

The smarter E Europe**Munich, June 14–16, 2023****THE SMARTER E EUROPE: STATEMENT PAPER****Prof. Dr. Hans-Martin Henning, Institute Director, Fraunhofer ISE**

“Our energy supply is facing a fundamental transformation – which has long begun. With sector coupling, the demand for electrical energy is increasing dramatically and electricity is becoming the most important primary energy. As this electricity will largely come from volatile renewable sources of energy such as wind and sunlight, we also need a paradigm shift in system operation: shifting from a demand-based power system dominated by large-scale power plants towards a flexible system that continuously balances distributed power generation from renewable sources, controllable power plants, flexible loads, including electrolyzers and storage systems in various shapes and sizes. This will allow us to build a stable energy supply, reach our climate goals while at the same time drastically reducing our dependence on energy imports. Furthermore, it also generates value in Germany and Europe. It is important to achieve technological sovereignty for all relevant components – meaning, having competences across all stages of value creation – in order to avoid new critical dependencies.”

Dr.-Ing. Herbert Diess, Chairman of the Supervisory Board of Infineon Technologies AG, former CEO of Volkswagen AG

“Electromobility is the cornerstone of a successful mobility transition and makes a significant contribution to decarbonisation. In 2022, more than one million e-vehicles were on Germany’s roads alone. Their storage capacity already amounts to 55 gigawatt hours today, more than all German pumped-storage power plants combined. If the cars are just parked and connected to the grid, using them to stabilize the electricity grid and increase its flexibility is ideal. The goal of bringing 15 million e-vehicles on German roads by 2030 leads to a storage potential of 825 gigawatt hours – this is huge. Even if only a portion of this capacity is used to stabilize the grid, it will be critical to the success of the new energy and mobility world.”

Michael Schmela, Executive Advisor, SolarPower Europe

“We need many renewable energy sources to decarbonize as they are often complementary – and we need to deploy them fast as time is running out to comply with the Paris target. In recent years, solar is emerging as the main pillar of a renewables based economy. With 45% more new solar capacity than the year before, in 2022, the world installed 239 GW of new solar, and global solar capacity finally surpassed the TW-scale.

The reasons for this spectacular performance are obvious. It comes down to the unmatched versatility of solar – powering individual energy self-sufficiency and comparatively quick-deploying utility-scale projects at competitive low cost.”

Jan Figgenger, Head of Grid Integration and Storage System Analysis, RWTH Aachen University

“Battery storage systems are a key technology in the energy transition as they balance the volatile generation of renewable energies and are able to flexibly supply energy. By the end of 2022, Germany had already implemented around 7 gigawatt hours of storage capacity, equivalent to nearly 20 percent of its national pumped-storage power plants. Most of this flexibility is built into more than 650,000 residential storage systems, while a growing number of companies are having commercial storage systems installed and large-scale storage systems are supporting our grids each and every

second. However, due to the lack of regulations and technical infrastructure the full potential of battery storage systems remains untapped. In combination with other storage technologies, the right political and regulatory framework for battery storage systems would make a secure and stable 24/7 renewable energy supply a reality."

Bruce Douglas, Director Business & Communications, Eurelectric

"Moving towards a verifiable system of matching the production of carbon-free sources of energy with consumption on an hourly basis can help accelerate the decarbonisation of the grid, reduce costs, increase accuracy of carbon reporting and facilitate system flexibility. Solutions exist to accelerate the uptake of hourly matching: This can be achieved by increasing and diversifying the clean energy resource mix and adding dispatchable assets, like energy storage, to resource portfolios. Solutions based on novel energy storage technologies like long duration energy storage (LDES) are expected to reduce the cost of 24/7 renewable power to below 100 USD per MWh in the near future if deployment accelerates."

Markus Elsässer, CEO of Solar Promotion GmbH

"For more than 30 years, we have been committed to the new energy world. This new energy world is renewable, decentralized and digital, while ensuring a sustainable energy supply around the clock. What started as a vision is now becoming a reality. The strong growth of our exhibition platform, The smarter E Europe, is a testament to the success of our cross-industry and cross-sector approach. The electricity, heat and transport sectors are becoming increasingly intertwined and the market is adapting to this. Established companies are expanding their areas of business while new players are entering the market with their innovative business models. The industry as a whole is undergoing a major transformation, also in response to today's political, social and economic climate, making for a particularly dynamic and exciting development."

The smarter E Europe, which encompasses four individual exhibitions (ees Europe, EM-Power Europe, Intersolar Europe and Power2Drive Europe), will take place from June 14 to 16, 2023, at Messe München.

For more information, please visit:

www.TheSmarterE.de

The smarter E Europe

"Creating a new energy world" – that's the goal of The smarter E Europe, Europe's largest platform for the energy industry. The aim is to shine a spotlight on renewable energies, decentralization and digitalization of the energy industry as well as cross-sector solutions from the electricity, heat and transport sectors for a smart and sustainable energy supply. Our vision: a renewable, decentralized, digital, continuously available energy supply. We have been working at full steam to achieve this vision for more than 30 years. The four concurrent exhibitions will be combined at the innovation hub The smarter E Europe.

Intersolar Europe

Intersolar Europe, the world's leading exhibition for the solar industry reflects the rapid growth of the solar industry. For more than 30 years, it has been providing a networking opportunity for the key solar energy players, all under the motto "Connecting solar business". This is where manufacturers, suppliers, distributors, installers, service providers, project developers and planners as well as start-ups get a front-row seat to the latest trends, developments and business models.

ees Europe

ees Europe is Europe's largest and most international exhibition for batteries and energy storage systems. Under the motto "Innovating energy storage," the yearly event brings together manufacturers, distributors, project developers, system integrators,

professional users and suppliers of innovative battery technologies and sustainable solutions for storing renewable energies such as green hydrogen and Power-to-Gas applications.

Power2Drive Europe

Power2Drive Europe is the international exhibition for charging infrastructure and e-mobility. Under the motto "Charging the future of mobility!", Power2Drive Europe is the ideal meeting point for charge point operators and e-mobility providers, manufacturers and distributors, installers and planners, fleet and energy managers, suppliers and start-ups. The exhibition shines the spotlight on charging systems, electric vehicles, traction batteries and mobility services as well as innovative solutions and technologies based on renewable energies – for sustainable mobility.

EM-Power Europe

EM-Power Europe is the international exhibition for energy management and integrated energy solutions. It is focused on modernizing and digitalizing the power grid into a flexible smart grid, integrating prosumers, e-mobility and power-to-heat concepts into a holistic, renewable energy system, and promoting the efficient use of renewable energy sources.

The smarter E Europe is organized by Solar Promotion GmbH and Freiburg Wirtschaft Touristik und Messe GmbH & Co. KG (FWTM).

For more information on The smarter E Europe, please visit: <http://www.thesmartere.de/en>.

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