



# KOLLOQUIUM BUILDING A CLEAN ENERGY FUTURE FOR THE WORLD WITH DR. MARTIN KELLER (NATIONAL RENEWABLE ENERGY LABORATORY)

20 September 2023 • 3:30 pm • Lecture Room 241, building 14.6 (PTJ), Forschungszentrum Jülich

## DR. MARTIN KELLER

*Martin Keller is the director of the National Renewable Energy Laboratory (NREL), one of the U.S. Department of Energy's 17 national labs and the only one dedicated to the research, development, commercialization, and deployment of renewable energy and energy efficiency technologies. Since starting his tenure as director in 2015, Keller has set ambitious partnership goals to maximize the impact of the innovations developed by NREL's world-class researchers.*



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*Before joining NREL, Keller led energy, biological, and environmental research programs at Oak Ridge National Laboratory, eventually serving as the associate laboratory director for the Energy and Environmental Sciences Directorate. Earlier in his career, his dedicated work in a variety of research management positions at Diversa Corp. enhanced and developed the microbiology expertise of this biotech company. Keller holds a doctorate in microbiology from the University of Regensburg, Germany.*

The United Nations system has adopted the terminology and framework of the “triple planetary crisis” to describe the main interlinked issues that humanity faces today. The challenges of pollution, climate change, and biodiversity loss reinforce each other and must be addressed for a viable future. To directly address these challenges, the National Renewable Energy Laboratory (NREL) has developed a strategy focused on three critical objectives: Integrated Energy Pathways, Electrons to Molecules, and Circular Economy for Energy Materials.

Integrated Energy Pathways research develops foundational knowledge and technologies to optimize the integration of renewables into a modernized, secure, and resilient grid. Work under the Electrons to Molecules umbrella focuses on converting electricity and small waste gases for use in chemical, material, and fuel synthesis and energy storage. The third critical objective, Circular Economy for Energy Materials, seeks to establish foundational knowledge and technology in the design, recycle, reuse, remanufacture, and reliability of energy materials and processes.

Since opening in 1977 as the Solar Energy Research Institute, NREL has greatly expanded the scope of its mission. The laboratory continues to build on its groundbreaking work in renewable power, including wind, water, and geothermal, while pursuing equally vital elements of a clean energy future, such as bioenergy, hydrogen and fuel cells, advanced manufacturing, building efficiency, and security and resilience. To maximize the impact of its scientific discoveries, NREL partners with companies of all sizes, as well as educational institutions, nonprofit organizations, communities, tribes, jurisdictions, and utilities all over the world. The laboratory recognizes that leading the energy transition requires solutions that are inclusively designed and benefits that are equitably distributed.

The challenges we face as a society are increasingly urgent. We need to accomplish as much in the next decade as we have over the last 30 years, and with a whole-systems approach and contributions from as many people as possible.

## YOU ARE CORDIALLY INVITED TO THIS LECTURE BY:

**Prof. Dr. Martin Riese (IEK-7)**

*on behalf of the Scientific and Technical Council of Forschungszentrum Jülich*