

Fall 2024



HIGH-LEVEL POLICY CONFERENCE

# Driving EU Competitiveness through Low-Carbon Energy Research & Innovation

Underscoring the vital role of low-carbon energy  
R&I in achieving Europe's most strategic objectives

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**EVENT REPORT**

## INTRODUCTION

With the EU's competitiveness increasingly under strain from intensifying global competition and geopolitical pressures, the EERA community firmly believes that low-carbon energy research and innovation (R&I) constitutes an essential factor in achieving Europe's most pertinent strategic objectives as the continent simultaneously strives towards ensuring a successful clean energy transition.

**At its core, R&I can play a highly valuable role as a driver of competitiveness in Europe's journey to radically transform its energy system to reach a climate neutral society by 2050.**

Accordingly, the panel discussions of the conference provided forward-thinking and comprehensive insights from several integral perspectives, namely policy, industry and research, into furthering the current dialogue on how to reconcile a competitive Europe with sustainability and environmental considerations at the forefront.

## EVENT SUMMARY

### Opening remarks

Henk-Jan Vink - President, EERA

This year's EERA High-Level Policy Conference takes place at a time when research and innovation is gaining ground as an integral factor for tackling Europe's most prominent challenges, spurred on by the release of two influential reports at the EU level, namely the [Letta report on the Single Market](#) and the [Draghi report on the future of European competitiveness](#).

Building further, as European competitiveness continues to be hindered by fragmentation of the EU market, high labour costs, and limited access to critical raw materials, a strong research and innovation landscape is increasingly being cited as imperative in alleviating such persistent and limiting bottlenecks.

**Against this backdrop, it can be noted that important developments are evolving across the R&I landscape for the EERA research community, offering both opportunities and challenges when it comes to paving the path for Europe to achieve climate neutrality in the coming decades.**



## Opening speech

**Janez Potočnik - Co-Chair of the International Resource Panel & Former European Commissioner for Science and Research (2004 - 2010) and Environment (2010 - 2014)**

Europe is facing multiple crises from local to global level. As the world enters a new geostrategic reality, such acute crises begin to expose the continent's deep fragilities.

Although growth in Europe's economy remains key, it must be acknowledged that it is not linear or unlimited. This calls for going beyond Gross Domestic Product (GDP) by implementing a fundamental shift in the social-economic model in order to both meet society's needs while remaining within the planetary boundaries.

In citing the Club of Rome, "we have moved from an empty world dominated by nature to a full world dominated by humans".

**Europe needs a systemic change in the way it uses resources. The continent must implement a circular resource efficient approach, where both environmental impact and human well-being are taken into account.**

Furthermore, environmental and economic aspects need to be dealt with in a harmonious manner to achieve a better Europe for the future.

**In drawing from recent IEA reports, competitiveness itself should be aligned with a holistic perspective of a just transition and high environmental standards.**

“ Sustainability is not in opposition to competition, but a critical success factor for competitiveness, security, fairness, democracy and coherence of the European project at large. ”

Janez Potočnik - Co-Chair of the International Resource Panel

## Highlights EERA flagship report EU Competitiveness and Strategic Autonomy: The central role of low-carbon energy research and innovation

**Adel El Gammal - Secretary General, EERA**

Europe faces an emergency in restoring its economic competitiveness, stemming from an acute reshuffling of the geopolitical order in recent years.

**Against this backdrop, EERA's flagship report highlights the vital role of low-carbon R&I in building industrial European leadership in key sectors.**

On a global scale, the EU needs to strike the optimum balance within the rivalry between the two superpowers of the US and China.

On one hand, the European relationship with the US has shifted from being strategic, to one that can be defined as transactional and opportunistic, while the EU and China are ultimately systemic rivals.

In tackling this dual-sided strategic challenge, both the Letta and Draghi reports point to research and innovation as central to enhancing Europe's competitiveness.

**Importantly, EERA's report chooses to adopt the concept of sustainable competitiveness, which focuses on integrating environmental sustainability and social progress in the achievement of economic competitiveness.**

With this in mind, EERA proposes ten policy recommendations, stemming from its upcoming report, for a sustainable and competitive Europe with low-carbon energy R&I at the core, subdivided between two key categories: "EU competing in the world" and "Research & innovation at the core of sustainable competitiveness."

“**Research and innovation should be considered as an investment for society, and not as a cost.**”

Adel El Gammal - Secretary General, EERA

## **Fireside chat - Placing R&I at the core: ensuring long-term economic resilience and sustainable competitiveness in Europe through low-carbon energy**

Rosalinde van der Vlies - Director, Clean Planet, DG RTD

Anna Gumbau - Energy and climate journalist

**There is an imperative need to accelerate funding for research and innovation across Europe in both the public and private spheres.**

A 'team Europe' approach is key, encompassing investments made in research at EU, national and regional levels, as well as in the private sector. Coordinated European efforts remain essential to ensure defragmentation and a collective vision of where investments are needed in the short and long term.



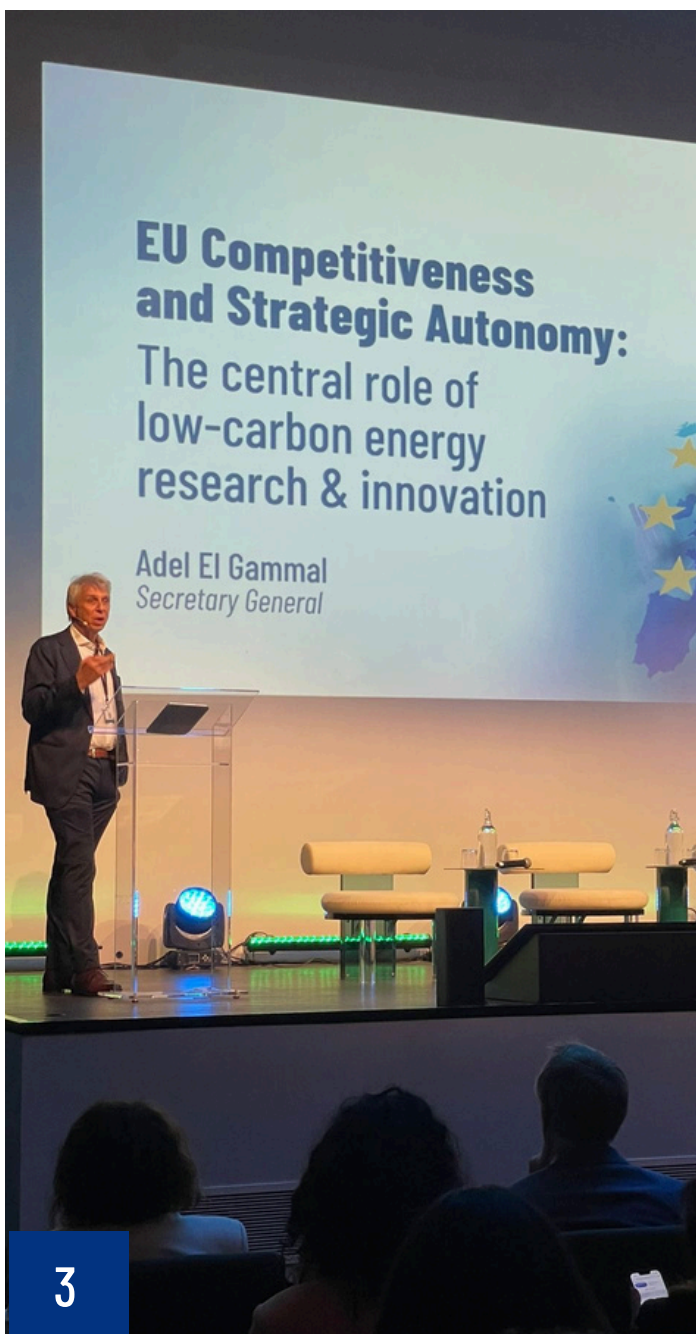
The EU is not starting from scratch. Powerful tools exist, including partnerships, as well as the Strategic Energy Technology Plan (SET Plan), which serves to deliver on common strategic agendas and strengthen connectivity not only between the Union, member states and industry players, but also all relevant stakeholders.

**Achieving short-term competitiveness and addressing urgent needs, while at the same time securing long-term sustainability, requires a lasting balance between both low and high Technology Readiness Levels (TRLs).**

Moving forward, several actions are already in the pipeline on advancing further the R&I potential of Europe at the Commission level, namely a strategy for start-ups and scaling up, a new policy on technology and research infrastructures, as well as three notable Acts covering the areas of innovation, the European Research Area (ERA), and advanced materials.

“**Research and innovation is crucial not only to meet our climate ambitions but also to drive forward competitiveness.**”

Rosalinde van der Vlies - Director, Clean Planet, DG RTD



1. **Henk-Jan Vink**, President, EERA
2. **Janez Potočnik**, Co-Chair of the International Resource Panel
3. **Adel El Gammal**, Secretary General, EERA
4. **Rosalinde van der Vlies**, Director, Clean Planet, DG RTD & **Anna Gumbau**, Energy and climate journalist

## Panel discussion 1 - Securing long-term competitiveness: enabling conditions and the role of low-carbon energy R&I in setting the course

The first panel discussion delved into the role of energy research in driving the EU's long-term competitiveness. The conversation, rooted in the insights and recommendations presented earlier in the conference, saw crucial inputs offered from panellists Martin Porter, Angels Orduña, Nils Røkke, Norela Constantinescu, and César Dro.

### Martin Porter - Executive Chair, Cambridge Institute for Sustainability Leadership (CISL) Europe

Sustainable competitiveness is embedded in an idea that does not automatically include social and environmental aspects. On the other hand, competitive sustainability, when originally developed, attempted to address this shortcoming.

Going forward in the long-term, predictability for companies and economies comes from setting targets in the areas of climate, low-carbon energy, biodiversity and nature protection, all of which are imperatives that must be used to measure and calculate competitiveness, for which competitive sustainability already gives us an entry point.

**Competitiveness itself needs to be purposeful and enable the achievement of upcoming European climate goals. Europe already has a strong starting position in many key areas, but risks losing this unless it rapidly scales up and provides easier access to funding.**

As R&I continues to be increasingly linked to competitiveness and industry, the challenge is now to ensure trust and support among Member States in defragmenting and building an integrated industrial strategy.

### Angels Orduña - Executive Director, A.SPIRE

In Europe, sustainable competitiveness is a 'sine qua non', meaning if companies work to be competitive without integrating sustainability, they will no longer have production lines here.

**Although there is full agreement that innovation is crucial, it will not necessarily make Europe more competitive. There are two key elements that must be present for an industry to be competitive, namely differentiation and being the first to the market, alongside lower prices and lower costs.**



Decarbonising and creating circular innovations towards attaining climate neutrality costs money and makes products more expensive, in which competitiveness is not immediate. This is why de-risking innovation is crucial.

When it comes to sustainable competitiveness, the process industry can either innovate to drastically reduce emissions and keep jobs in Europe or delocalise to limit European emissions but ultimately create a scenario of decreased jobs, wealth and competitiveness. To avoid the latter outcome, Europe needs to continue to both sustain the industry and increase investments.

Technology neutrality is optimal but relevant criteria is greatly needed. The investment will come if the industry has a stable and predictable framework for funding.

**Europe should not only develop and implement its innovation, but should also export it as part of a broader competitive strategy.**

**Nils Røkke - Vice-president, EERA & Executive Vice-president Sustainability, SINTEF**

The several recently published reports, respectively spearheaded by Enrico Letta, Mario Draghi and Manuel Heitor, are all wake-up calls for Europe to do something. It is of key importance to take seriously the advice stemming from these publications.

Research and innovation is crucial for our societies. Europe is currently at a determining point in terms of boosting R&I to remain competitive, innovative and to fill the productivity gap.

**Europe should make better use of its instruments for connecting member states and Pan-European activities through Framework Programming, and importantly, associations such as EERA.**

“ We are at a determining point in terms of boosting R&I to be competitive, to be innovative, and to fill the productivity gap. ”

Nils Røkke - Vice-president, EERA & Executive Vice-president Sustainability, SINTEF



**Norela Constantinescu - Deputy Director Innovation and Technology Center, IRENA**

Delving into practical examples of the European position when competing globally, from the point of view of IRENA, the levelised cost of electricity in Europe for Photovoltaics (PV) is approximately 62 USD per megawatt hour, a figure higher than in both the US and Asia. The same situation exists for onshore wind, with China and Brazil having half of Europe's levelised cost of electricity.

Conversely, EU competitiveness remains in offshore wind, where the levelised cost of electricity remains the lowest in Europe compared to other parts of the world.

**From this perspective, the EU needs to better understand how to embed energy policy with industrial trade policies, while also ensuring the spending target of 3% of GDP on research across the continent.**

**César Dro - Policy officer, Common Policy Centre, DG RTD, European Commission**

The question of directionality versus diversification will become significant in shaping the research and innovation landscape in the coming years. Europe is currently facing very big regional R&I divides, with vastly different capacities depending on member states, regions, and centres of excellence.

Such disparities can have negative social impacts, principally in terms of brain drain, as well as both environmental and economic impacts.

**Europe has a diverse network of research and technology organisations which facilitate international collaboration and possess strong expertise, along with a territorial dimension, on which to leverage.**

It is important that the EU does not try not to copy the US and China. A distinct European approach to build on its strengths is crucial to achieve net-zero 2050 goals. This is particularly true when looking at the unique set of challenges facing the EU, namely the structure of its production, its increasing dependencies and the current demographic transition.



**Panel discussion 1: Securing long-term competitiveness: enabling conditions and the role of low-carbon energy R&I in setting the course**



## Panel discussion 2 - Low-carbon energy R&I meets the industrial ecosystem: addressing bottlenecks, sharing success stories, and paving the way forward

The second panel explored the main challenges Europe needs to tackle to achieve short-term competitiveness in scaling up low-carbon energy technologies on a global scale. The conversation saw insightful and actionable ideas put forward by four panellists, namely Tuula Mäkinen, Daniel Cios, Fabrice Stassin, and MEP Benedetta Scuderi.

### Tuula Mäkinen - ExCo Member, EERA & Lead, Green Electrification, VTT

When it comes to the most significant bottlenecks for scaling up low-carbon energy technologies in Europe, talent and skills shortages remain as key challenges to overcome, particularly from the perspective of research and development (R&D). Taking an example from Finland, a survey was conducted among students on which sector they would be most interested in working in the future, in which energy ranked the lowest, particularly for girls.

Moreover, to ensure greater policy alignment across various stakeholders in the low-carbon energy field, better utilisation could be made of existing European platforms to allow for the discussion and sharing of views in order to reach a common approach.

**For tackling global challenges, notably in this case developing clean technologies and solutions, there needs not only to be an understanding of what is happening outside of Europe, but also strengthened cooperation on an international level.**

### Daniel Cios - Policy Officer, Energy Intensive Industries and Raw Materials, DG GROW, European Commission

The recently published Draghi report provides vitally important feedback into the thinking at a Commission level. Speaking directly from the perspective of a Directorate-General (DG) dealing with industrial policy, the report particularly highlights the difficult landscape in Europe for newcomers and junior companies to perform investments.

**Policy-focused solutions to support scaling up exist in the form of the Net-Zero Industry Act and the Critical Raw Materials Act, as well as the newly announced, upcoming Clean Industrial Deal and Competitiveness Fund.**

Access to funding can be characterised as one of the most critical obstacles to rapidly accelerating the scale-up European low-carbon energy technologies. Furthermore, many of the technologies are there, but the market for them is currently missing.

When competing globally, the EU innovation landscape has the unique advantage of accessibility among 27 countries, all with many leading universities, research institutes and companies. This provides huge potential for Europe that others outside the Union do not possess, namely in creating expansive joint research projects to bring together different perspectives and inputs for tackling the continent's most pressing challenges.

### Fabrice Stassin - Secretary General, BEPA

On an industry level, talent and skills shortages is a significant challenge in the deployment of low-carbon energy technology, alongside EU and national policy alignment.

For fostering more effective alignment on a policy level, more communication between European Commission DGs is needed. This is also important at a member state level, to avoid internal competition and ensure greater coordination. It is also critical for industry and research stakeholders to organise between themselves in offering key insights and sources of information to the EU institutions.

Europe holds a key competitive advantage thanks to its strong research and development community, one that is intellectually productive and highly collaborative. To compete globally, the EU must use its current resources in the best way possible, however for optimal efficiency, more financial resources are imperative.

**Research and development is the source of competitiveness. Despite this, it seems that research is consistently used as a bargaining tool when it comes to spending cuts, rather than an essential investment for the future.**

On the principle of accountability, a dimension of sustainability must be incorporated. It must be remembered that being competitive should not be at the cost of negative social and environmental consequences.

“ We need to find a balance between competitiveness and sustainability, and maybe this could be part of the key success ingredient for Europe. ”

Fabrice Stassin - Secretary General, BEPA



### Benedetta Scuderi - MEP, Greens/EFA

On the EU level, a problem of implementation exists. Building on this, the Union is not only hindered by a lack of policy alignment, but also a lack of market alignment. Overcoming this requires greater EU integration, particularly aiming towards just one systemic energy system to be powered by many energy sources.

Although investment is one of the most pressing issues for scaling up European low-carbon energy technologies, it is also the most solvable one. What investors need is both clarity and predictability.

**Europe is lacking a vision and a strategy. Bolder actions are essential. Going forward, it is crucial to understand the energy system, industry and market needed to power Europe's future.**

Efforts towards achieving the clean energy transition need to be aligned, notably involving all relevant stakeholders as it progresses.

## Concluding Remarks

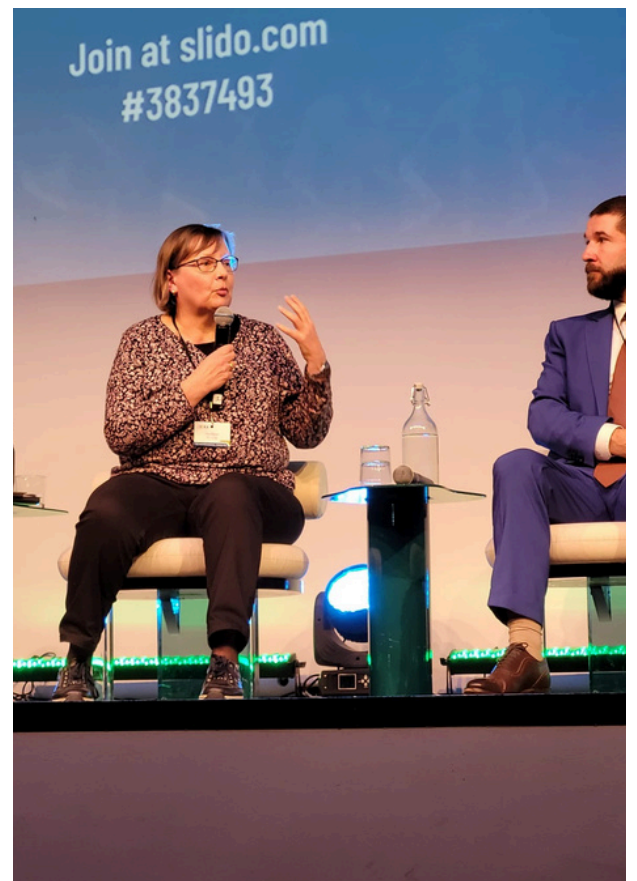
### Henk-Jan Vink - President, EERA

The engaging and nuanced discussions of this year's EERA High-Level Policy Conference served to foster greater understanding and awareness of the opportunities, challenges, and next steps needed to secure both short and long-term competitiveness for Europe.

Most importantly, a competitive Europe in the low-carbon energy field cannot be achieved without ensuring a strong research and innovation landscape.

“ We cannot afford to not invest in key technologies that will be the future of our world. ”

Henk-Jan Vink - President, EERA



**Panel discussion 2: Low-carbon energy R&I meets the industrial ecosystem: addressing bottlenecks, sharing success stories, and paving the way forward**

