**
  O. Escamilla Rincon, M. Schütt (Rostocker Kompetenzzentrum für Leistungselektronik, Germany), A. Paez Delgado, H.-G. Eckel (University of Rostock, Germany) (Submission-ID WISO25-195)
- **Transient Positive- and Negative-Sequence Estimation Based on Online Elliptical Trajectory Approximation**
  H. T. Eickhoff, M. V Soares, V. Chani (Silicon Austria Labs, Austria), M. Galler, P. Habekost (DEIF Wind Power Technology Austria, Austria) (Submission-ID WISO25-179)

12:00 – 12:40	Discussions

11:00 – 12:40	SESSION 12C – WIND POWER MODELLING II
> Session Chair	Nigel Schofield (University Of Huddersfield, United Kingdom)
11:00 – 12:20	Presentations (20 min. each)

- **Analysis of Subsynchronous Resonance of Doubly-Fed Induction Generator Based on Impedance Modeling**
  J. Chen (Rostocker Kompetenzzentrum für Leistungselektronik – RKL, Germany), M. Schütt (University of Rostock, Germany), C. Prignitz (Nordex, Germany), A. Paez Delgado, H.-G. Eckel (University of Rostock, Germany) (Submission-ID WISO25-180)
- **Generating Synthetic Power Curves from Real Turbine Data: A Scalable Approach Based on Specific Power Density**
  C. Zink, **B. Häckner** (Fraunhofer IEE, Germany), A. Basse (Fraunhofer IEE | Federal Environment Agency, Germany), T. M. Süllner (Technical University of Central Hesse – THM | Fraunhofer IEE, Germany), D. Geiger (Fraunhofer IEE | University of Kassel, Germany), K. Knorr (Fraunhofer IEE, Germany) (Submission-ID WISO25-130)
- **Automated Time Series-Based Loss Calculation Model for Onshore Wind Turbines in Germany**
  J. Hirschmann, B. Rieß (Fraunhofer IEE | University of Kassel, Germany), L. Michaelis, M. Schill, I. Eilmes, M. Kleebauer, D. Geiger, C. Pape, A. Basse (Fraunhofer IEE, Germany), L. Pauscher (University of Kassel, Germany), D. Callies (Fraunhofer IEE, Germany | University of Kassel, Germany) (Submission-ID WISO25-239)
- **Reconstructing Danish Wind Power Capacity from Measured Data Using a Power Curve Model and Quadratic Optimization**
  O. Viotti (Svenska Kraftnät | Uppsala University, Sweden) (Submission-ID WISO25-65)

12:20 – 12:40	Discussions

11:00 – 12:40	SESSION 12D – FLEXIBILITY ASPECTS
> Session Chair	Yoh Yasuda (University of Strathclyde, United Kingdom)
11:00 – 12:00	Presentations (20 min. each)

- **BMViewGB: An Interactive Web Based Tool for Visualising the Operations of the Balancing Mechanism in Great Britain**
  E. Tekcan, E. Spyrou (Imperial College London, United Kingdom) (Submission-ID WISO25-127)
- **Modelling of Efficiency Maps for Optimised Energy Storage Scheduling**
  M. Winkelkotte (Techical University of Ilmenau, Germany), S. Flemming (Fraunhofer IOSB-AST, Germany), P. Bretschneider (Techical University of Ilmenau, Germany) (Submission-ID WISO25-170
- **Assessment of the DSM Potential on Two Sample Islands (DSM4islands)**
  N. Martensen, N. Martensen, N. Rhein, R. Sandherr (Energynautics, Germany), R. Musca (University of Palermo, Italy), M. Theofilou (EPL Technology Frontiers, Cyprus), A. Livera, D. Marangis (University of Cyprus, Cyprus), M. Caruso (Exalto Energy&Innovation Srl, Italy) (Submission-id WISO25-324)

12:00 – 12:40	Discussions

12:40 – 12:50 SHORT BREAK

12:50 – 13:50	SESSION 13 – CLOSING SESSION
> Session Chair	Eckard Quitmann (Energynautics, Germany)
12:50 – 13:20	Panel discussion

TOPICS ADDRESSED: SYSTEM STABILITY, THE ROLE OF RES, AND THE MONEY

Panelists:
- **Didier Mallieu (**Hitachi Energy, Switzerland)
- **Juan Muñoz** (Nordex, Spain)
- **Malwin Niehus** (Federal Network Agency - Bundesnetzagentur, Germany)
- **Markus Pöller** (Moeller & Poeller Engineering, Germany)
- **Johannis Porst** (50Hertz, Germany)

13:20 – 13:40	Discussions
13:40 – 13:50	Closing Remarks

13:50 – 14:50 LUNCH

POSTER PRESENTATIONS

- **Regional Resilience with Distributed Generation Using an Open-Source Simulation Framework**
  J. Ungerland (Fraunhofer ISE, Germany), C. Gehbauer (Lawrence Berkeley National Laboratory, USA) (Submission-ID WISO25-8)
- **Advantages and Challenges of Dynamic Link Library Applications in Root-mean-square Simulations**
  V. Akhmatov, F. Granado Rosa, M. Garces Quilez, I. Fernandez Vizcay, G. Broechner Nielsen, L. Negi, J. Haugaard, M. Neshati (Siemens Gamesa Renewable Energy, Denmark) (Submission-ID WISO25-28)
- **Steady State and Dynamic Performance Studies for Onshore Grid Integration of Wind Farms**
  N. Sharma, **A. Scott,** Md. A. Wasim, B. Gomersall, B. Marshall (The National HVDC Centre, United Kingdom), C. T. Chakonta, J. Fradley, N. Mostafa, R. Gardos (National Energy System Operator (NESO), United Kingdom) (Submission-ID WISO25-40)
- **Localized Diakoptic Refactorization for MNA-Based EMT and DP Power System Simulations**
  C. Wirtz, S. Krahl (FGH e.V., Germany), A. Moser (IAEW RWTH Aachen University, Germany) (Submission-ID WISO25-43)

- **A Control Method for Sharing Offshore Wind Power Fluctuations between Onshore Terminals in a Three-terminal Submarine HVDC System**
  G. Fukuhara, T. Nakajima (Tokyo City University, Japan) (Submission-ID WISO25-45)
- **Island Grid Frequency Control Method Using HVDC System Connected to Remote Island in Coordination with Synchronous Generator**
  T. Koga, T. Nakajima (Tokyo City University, Japan) (Submission-ID WISO25-47)
- **Forecasting Beyond the Storm: Machine Learning Models for Offshore Wind Power under Operational Constraints**
  A. Bähr (Dresden University of Technology, Germany), N. Agaoglu (Rheinisch-Westfälische Technische Hochschule RWTH, Germany), M. Ahlborn (Karlsruhe Institute of Technology KIT, Germany), M. Chavan, G. Dinesh (Friedrich-Alexander-University Erlangen-Nürnberg, Germany), I. Fendel (Technical University of Braunschweig, Germany), **J. Dobschinski** (Fraunhofer IEE, Germany | University of Kassel, Germany) (Submission-ID WISO25-52)
- **Experimentation of an Autonomous Solar Cold Room with Thermal Emulation of Virtual Food Storage**
  D. Chèze, E. Lemaire, O. Wiss (Univ. Grenoble Alpes, France), F. Wallaert (GROUPE AIRWELL, France) (Submission-ID WISO25-54)
- **Optimal Management of Offshore Wind Farms and Battery Storage with Ensemble Forecasts**
  T. Fischer, M. Wiemer, P. Sharma (Fraunhofer IEE, Germany), C. Möhrlen (WEPROG, Germany), A. Fried (SEtrade, Germany), M. Siefert (Fraunhofer IEE, Germany) (Submission-ID WISO25-71)
- **Vehicle Behavior Analysis to Propose a Coordinated Control Method for EVs and Used Batteries in Regional Microgrid with Renewable Energy Sources**
  H. Isomi, K. Kuran, T. Nakajima (Tokyo City University, Japan), A. Hayashida (Hokkaido Research Organization, Japan) (Submission-ID WISO25-88)
- **Proposal and Evaluation of Control Method for Reuse EV Batteries in a Rural Microgrid with Renewable Energy Sources**
  Y. Kuratsuji, M. Abe, M. Motohashi (Hokkaido Research Organization, Japan), A. Hayashida (Hokkaido Research Organization, Japan) T. Nakajima (Tokyo City University, Japan) (Submission-ID WISO25-89)
- **Evaluation of V2X System Implementation to Regional Microgrids Based on Vehicle Behavior Using EVs and Used Battery Clusters**
  K. Kuran, H. Isomi, Y. Kuratsuji, T. Nakajima (Tokyo City University, Japan), A. Hayashida (Hokkaido Research Organization, Japan) (Submission-ID WISO25-90)
- **A Contingency Severity Screening Methodology Based on Static Calculations as Proxies for Dynamic Behavior**
  J. Cervantes Gomez (Energinet | Aalborg University, Denmark), Y. Liao, J. B. Kwon (Energinet, Denmark), S. Chaudhary, C. Leth-Bak (Aalborg University, Denmark) (Submission-ID WISO25-93)
- **Comparative Analysis of Control Frameworks for Harmonic Filtering in Power Conversion Systems of Power-to-Hydrogen Plants**
  A. Fathollahidehkordi, **B. Andresen** (Aarhus University, Denmark) (Submission-ID WISO25-99)
- **Offshore Wind Blackstart: State-of-the-Art Literature Review**
  L. Noris, Ó. Saborío-Romano, D. Müller (DTU, Denmark), B. Zoghdar (TotalEnergies, France) (Submission-ID WISO25-103)
- **Power Damping Control Method for Onshore Power Grid Using HVDC System Connected to Offshore Wind Farm**
  S. Hosokawa, T. Nakajima (Tokyo City University, Japan) (Submission-ID WISO25-107)
- **Chance Constrained Optimization of Energy Intensive Production as Beneficial Power Units**
  J. Nicklaus, L. Brass, G. Schubert (HTWG Konstanz, Germany) (Submission-ID WISO25-112)
- **Analysis of the Influence of Renewable Energy and Bess on Electricity Market Price Formation: A Decomposition Approach with NIC, OIC, and CIC**
  N. Yuki, A. Isonaga, K. Hayashi, T. Wachi (J-POWER Business Service Corporation, Japan), S. Minotsu, R. Shibata, G. Fukuda (Electric Power Development Co., Japan) (Submission-ID WISO25-119)
- **Dynamic Behaviour of Grid Forming Inverters when Providing Static Voltage Support via Q(V) Characteristics**
  T. Garn, R. F. Herman, B. O. Winter, B. Engel (TU Braunschweig – elenia, Germany) (Submission-ID WISO25-134)
- **Analytical Stability Investigations for Grid-Forming Inverters by Hamilton Functions**
  A. Schöley, T. Jeinsch (Universität Rostock, Germany) (Submission-ID WISO25-139)
- **Syncwind's Type 5 Wind Turbine Power-Train: A Grid-Forming Alternative to Inverter-Based Resources**
  G. Henderson (SyncWind Power, New Zealand) (Submission-ID WISO25-150)
- **Energy Demand Optimization With Respect to Uncertainties Based on Historical Time Series Information**
  M. Schreiber, P. Bretschneider (Technische Universität Ilmenau, Germany) (Submission-ID WISO25-155)
- **A Modified DC Chopper and Buffer for Low DC link Inductance of CSC-based DFIG to Enhance LVRT Capability**
  J. Chen, M. Schütt, A. Paez, H.-G. Eckel (Rostock University, Germany) (Submission-ID WISO25-156)

- **Modelling Large-Scale Loads For Grid Compliance Studies: A Multi-Layered Approach**
  P. E A Cardoso, M. V Castro, F. O Valente, J. F Pedersen, F. M Teixeira (Power engineering – Opoura, Denmark) (Submission-ID WISO25-161)
- **GIS Analysis for Sustainable Ammonia in Kenya**
  B. Häckner, C. Zink (Fraunhofer Institute for Energy Economics and Energy System Technology IEE, Germany) (Submission-ID WISO25-176)
- **How the Norwegian virtual self-consumption scheme affects profitability of PV**
  J. Hole (NTNU, Norway | NVE, Norway), M. Korpås (NTNU, Norway) (Submission-ID WISO25-220)
- **The Electricity Industry: A Socially Performing Sector**
  A. Koninckx, A. Garcia (Eurelectric, Belgium) (Submission-ID WISO25-222)
- **Electrical and Thermal Energy Matching Analysis: Investigating Solar Thermal and PV Systems in a Business Park**
  M. Koubar, J. Munkhammar, E. Ihrefjord, M. Khotyaintsev, M. Bröms, M. Åberg (Uppsala University, Sweden) (Submission-ID WISO25-291)
- **Unified Advanced Vector Control for Enabling Higher Penetration of Converter-based Renewable Energy**
  M. Bazargan (Power Nova & Power Technologies, United Kingdom), S. Kelly (Power Nova & Transmission Excellence, United Kingdom), S. Fekriasl (Pulse Clean Energy, United Kingdom) (Submission-ID WISO25-337)