EERA
European Energy Research Alliance
clean Energy tranSition for Sustainable Society (e3s)

The future of Energy Security in EU and the 2040 Climate Target

Exploring how different energy security scenarios could affect the achievement of the EU 2040 Climate Target

Brussels, 6 May | 9.30 – 17.30

Background and context

Energy security has become a **central priority for the European Union,** driven by geopolitical tensions, supply disruptions, and the need to reduce external energy dependencies. Ensuring a resilient and reliable energy system is therefore a key element of the EU policy agenda, aiming to guarantee energy affordability for citizens and businesses while maintaining the competitiveness of European industry.

In parallel, the EU has recently adopted a **legally binding intermediate climate target for 2040**, which sets the objective of reducing **net greenhouse gas emissions by 90% compared to 1990 levels**, marking a key milestone on the pathway to climate neutrality by 2050. Achieving this target requires a profound transformation of Europe's energy system, including the deployment of low-carbon technologies, improvements in energy efficiency, and strengthened energy infrastructure. In this context, it is increasingly important to explore which EU energy security scenarios may emerge from this transformation, and how these scenarios could influence the EU's ability to meet its 2040 climate target.

Objective and expected outcomes

The workshop aims to address **how different energy and climate scenarios could impact energy security in the EU**, while also considering implications for energy affordability and industrial competitiveness. In addition of identifying and exploring possible futures scenarios for EU energy security, the workshop will provide an overview of how a subset of EU countries have been strengthening their energy security to respond to rising geopolitical uncertainty, such as the phase-out of Russian energy since 2022.

By bringing together researchers, industry representatives, and policymakers, the workshop will provide a space to reflect on the evolving relationship between **energy security strategies and decarbonisation pathways** in the EU. Through a foresight exercise, it will also identify a set of possible and **plausible scenarios** based on the identification of the main drivers and uncertainties shaping the future of Europe's energy system.

Structure of the workshop

Morning session – Public

The morning session will be open to a broad audience. It will include **keynote interventions**, followed by a **roundtable discussion with representatives from selected European countries** addressing the central question: *How could different energy and climate scenarios influence the EU's energy security? What are the potential synergies and trade-offs.*

WEDNESDAY, 6 MAY 2026 | MORNING SESSION		
9.30 – 10.00	**Introduction and setting the scene**	Rosita Zilli Policy Director *EERA* Tiina Koljonen Principal Scientist *VTT* Asgeir Tomasgard Director of NTNU Energy *NTNU*
10.00 – 10.55	**Keynote speeches**	
20min	The future of Energy Security in EU and the 2040 Climate Target	Ruud Kempener Deputy Head of Unit Energy Security and Safety *DG ENER, European Commission*
20min	The key factors for designing a secure European energy system meeting the legally binding interim climate target for 2040	Albana Ilo Co-Chair *ETIP SNET WG1 on Reliable, economic and efficient energy system*
15min	Q&A	
10.55 – 11.15	*Coffee break*	
11.15 – 12.05	**Countries representatives round table discussion:** - Croatia - Cyprus - Finland - Italy - Norway	**Moderator:** Raquel Santos Jorge Research Coordinator *NTNU* **Panellists:** Ana-Maria Boromisa, *IRMO* (Croatia) Theodoros Zachariadis, *CYI* (Cyprus) Tiina Koljonen, *VTT* (Finland) Giuseppe Pellegrini Masini, *ENEA* (Italy) Asgeir Tomasgard, *NTNU* (Norway)
12.05 – 12.20	Q&A	
12.20 – 12.30	**Wrap up and conclusions**	Tiina Koljonen Principal Scientist *VTT*
12.30 – 13.30	*Light Lunch*	

Afternoon session – EERA Members foresight exercise

The afternoon session will be restricted to **EERA members** and will consist of a **foresight exercise** focused on exploring possible developments in Europe's energy system up to 2040. Participants will identify key drivers and uncertainties and develop **plausible energy security scenarios**, assessing their potential implications for achieving the EU 2040 climate target.