



The European Union Emissions Trading Scheme (EU ETS): Design, Analysis & Trading

Prof Dr Rüdiger Kiesel (University of Duisburg-Essen, Germany)

Monday, 20 July 2026 | 16h00–17h00 SAST

HOW TO ATTEND:

In person (main venue):

- Road House Cinema (Neelsie) Stellenbosch University

Watch at satellite venues:

- Room P215, 2nd Floor Physics Building University of the Witwatersrand
- Seminar Room K310 Physics Building G5 North-West University

Online (live stream)

--- Please note, a recording of the lecture will be published on the NITheCS YouTube channel following the event ---

ABSTRACT

The EU Emission Trading System (EU ETS), established in 2005, is now in its fourth phase of emissions coverage and regulatory development. Widely regarded as one of the most sophisticated examples of market-based environmental regulation, the EU ETS also raises tensions between environmental effectiveness, economic efficiency, and political acceptability. This talk will review the objectives and design features of the EU ETS, including discussions about its role as the central instrument in the EU's climate policy mix.

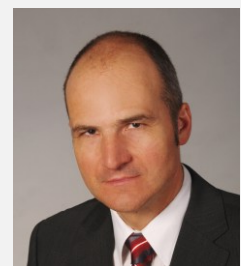
As the EU ETS has matured, financial actors have increasingly participated alongside compliance entities, raising concerns about the balance between hedging and speculative activities. The talk will then address the critical issue of distinguishing between these two types of market behaviour and understanding their respective impacts on market dynamics. However, because of the special structure of the EU ETS, with a specified date for compliance implying a specific time dynamic of hedging pressure, and the fact that there is no natural short side as there are no producers and consumers who need to hedge against price changes, trading behaviour in the EU ETS is substantially different from usual commodity markets and its analysis represents particular challenges.

One key finding is that hedging and speculation occur in separate contracts. Banks and compliant commercial entities trade mainly with each other, giving banks an important role in providing liquidity for long-term hedging. However, funds play a role in short-term trading as a counterparty of commercials. Increased trading between banks and funds suggests a steady rise in speculative activity. Financial activity plays an important role in the EU ETS and should be monitored to ensure it does not deplete the long-term liquidity required for effective hedging.

BIOGRAPHY

Prof Dr Rüdiger Kiesel holds the Chair in Energy Trading and Finance and serves on the board of the House of Energy, Climate and Finance at the University of Duisburg-Essen. He previously directed the Institute for Mathematical Finance at the University of Ulm and has held academic positions at Birkbeck College, the London School of Economics, and the University of Oslo. His research focuses on quantitative climate finance, electricity market modelling, derivatives valuation and hedging, and risk management in financial and energy markets. He is co-author of *Carbon Finance* and *Risk-Neutral Valuation* and has published more than 70 research papers.

Prof Kiesel is a frequent international conference speaker and consultant to financial institutions, utilities, and regulators on carbon, credit, and energy risk management, derivative pricing, and asset allocation.



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