



# | European Energy Research Alliance

Annual report 2025



# A word from the Secretary General

Dear Members and Colleagues,

At the time of reading the EERA annual report for year 2025, the world will certainly already look very differently from it was just a few months ago.

As the post-World War II order recedes, a new global configuration is still taking shape.

In this uncertain and turbulent transition, Europe faces an increasingly transactional world where force and opportunism too often supplant rule-based multilateralism and long-standing strategic alliances. Yet the European Union's measured institutions – sometimes seen as cumbersome – can become a new pole of stability: a “go-to” middle power around which democracies may coalesce to resist rising imperialism and defend shared values.



As Prof. Mario Draghi has urged, Europe's future depends on its ability to convert intersecting crises into an existential opportunity: to strengthen its Union and re-emerge as a sovereign, science- and values-driven global power. In service of that ambition, the EERA research community has renewed its mission to catalyse Europe's low-carbon energy research, shape evidence-based policy, and accelerate world-class innovation.

We believe a sustainable, resilient Europe must place research and innovation at the heart of its socio-economic renewal.

With several strategic initiatives launched in 2025, EERA research community will continue through 2026 and beyond to deliver creative, cutting-edge scientific insight and forward-looking inspiration—helping to steer Europe toward a just, modern, and sustainable society

Kind regards,

A handwritten signature in black ink, appearing to read 'Adel El Gammal'.

Adel El Gammal, Secretary General







# Highlights from 2025





# Section 1

## A strategic voice for clean energy R&I – making research matter in Europe's decisions







[Read the  
event report](#)

# High-Level Policy Conference

From science to market – Implementing the Clean Industrial Deal for a competitive, low-carbon Europe

The 2025 conference provided a platform to reflect on Europe's capacity to remain competitive while delivering on climate-neutrality. Keynote contributions from **Mariana Mazzucato** on mission-oriented innovation and strategic public investment and **Philippe Lamberts** on political and industrial challenges facing Europe's clean transition

Marked the **launch of three forward-looking reports** that were discussed in three different panels with speakers from the policymaking field, industry and academia:

- The role of innovation hubs in accelerating industrial transformation
- Resilience and preparedness in a volatile geopolitical context
- The transformational impact of AI on Europe's energy systems



# Providing thought leadership 2025 flagship publications

One goal: making Europe more competitive. Three structural challenges within the low-carbon energy research sphere: **the gap in the innovation chain, AI in energy systems**, and the central role **of resilience and preparedness**. EERA published three reports, each one addressing a structural bottleneck where research and innovation can strengthen Europe's competitiveness by linking it to concrete EU priorities and decision points.





## **Unlocking the power of AI in Europe's energy systems:**

Expert policy  
recommendations

# Unlocking the power of AI in Europe's energy systems

This report presents expert policy recommendations designed to harness the transformative potential of artificial intelligence (AI) for the European energy systems, in line with the anticipated objectives of the forthcoming European Union (EU) Strategic Roadmap. It summarises an in-depth analysis of the opportunities and challenges involved in making AI a robust enabler of the clean energy transition, as well as the actions required to achieve this.

[Read the report](#) >



# Resilience and preparedness in Europe's energy transition: the role of low-carbon energy R&I

This paper explores the impact of the concepts of resilience and preparedness on energy systems and the role of low-carbon energy research and innovation in strengthening these two dimensions within this framework. The analysis will distil a set of priorities indicating where low-carbon energy R&I should best be directed to address the challenges identified. On this basis, operational policy recommendations will be derived to position EERA within the evolving European policy agenda on this topic. The ultimate goal is to support Europe in advancing competitiveness, climate neutrality and strategic autonomy in a coherent and effective manner.

[Read the report](#) >

Position paper  
**Resilience and  
preparedness in Europe's  
energy transition:  
the role of low-carbon  
energy R&I**



The background of the left side of the image is a dark blue, textured globe. The continent of Europe is highlighted in a lighter blue, and its internal borders are visible. The globe is surrounded by faint, glowing lines and patterns, suggesting a global network or energy flow.

**From lab  
to leadership:**  
bridging Europe's  
research-to-impact gap

# From lab to leadership: bridging Europe's research-to-impact gap

Europe's climate neutrality, competitiveness, and energy security depend on turning its strong research base into industrial impact. Yet fragmentation and slow uptake continue to limit progress. EERA Innovation Hubs offer a pan-European framework to connect research, industry, finance, and policy, accelerating technology transfer and de-risking investment. By strengthening coordination across the research landscape, they help bridge the gap between scientific breakthroughs and large-scale deployment, supporting Europe's competitiveness and strategic autonomy.

[Read the report](#) >





# EERA at the 19th SET Plan Conference

## Driving Competitiveness through Collaboration

At this year's SET Plan Conference in Odense, EERA once again demonstrated its pivotal role in Europe's clean energy landscape, acting as a bridge between research and policy as well as industry to accelerate the energy transition.

During the High-Level Panel "Affordable Renewable Energy – A Key to Europe's Economic Growth", **Henk-Jan Vink**, President of EERA, showcased how **EERA Joint Programme Wind Energy**, in close collaboration with **ETIPWind**, has succeeded in shaping a European research and innovation agenda. By aligning thematic priorities and fostering collaboration across the community, this partnership has strengthened the competitiveness of Europe's wind sector and created a shared vision.



# High-Level Panel

## EU Support for Competitive Clean Energy Technologies



## EERA at the 19th SET Plan Conference

### Driving Competitiveness through Collaboration

In the panel on “EU Support for Competitive Clean Energy Technologies,” **Adel El Gammal**, EERA Secretary General, reflected on how EERA aligns with the EU’s objectives to enhance competitiveness. He underlined that EERA was early to recognise Europe’s emerging challenges and has been proactive in offering recommendations and roadmaps to help restore and boost EU competitiveness and innovation.

EERA was born with the SET Plan, and our mission has evolved: today, our focus is on boosting implementation and impact.

**A key milestone:** EERA's formal recognition within the new SET Plan governance, reflecting its role as the research pillar of the SET Plan.



# EERA at EUSEW 2025

## Smarter than ever

This year, EERA made a strong mark at the **2025 European Sustainable Energy Week (EUSEW)** in Brussels, taking place from 10 to 12 June 2025. In partnership with the European Commission's Joint Research Centre, EERA co-hosted a **high-level policy session** focused on the **transformative potential of AI in reshaping Europe's energy grids**. Led by its Joint Programmes on Smart Grids and Digitalisation for Energy, **the session explored challenges such as data reliability, AI's energy footprint, and the need for public trust and inclusive innovation**.

Moreover, **EERA President Henk-Jan Vink took the stage at the EUSEW Awards Ceremony** as a member of the high-level jury, **together with Commission Executive Vice-President** for a Clean, Just and Competitive Transition, Teresa Ribera.







## EERA at COP30

Carrying EERA's mission forward on the ground in Belém

EERA had a meaningful presence at COP30 in Belém.

Our JP Smart Cities Coordinator, **Sonia Giovinazzi**, represented us officially and spoke at the Südwind / EERA / SASAL event **“Local communities advocating for climate justice and Agenda 2030.”** She brought EERA's perspective on bridging knowledge, research and action for just, sustainable and resilient energy transitions, illustrating it through a concrete example of collaboration between NTNU and Kathmandu University in hydropower research led by JP Hydropower Coordinator Ole Gunnar Dahlhaug.

Beyond this intervention, Vice President **Nils Røkke** and JP Smart Grids Coordinator **Luciano Martini** were among the EERA community members helping amplify the Alliance's mission on the ground. The message from Belém was clear: ambition must accelerate, and cooperation is key.





# Shaping the low-carbon energy R&I policy agenda

## ● 7 Policy Working Group meetings:

- All JPs represented since 2024
- Membership increased from 120 to 134 organisations (+11.6%)
- Participation levels stable (average of 37 participants per meeting) or energy and climate stability towards 2040 in June 2025.

## ● 46 Weekly Policy Updates

## ● 6 Think Tank reviews

## ● 5 responses to EU consultations

## ● Policy presentations:

- At every EERA internal meeting (ExCoop, ExCo, JPCs, GA, ASM, Strategy meetings)
- 1 at a Joint Programmes' meeting (JP Hydro) and 3 at members' events (BERA, SINTEF, Norce).
- 1 at an external event (European Committee of the Regions)

## ● Sending of an open letter to the European Commission on the future Framework Programme 10 in April 2025.

## ● Signed the Solar Impulse Foundation's call for energy and climate stability towards 2040 in June 2025.





# Advocacy and direct engagement

1

## January

EERA Presidency met with Director-General **Kurt Vandenberghe** (DG CLIMA, European Commission) to highlight research community contributions to climate objectives.

2

## February

Participated as a discussant at a European Parliament (EP) event on **wind energy's contribution to European competitiveness and decarbonisation**. Hosted by MEP Thomas Pellerin-Carlin, the event explored the critical role of wind energy and other renewables in Europe's journey toward decarbonisation and energy independence.

3

## March

Co-organised the EP event on the **future of EU industries and the Clean Industrial Deal**. Hosted by MEP Radan Kanev, policymakers, researchers, and industry leaders discussed how to maintain EU competitiveness while advancing the low-carbon transition. Key topics: the need for stronger R&I support, a robust public-private funding framework, and scaling breakthrough technologies.

4

## December

Invited to participate in the EP ITRE Committee discussion on the future Framework Programme in early January 2026.

## Ongoing

Participation in the **ERA Forum**, contributing to long-term EU R&I policies and reinforcing EERA as a strategic interlocutor.



## Section 2

# **The Alliance in action: Collaboration, science and impact**





# 01

## Joint Programmes at the heart of EERA's vision towards the future

EERA does not exist without its Joint Programmes. They are the researchers, the networks, the scientific communities, the living engine of the Alliance. **What follows is only a glimpse of the extraordinary breadth of activity carried out in 2025:** publications advancing the state of knowledge, workshops fostering dialogue across disciplines and borders, awards nurturing the next generation of energy scientists, and strategic initiatives shaping the future of European R&I. Across all of this, a defining feature of 2025 has been the deepening of cross-JP collaboration.





# Joint Programmes at the heart of EERA's vision towards the future

## New publications advancing Europe's clean energy transition



[Read the report](#)

### From Innovation to Industrial Competitiveness

JP Wind, ETIPWind, IWG Wind

Launched at WindEurope in Copenhagen, this report defines a common European R&I strategy for wind energy through 2050 and proposes a Single European Fund for Wind Research & Competitiveness in the next EU budget cycle.

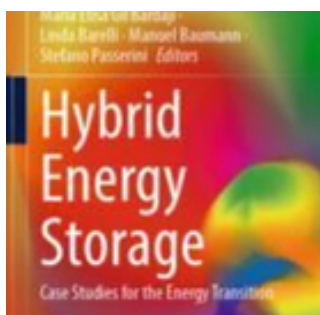


[Read the report](#)

### The crucial role of Smart Grids

JP Smart Grids

A White Paper setting out policy recommendations to enable the large-scale deployment of smart grid technologies in line with EU climate goals.



[Read the report](#)

### Hybrid Energy Storage

JP Energy Storage

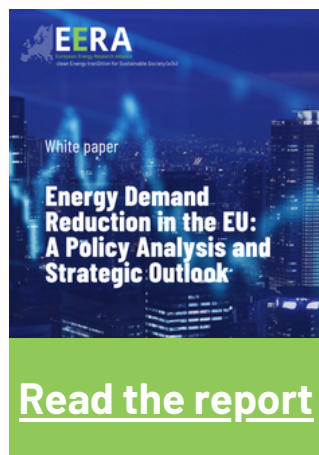
An open access book that addresses the need for hybridisation in energy storage, offering a fresh perspective on integrating diverse storage solutions to support a successful energy transition.



01

# Joint Programmes at the heart of EERA's vision towards the future

## New publications advancing Europe's clean energy transition



### Energy Demand Reduction in the EU JP E3S

A White Paper calling for a systemic shift in consumption patterns as a key pillar of energy security, affordability, and sustainability.



### Thermal energy storage in industrial processes JP EEIP

A perspective paper published in Green Energy and Sustainability, analysing the role of thermal storage technologies in industrial decarbonisation.



### Artificial intelligence in energy JP DfE

A forward-looking paper by EERA's transversal Joint Programme on Digitalisation for Energy, exploring how AI can support and accelerate the clean energy transition.



# 01

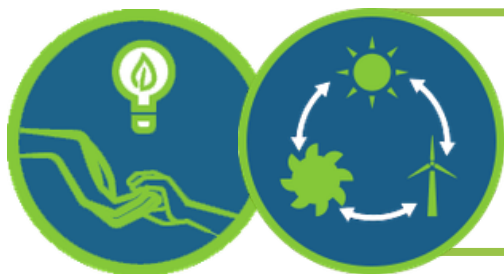
## Joint Programmes at the heart of EERA's vision towards the future

### Cross-JP collaboration: where knowledge meets

One of the most striking features of 2025 has been the intensity of cross-JP collaboration; a reflection of the increasingly complex and interconnected nature of the energy transition itself.



A workshop in Turin explored the societal impacts of hydrogen technologies, bridging SSH and STEM communities.



A workshop on digitalisation for a low-carbon society examined citizen-centred approaches to digital energy transition, from behavioural change to regulatory design.



A workshop in Vienna brought together researchers, policymakers, and practitioners to explore integrated technical and societal solutions for urban energy transition.



Over 100 participants gathered in Madrid for a workshop on smart energy storage in future markets, featuring a poster session and the JP Energy Storage Best Poster Award.



01

# Joint Programmes at the heart of EERA's vision towards the future

## Investing in the next generation

JP Smart Grids launched the 2025 PhD Candidate Award, recognising excellence in doctoral research on smart and sustainable energy systems. Winners will be presented at the 2026 JP Smart Grids Workshop.





## EERA Days

The EERA Days initiative continued to gain momentum in 2025, bringing the Alliance closer to the national R&I ecosystems that form its backbone.



**EERA Day in UK**



**EERA Day in Norway**

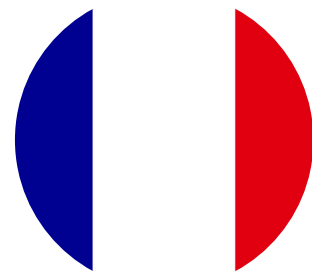


**EERA Day in France**





In March, **EERA Day in Norway**, co-organised with NORCE, SINTEF, and the University of Bergen, gathered the country's low-carbon energy research community at the Research Council of Norway in Oslo. Discussions centred on strengthening Norway's participation in EERA's Joint Programmes and better aligning national and European research strategies to accelerate the energy transition.



In the autumn, **EERA Day in France** took place at the Ministère de l'Enseignement supérieur, de la Recherche et de l'Espace in Paris. The event brought together France's key energy research actors, European representatives, and EERA members for a full day of dialogue on coordinating national and EU agendas. A highlight was a roundtable on aligning French and European energy research priorities, addressing fragmentation across funding instruments and pathways to stronger cross-border collaboration in support of decarbonisation, energy security, and competitiveness.



Preparations were already underway for the next edition: **EERA Day in the UK**, scheduled for February 2026 and organised in close cooperation with UKERC and UKRI.



# A strategic role in European projects for the transition

03

EERA regularly participates in projects directly linked to the EU energy strategy and strategically important to the Alliance. EERA took part in **eight European projects** in 2025.

## Batteries Europe

EERA continued the **coordination of the National and Regional Coordination Group (NRCG)** of the Implementation Working Group on batteries, with a key highlight of a workshop series where Member states were presenting and discussing their national battery strategies, ecosystems, and R&I funding. The project was concluded in May.



## SSH CENTRE

ERA played the crucial role of **liaising with SET Plan stakeholders**, leading the mapping of SSH aspects in the current SET Plan Implementation Plans and the related Horizon Europe Partnerships, which resulted in three reports published and one peer-reviewed paper.





# A strategic role in European projects for the transition

03

## CONNECT-NM

Since October 2024, the Alliance has been heavily involved in the **coordination and daily management** of the partnership, together with **increasing its visibility** and supporting its impact.



## StoRIES

This multimillion initiative providing transnational access to research infrastructures across Europe came to an end in 2025, publishing a SRIA, a Technology Roadmap and a book on Springer Nature, concluding with the signature of a Memorandum of Understanding (MoU) by 27 organisations to continue cooperation in the domain of Hybrid Energy Storage.



## RISEnergy

Following its official commencement in March 2024, EERA plays a truly active role in RISEnergy, leading efforts behind **building an energy research infrastructure system** and the dissemination, exploitation, outreach and engagement activities of the project.





# A strategic role in European projects for the transition

03

## SETindEU

ERRA is part of the secretariat supporting the SET Plan Implementation Working Group on Sustainable and Efficient Energy Use in Industry. It coordinates the drafting of the Common Implementation and Investment Plan, a key document defining the R&I priorities for the group's technologies and sector, and co-organises IWG meetings together with the European Commission's DG ENER.



## Cost Action EU-MACE

EERA took over the role of chairing the initiative, while also leading its tasks in **dissemination, communication and promotion.**

## SUNER-C

In this project that came to an end in June, EERA provided support to the largest solar fuels and chemicals community in Europe (SUNERGY), which consists of **renowned European research and industry players.**





# A strategic role in European projects for the transition

03

2025 closed with a remarkable outcome: **six out of eight proposals submitted were successfully evaluated**: five linked to the SET Plan and one to EU-Africa research cooperation. Together, they **position EERA at the heart of the SET Plan's** implementation, shaping future investment plans, working directly with industry, and strengthening research cooperation with Africa. Their execution will call on the full strength of the Alliance: Secretariat and Joint Programmes alike.





# Section 3

## Beyond the facts, the people who make it all possible







# Our community's shared identity

Most organisations update their strategy. Fewer take the time to ask: *who are we, and what do we stand for?*  
In 2025, EERA did both and chose to do it together.

## Reaffirming who we are

In January 2025, EERA launched a highly interactive, community-wide process to redefine its vision and mission; and, for the first time, to articulate the shared beliefs that underpin everything the Alliance does. Concluded in December, this year-long exercise was **a collective act carried out with and by the community itself**, represented by ExCo members, Personal Representatives, JP Coordinators and the EERA Secretariat.



The process reaffirmed a set of core beliefs that now formally ground EERA's actions and decisions:

- **Scientific excellence and integrity**
- **Collaboration and openness**
- **Impact and responsibility**
- **Technology agnosticism**
- **Full value-chain thinking**
- **Independence**

The response from across the community has been clear: At a time when these values are increasingly questioned, many members have expressed pride in being part of an organisation that stands firmly for them. These beliefs are a **shared foundation** to strengthen alignment across EERA's constituencies, **reinforce mutual trust**, and help the community **focus on what brings it together**.

## Vision

Research and innovation at the heart of a sustainable and resilient European energy system.

## Mission

We catalyse Europe's low-carbon energy research to shape science-based policies and advance world-class innovation.



# 02 The Joint Programme Committee: a new voice at the table

2025 marked a turning point in how EERA's Joint Programmes engage with the Alliance's governance. **The Joint Programme Committee (JPCOM), the result of a sustained, collective effort to give Joint Programmes a stronger and more strategic role within EERA**, held its first meeting this year and was formally embedded in EERA's Internal Rules of Procedure following its approval at the 15th General Assembly in May.

The JPCOM gives the Joint Programmes a **dedicated, representative body** through which they can collectively contribute to shaping EERA's strategic direction, **reinforcing alignment, strengthening trust across constituencies, and ensuring that the voice of the research community is heard** where it matters most.



Leading this new body are **Ivan Gordon**, elected as Chair, from IMEC, Belgium, and **Alessandro Sciuolo**, elected as Vice-Chair, from UNITO, Italy.

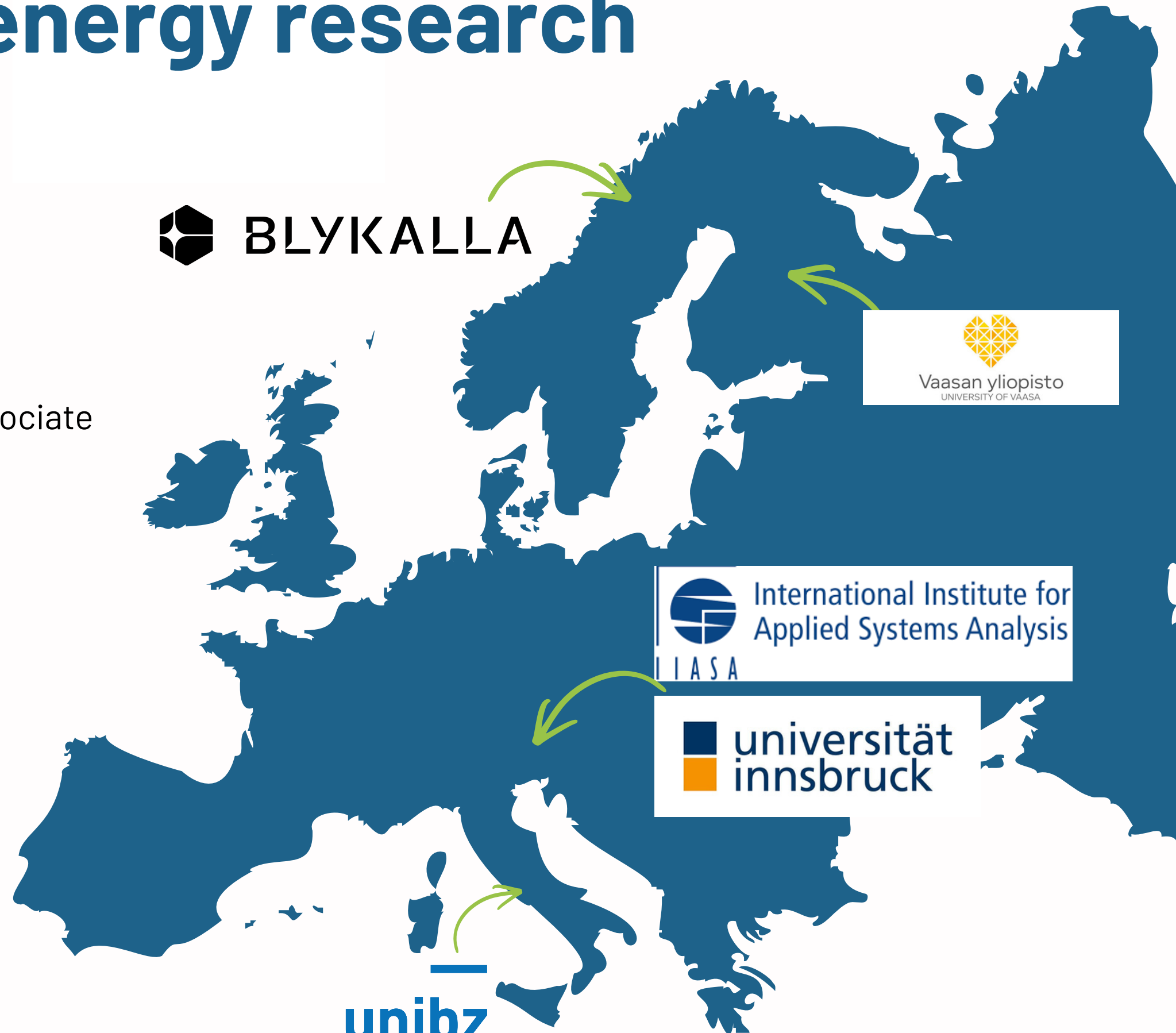




# 03 Reimagining clean energy research with new partners

In 2025, **5 new members** joined EERA:

- IIASA, AT – Associate
- Free University of Bozen-Bolzano (UNIBZ), IT – Associate
- University of Vaasa (VAASA), FI, Full
- Blykalla AB (BK), SE, Associate
- University of Innsbruck (UIBK), AT, Associate







# Powering the EERA management body

The EERA Executive Committee brings together some of the most outstanding research and innovation leaders in Europe, representing the Alliance's membership across the continent. In 2025, while no elections took place, **the ExCo welcomed several new representatives:** individuals stepping in to carry forward the commitment of their institutions within EERA's governance, we are pleased to have welcomed:



**IFPEN, France**  
Benjamin Herzhaft



**HELMHOLTZ, Germany**  
Peter Jansens



**RISE, Sweden**  
Henrik Svenningstorp

Their fresh perspectives and expertise enrich a body that continues to steer the Alliance with ambition and purpose. In 2025, the ExCo met two times and played a central role in the governance evolution that culminated in the formal establishment of the JPCOM.

[Meet the full EERA Executive Committee](#) ➤



# 05 The people behind EERA

Nothing that EERA has done and achieved in 2025 would have been possible without the people who show up every day with **expertise, dedication, and genuine passion for advancing low-carbon energy research.**

First and foremost, our **Joint Programme Coordinators** and their supporting teams: the researchers who give their time, knowledge, and energy to drive forward the scientific communities that are the lifeblood of EERA.

[Meet the Joint Programme Coordinators](#) ➤





# The people behind EERA

Equally, the EERA Secretariat, a team whose commitment, creativity, and care keep the Alliance running, connected, and moving forward. Behind every event, publication, policy engagement, and member interaction, there are people who make it happen. To all of them, and to the thousands of researchers across our network who are quietly, persistently advancing the Clean Energy Transition, thank you. This is your work as much as anyone's.

[Meet the EERA Secretariat team](#) ➤









# Contact Us

For questions or  
clarifications.

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