

The IREC Scientific Advisory Board is made up of the following members:

Scientific Advisory Board 2026

Professor Lourdes F. Vega

Director of the Research and Innovation Center on CO₂ and H₂ at Khalifa University (Abu Dhabi, UAE), and Joint Chair Professor at the Gas Research Center.

She has more than 25 years of international experience in academia and industry, with outstanding contributions in CO₂ capture and utilisation, clean energy, and sustainable process design. Formerly Director of MATGAS and Global Business Technology Manager at Air Products, Prof. Vega is widely recognised for her leadership in molecular thermodynamics and computational modelling. She is an elected member of several scientific academies and recipient of multiple international awards.

Professor John A. Kilner

Professor of Materials Science at Imperial College London and Principal Investigator at the International Institute for Carbon-Neutral Energy Research (Kyushu University, Japan).

Prof. Kilner is internationally renowned for his research on solid oxide fuel cells and ceramic materials for energy applications. He is a founding member of Ceres Power and has received numerous awards, including the Schönbein Gold Medal and the Royal Society Armourers and Brasiers Award. He is also a Fellow of the Institute of Physics and the Institute of Materials, Minerals and Mining.

Professor Pierluigi Siano

Professor of Electrical Engineering at the University of Salerno, Italy.

He is one of the most cited researchers in smart grids, demand response, and renewable energy integration. His expertise includes energy management systems, artificial intelligence in energy systems, and sustainable urban infrastructures. Prof. Siano has coordinated numerous European and national research projects and serves on several editorial boards in the field of energy systems and electrical engineering.

Professor Ursula Eicker

Canada Excellence Research Chair in Next Generation Cities at Concordia University (Montréal, Canada).

She is an internationally recognised leader in zero-carbon cities, energy-efficient buildings, and renewable urban energy systems. Formerly Head of the Centre for Sustainable Energy Technologies at Stuttgart University of Applied Sciences, she has published over 400 scientific papers and several books. Her research combines urban modelling, energy planning, and technological innovation for sustainable urban development.

Doctor Verónica Bermúdez Benito

Senior Research Director and Director of the Energy Center at QEERI (Qatar Environment and Energy Research Institute), where she leads strategic research on photovoltaics, energy management, and energy storage.

With a PhD in Physics from Universidad Autónoma de Madrid, she brings extensive experience in both academia and industry, including leadership roles at Solar Frontier (Japan), EDF R&D and IRDEP (France). Author of over 120 publications, she is Associate Editor of the Journal of Renewable and Sustainable Energy and actively supports STEM outreach.

Professor Roel van de Krol

Head of the Institute for Solar Fuels at the Helmholtz-Zentrum Berlin.

His research focuses on the development of photoelectrochemical systems for solar hydrogen generation, with a strong emphasis on semiconductor physics, water splitting, and integrated solar fuel devices. He is internationally recognised for his work on metal oxide semiconductors and tandem PEC cells. Prof. van de Krol has contributed significantly to advancing solar-to-fuel conversion technologies.

Professor Nicolaos A. Cutululis

Professor at the Technical University of Denmark (DTU) and expert in offshore wind integration, smart grids, and energy systems flexibility.

He has played a leading role in key European R&D projects, including those related to system operation with high shares of renewables and grid-forming technologies. Prof. Cutululis works closely with TSOs and policymakers to accelerate the energy transition and ensure secure and resilient electricity grids.

Professor Dirk Van Hertem

Professor at KU Leuven, Belgium, and a leading authority in power systems engineering, HVDC technologies, and power system protection.

His research contributes to the development of secure and resilient transmission networks, with a focus on offshore grids, grid integration of renewables, and reliability assessment. He collaborates extensively with European TSOs and regulators, and has coordinated major EU research initiatives in grid planning and operations.