

2nd Workshop on Integration of Local Energy Systems

Where: Ulmenliet 20, Hamburg. Room S3.05

When: 17.11.2023, 10 a.m.

10:00	Welcome & Intro
10:15	Panel 1 - Pitches: Each presenter pitches their work to the audience
10:40	Panel 1 – Grid Integration
12:00	Challenges and Solutions for the Analysis and the De-risking of Large-Scale Converter System Including Realtime Demonstration Carsten Heising from Avasition
12:30	Lunch
13:30	Hydrogen at EWE Business field: Large-scale storage and hydrogen Wilko Heitkötter and Michael Claußner from EWE GASSPEICHER GmbH
14:00	Panel 2 - Pitches: Each presenter pitches their work to the audience
14:30	Panel 2 – Role of Hydrogen in Local Energy Systems
16:00	Discussion round
16:45 – 17:00	Summary & Closing

Panel 1

Power Converters for H2 Applications and Providing Grid Services

Mohammadhossein Tavanaee, PhD candidate at the Universitat Politècnica de Catalunya (UPC)

A Multilinear Model of a Grid-following Converter

Christoph Kaufmann, researcher at Fraunhofer IWES

Standards for the Grid Integration of Hydrogen Infrastructure

Jannes Vervoort, researcher at Fraunhofer IWES

Simultaneous Optimal Dispatch and Sizing of Local Energy Systems

Georg Pangalos, researcher at Fraunhofer IWES

An Approach to Multi-energy Network Modelling by Multilinear Models

Leandro Samaniego, researcher at the HAW

Panel 2

Renewable Energy Hydrogen Water Electrolysis Systems – Lessons Learned & Way Forward

Øystein Ulleberg, Chief Scientist, Institute for Energy Technology (IFE)

Off-Grid Solar PV-Wind Power-Battery-Alkaline Water Electrolyzer Plant: Simultaneous Optimization of Component Capacities and System Control

Alejandro Ibanez Rioja, researcher at Lappeenranta-Lahti University of Technology (LUT)

Pietari Puranen, researcher at Lappeenranta-Lahti University of Technology (LUT)

Optimizing Electrolyzer Performance in a Dynamic Energy Landscape: Modeling, Scenarios, and Sustainability

Aruna Chandrasekar, researcher at Electric Power Research Institute (EPRI)

Analysis of Regulation through Economic Model Predictive Control of Hydrogen-Based Energy Storage Systems

Marina Nascimento Souza, researcher at Fraunhofer IWES

In Search for a High-Performance Modeling Framework for Electrolyzers

Torben Warnecke, researcher at DESY

Improved Integration of Electrolyzers by Grid-forming Battery Systems in Weak Grids

Christoph Kaufmann, researcher at Fraunhofer IWES