

## **Plenary Keynote: Hans Van Steen**

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### **Towards a Sustainable and Resilient European Energy System with Energy Efficiency**

#### **Abstract**

The planet's biophysical dynamics are undergoing significant changes, leading to an increasing frequency and intensity of extreme weather events, as evidenced by the record-breaking year of 2021. This necessitates an urgent response to mitigate the effects of climate change, particularly by limiting global warming to well below 2°C, preferably 1.5°C, as outlined in the Paris Agreement. Moreover, the recent geopolitical events, i.e. the ongoing conflict between Russia and Ukraine, have shed light on the interdependence and complexities of international fossil fuel trade. Recognizing the need for diversification and reduced reliance on specific energy imports, the European Union is prioritizing a transition away from fossil fuel imports from Russia.

Central to achieving a clean, smart, and secure European energy system is the adoption of measures focused on energy savings, energy efficiency, and the deployment of renewable energy sources. The European Union has set ambitious objectives for a sustainable and decarbonized energy system, aligned with the goals of the Paris Agreement in Fitfor55 and on top of the in REPowerEU. Energy efficiency plays a pivotal role in supporting this transformation, providing cost-effective means to achieve climate neutrality alongside the accelerated deployment of renewable energy, actively promoted through frameworks like the recently agreed Renewable Energy Directive (REDIII).

The Energy Efficiency First Principle calls on Member States to prioritize energy efficiency in their planning and investment decisions. This talk aims to explore the efficacy of energy efficiency measures and their impacts, while considering the cost-effectiveness of renewable energy deployment. By addressing these crucial factors, we can pave the way for a resilient, low-carbon economy, ensuring the long-term security and sustainability of Europe's energy future.

This talk will elaborate on EU initiatives and achievements. The European Union has demonstrated its commitment to addressing climate change and advancing clean energy through various policies and actions, in particular the Energy Efficiency Directive (EED), the Energy Performance of Buildings Directive (EPBD), the Sustainable Product initiative (SPI), including eco-design and labelling policies, the EU Action Plan on the Digitalising the Energy System, the forthcoming Action Plan on Heat Pumps, etc. etc. The talk will also touch upon the industrial policy aspects, including the Net-Zero Industrial Act.