



Hydrogen Europe
Research

Policy Working Group

30 January 2024

Agenda

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- Call for evidence on joint European degrees, quality assurance & researchers' careers

3. Latest updates on EU institutions' activities

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4. Data, reports, opportunities



▶ HER Activities

Call for evidence on joint European degrees, quality assurance & researchers' careers

Ahead of the adoption of a Communication, the European Commission has launched a [call for evidence](#) to collect stakeholders' views and suggestions on three topics:

1. Joint European degrees
2. European Quality Assurance and Recognition System
3. Better valorisation and recognition in career of academic staff



Communication
Council recommendation
Council recommendation

What are your views and experiences on:

- The **added values and difficulties linked to setting up European degrees.**
- Mechanisms for quality assurance of training at European level. Who should be in charge of such mechanisms? Could it be a role for sectoral associations such as HER?
- Do you know of good practices or policy incentives set up at national / regional levels that fostered the valorisation and recognition in career of academic staff?



Latest updates on ▶ EU institutions' activities

Belgian presidency of the EU



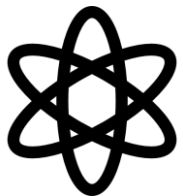
In January 2024, Belgium took the rotating presidency of the EU Council (until 30 June 2024). The detailed programme of the presidency can be retrieved [here](#).

For R&I, priorities include:



- Improving the valorisation of research results
- Exploring ways of **improving the *Horizon Europe* programme**, based on the evaluation of the Horizon 2020 programme
- Promoting international cooperation based on openness, with partners sharing common standards, guided by the principles of a level playing field and reciprocity
- Advancing R&I in the nuclear field, focusing on finding innovative solutions for highly radioactive waste and nuclear testing, as well as the ITER project.

For Energy, priorities include:



- Fostering the transition to a sustainable and cost-effective energy system (incl. grid infrastructure, **H2 import facilities** and CO₂ transport - **assessing the effectiveness of the current framework for infrastructure planning, construction and financing**)
- promoting international trade in hydrogen, potential strategy for importing H2 into the EU
- Achieving offshore energy targets & Renovation wave

Electricity market reform & Gas Package

Electricity market reform

On 14 December, the colegislators reached an [agreement](#) on the reform of the European electricity market. The overarching goal is to support the EU target of a 45% share of renewable energy by 2030, including new renewable energy auctions at EU level.

- Contracts for Difference: support to existing nuclear power plants was made possible.
- Power purchase agreements: exclusively supporting new renewable generation.
- No cap on the income of inframarginal generators in times of crisis (up to the EU Council to act on an EC proposal)

Gas package

Interinstitutional agreement reached for the gas package - [Regulation](#) & [Directive](#)

- Creation in 2024 of an independent entity for the planning of European Network of Network Operators for Hydrogen (ENNOH), which would not be fully operational until January 2027.
- Demand aggregation and group purchasing mechanism for gas that could be extended to H2.
- It will be up to each national regulatory authority to set its own tariff for H2 based on a methodology developed in consultation with neighbouring national regulatory authorities

Net Zero Industry Act & STEP fund

On 22nd January, the second round of interinstitutional negotiations on NZIA were held with little progress made. **The colegislators' positions are distant with regard to the scope of the text:** Trilogues

- EP: extended the scope to the entire supply chain (components, materials and production machinery) and are proposing a single, extended list of technologies
- Council: 2 lists one 'strategic' and one 'non-strategic'



Agreement on this is a necessary step for further negotiations as most other elements are connected to this first definition.

STEP - funding instrument of NZIA

- **Interinstitutional negotiations on 'STEP' platform are suspended** pending the outcome of the European Summit on 1 February, where the MFF mid-term revision should be discussed (and the amount to be allocated to STEP).
- Informal meeting took place on 15 January, another one is scheduled on 31 January.
- Budget wished for:
 - EC: 10B€
 - EP: 13B€
 - Council (tbd): 1,5B€

Accounting GHG emissions from transport services

‘EU count emission’ regulation sets out a common framework to calculate and report transport-related GHG emissions (both for freight and passenger sector).



EU COUNCIL

On 4 December, the Council adopted their negotiating position on the draft

- Several delegations highlighted the administrative burden resulting from the duplication of rules on calculating, verifying and reporting GHG emissions under several pieces of EU legislation.

The Council retains the approach of the initial proposal, while taking account of national contexts.

Notable changes:

- Possibility of using data verified by an accredited body, if this data is available at the same level of aggregation as that required by the regulation.
- The Councils asked the Commission for a calculation tool for so-called “output” data to ease the calculation for SMEs
- Ask for the establishment of a complete and accurate databases containing default values for emission intensity and emission factors.

Accounting GHG emissions from transport services



EUROPEAN PARLIAMENT

In the Parliament, discussions on the initiative are ongoing:

- MEPs would like to take **full life-cycle analysis into account**, as they fear not including the full LCA would favour non European products that are cheaper:

“The missing link is that we do not factor in CO₂ emissions related to production [...]. Without this element, the chain is broken” according to the rapporteur, Barbara Thaler (EPP, Austrian)

- MEPs welcomed the alignment of the European standard with the international standard **ISO 14083:2023**. They believe that **the Commission should provide free access to all operator**. The EC replied that it cannot make it available to users but will be able to provide advice to industry.

Next steps:

- 4 March 2024: Vote scheduled in the committee
- 10 April 2024: Indicative plenary sitting date

Hydrogen Bank - German Auctions launched

Following the [announcement on 20 December](#) Germany announced that it will participate in the “[Auction-as-a-Service](#)” scheme of the Innovation Fund 2023 pilot auction for renewable hydrogen production.

- €350 million available from its national budget for hydrogen production in Germany, in addition to the €800 million already foreseen for European projects from the EU Innovation Fund.
- To be funded under the Innovation Fund 2023 pilot auction.
- First country making use of the scheme.

With this instrument, **Member States can identify and support projects on their territory that passed the qualifications criteria but have not secured EU funding** without the need for a separate national auction process. Member States participate on a voluntary basis, and their funding is considered as State aid.



FP10 - Calendar

January 2024

Publication of the ex-post evaluation of the 2014 – 2020 Horizon 2020 research programme and how its €80 billion budget was spent

October 2024

Commission expert group led by former science minister of Portugal Manuel Heitor publishes its independent report on the future of European research and innovation

**By 1 July 2025
The official
Commission
proposal for FP10 is
unveiled**

June 2024

**Member states outline
their vision in the
European Research Area
and Innovation
Committee (ERAC) FP10
task force report**

Early 2025

The interim evaluation of Horizon Europe is due to be published

FP10 - Calendar

Autumn 2025 Member states start negotiations on the proposed framework programme

End of 2026 (hopefully)
A deal on FP10, leaving the Commission a year to prepare the programme

Beginning of 2026
Member states reach a deal and negotiations with the European Parliament start

2027
Heads of state and Parliament set the seven-year EU budget, including funding for FP10



2028
FP10 starts

FP10 - Evaluation

Ex-post evaluation of Horizon 2020 (2013-2020):

- 35,000 projects funded, involving 40,000 organisations
- An additional €159 billion would have been needed to finance all the high-quality proposals
- 41% of Horizon 2020 projects were still running at the time of the final evaluation, (impacts still evolving)

Ms. Iliana Ivanova, Commissioner for Research and Innovation, addressed MEPs from the ITRE committee on 23rd January:

- Committed to **keep a high research budget** - negotiations with the Council on the revision of the MFF will be difficult.
- **19 countries will be associated with Horizon Europe in 2024** (UK, continuing discussions with Switzerland; finalisation with Canada, progressing with South Korea, etc.)
- Based on the findings of the evaluation, the next FP should:
 - Be simplified, reducing administrative burden
 - Reinforce dissemination, exploitation and deployment of results
 - Widen the participation
 - Promote greater synergies between European, national and regional initiatives
- Current [white paper](#) open for feedback on integrating dual-use technologies in the next FP.

FP10 - ERC's views

On 24 January the ERC published a [statement](#) and called for being strengthened in the FP10.

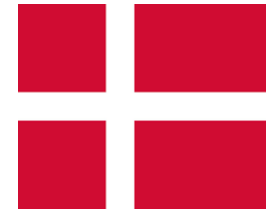
In order to be an industrial leader, the EU must also be a scientific and technological leader, and in this respect, setbacks in R&I would affect Europe's economy, competitiveness and social model, as well as its strategic autonomy and security.

Achievements:

- ERC grantees have won, among others, 14 Nobel Prizes, 6 Fields Medals, 11 Wolf Prizes.
- About 400 ERC funded researchers have founded [start-up companies](#)
- ERC researchers are also training the next generation of excellent scientists and have employed over 100,000 other researchers, mainly PhD candidates and postdocs, in their teams.

Request to double the spending for research and innovation in the next Multiannual Financial Framework (€200 billion), to retain its governance model (independence & autonomy) and procedures

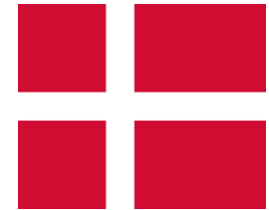
FP10 - Views from Denmark



WIDENING, MISSIONS & PARTNERSHIPS

- **“Rethink and limit” the number of partnerships in FP10.** “There is a need for fewer, stronger, thematically clearer partnerships of broad EU interest, where enhanced national and EU alignment is deemed absolutely necessary”. They find that the process of selecting partnerships is not transparent, the evaluation criteria are too broad, too many partnerships overlap, and have “severe” implementation problems.
- **Move research missions out of FP10:** Missions do not have “adequate R&I content”. “We continue to fully support the mission areas, but for missions to succeed, they should be (re)launched as **proper EU missions with their own legislative acts independent from FP10, combining R&I resources from FP10 with other funding from relevant programmes to support all the necessary activities outside the R&I domain.**”
- **Move calls for the widening programme out of FP10.**

FP10 - Views from Denmark



EIT & EIC

- The Commission should **dismantle EIT** and provide a plan for reaching financial “self-sustainability” for its “well-functioning” knowledge and innovation communities (KICs). Calling for EIT to go based on “on close consultation with stakeholders that find it **increasingly difficult to identify added value** and have chosen to opt out of this instrument”.
- The paper argues that the **KICs include education elements clearly overlapping with Erasmus+**, and that certain EIC projects overlap with the KICs. “Outfacing the EIT would constitute a major streamlining initiative by the EU and the EIT budget could strengthen the EIC.”
- **The EIC “must be continued and strengthened” in FP10.**

EIC 2024 Work programme

On 12 December the European Commission announced that it had adopted the **2024 work programme of the European Innovation Council (EIC)**, with a budget of + €1,2 billion.

Target audience: highly innovative SMEs and start-ups, particularly in strategic technologies.

- €256 million funding ***EIC Pathfinder*** grants dedicated to multidisciplinary research teams wishing to test a visionary idea.
- €94 million funding ***EIC Transition programme***, which is aimed at project leaders wishing to transform research results into innovation opportunities.
- €675 million funding ***EIC Accelerator*** for start-ups and SMEs wishing to develop and scale up innovations with the potential to create new markets or stimulate existing ones.

Member States on Research & Innovation at EU level

On 8th December, adoption by the EU council of **conclusions** on strengthening the role and impact of research and innovation in the EU's policy-making process:

- Improving policymaking by including scientific evidence and knowledge in the regulatory process
- Highlighting the importance of the regional R&I ecosystems (synergies between cohesion policy and R&I funds)
- Referring to the policy impact of the Recovery and Resilience Facility

On 29th December, the Council **recommendations** on how to keep, attract and retain research, innovation and entrepreneurial talents in Europe:

- Improving researchers' overall working conditions and environment, ensuring a work-life balance, and countering precarity
- Promoting adequate social protection measures, with a particular focus on early-career researchers
- Fostering inter-sectoral mobility and a real flow of talents among sectors by equipping researchers with transversal skills, in addition to strong research skills and contributing to addressing the market demand for highly-skilled talents
- Addressing persisting inequalities in research careers and market challenges

COP28



COP28 - Framework Convention on Climate Change

- The parties “call” for “*a transition away from fossil fuels in energy systems, in a fair, orderly and equitable way, accelerating climate action in this critical decade, so as to achieve climate neutrality by 2050*”.
 - No precise and binding timetable for phasing out oil, coal and gas.
 - The wording of the final agreement is less ambitious than that proposed by the EU - concerns that the call to abandon fossil fuels was limited to the energy sector, without addressing the issues of plastics and fertilisers.
 - Focus on phasing out of “inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible”

Other news

- **Critical Raw Materials** - The EU wants to sign a memorandum of understanding with Uzbekistan on raw materials - authorization granted to the EC by EU member states. The EU already has negotiated agreement on CRM with countries such as Argentina, Canada, Kazakhstan.
- **EU-Japan Centre for Industrial Cooperation launches business-to-business platform for ecological transition** - It aims to bring together research and innovation players, such as research bodies, companies and *start-ups* from Japan and Europe, to work in partnership to contribute to a low-carbon society.
- **European Court of Auditors recommends developing a strategic approach to biofuels beyond 2030**
- ***Energy Storage Coalition* encourages Member States to tackle energy storage barriers in their energy and climate plans and provides recommendations on how to overcome the barriers**

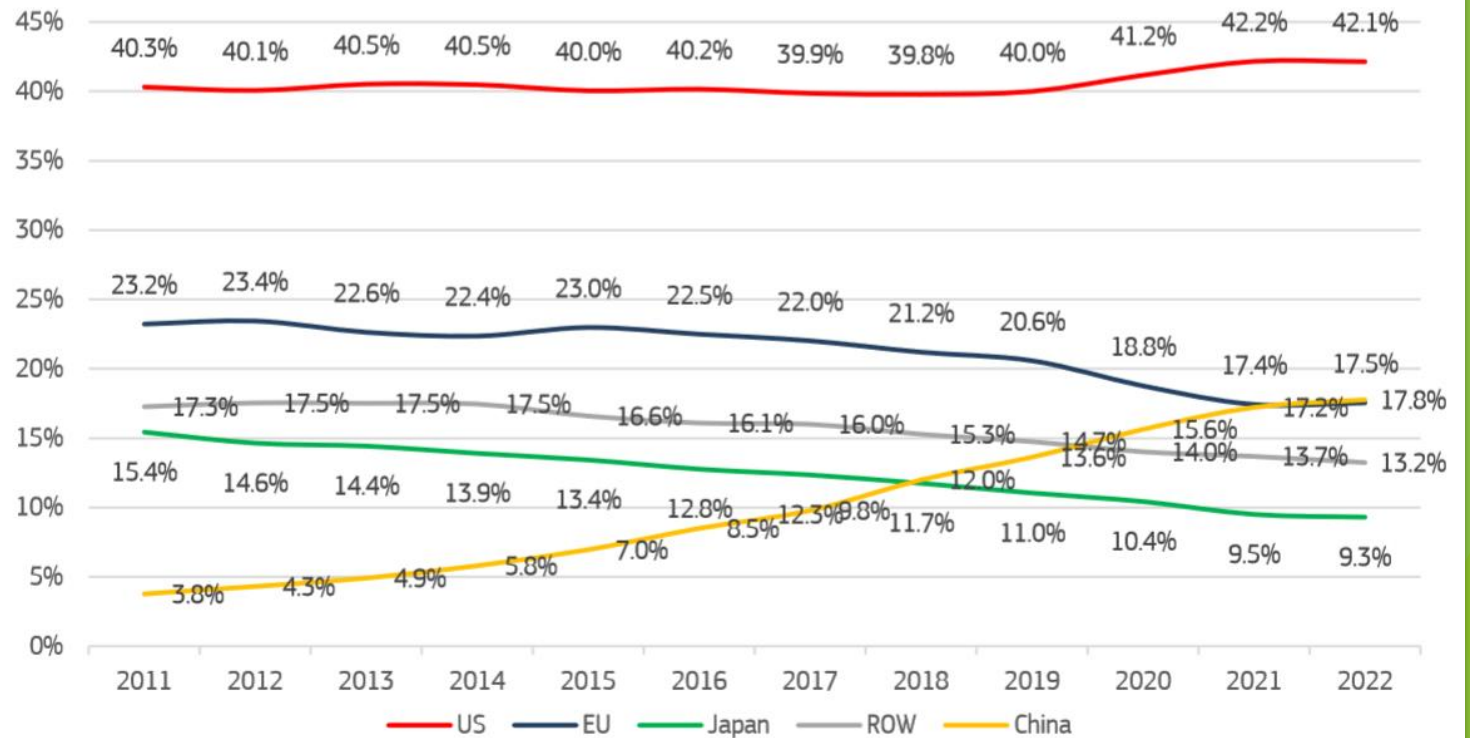


▶ Reports, studies

Reports - European Commission

On 14 December, the European Commission published the [2023 EU Industrial Research and Development \(R&D\) Investment Scoreboard](#). The document lists and analyses the top 2,500 global companies and the top 1,000 EU-based companies with the highest R&D investment in 2022.

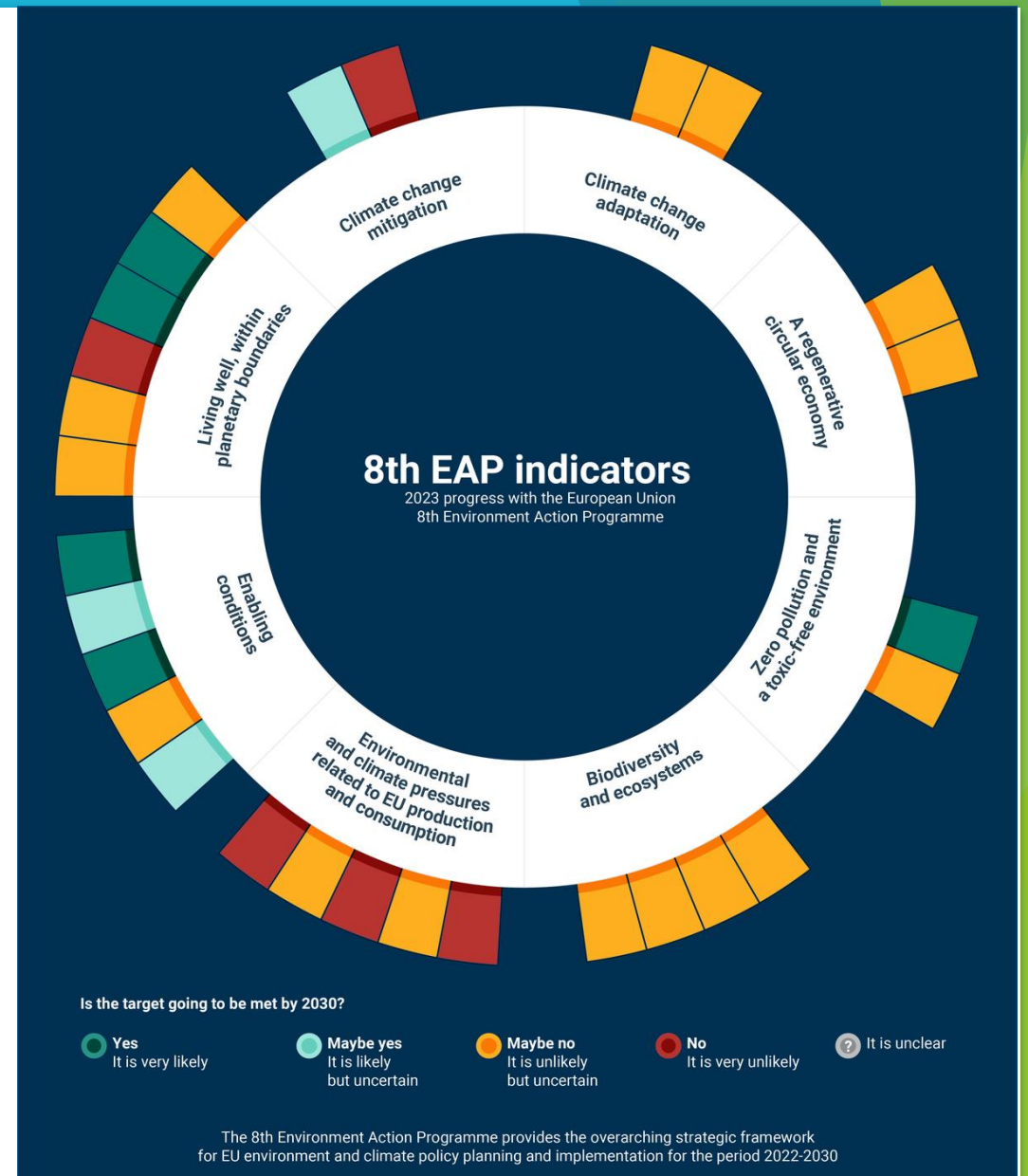
Figure 12. R&D investment shares by region/country, 2012-2022



Note: Figures show the share of total nominal R&D investment per year and region, calculated at 2022 exchange rates to the euro.
Source: *The 2023 EU Industrial R&D Investment Scoreboard*, European Commission, JRC/DG R&I.

Reports - EEA

The European Environment Agency highlights progress in reducing GHG emissions, while calling for targeted action to achieve global sustainability by 2030 - to read the [Monitoring report on progress towards the 8th EAP objectives 2023 edition](#).



Reports - IEA

In an interview with the German newspaper on 23 January, Fatih Birol, Director of the IEA, stated that only 7% of world's hydrogen projects will be completed by 2030, and that the costs will remain very high - wanted to warn against excessive expectations.

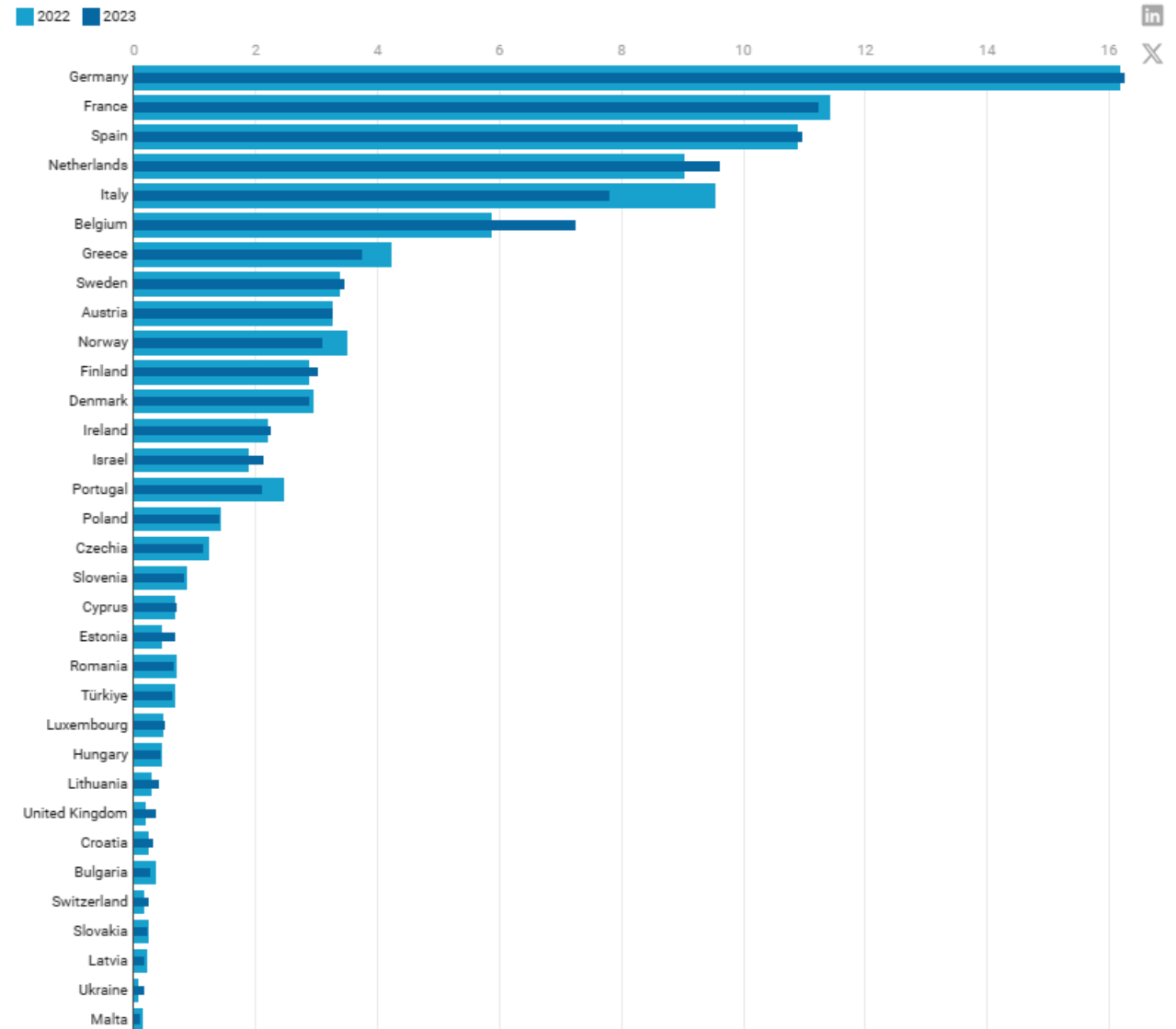
In its [electricity market report](#), the IEA announced that global electricity demand is expected to grow faster over the next three years as the transition to clean energy accelerates.

- Global emissions from electricity generation are expected to fall by 2.4% in 2024, followed by smaller reductions in 2025 and 2026.
- In the EU, electricity demand fell in 2023 for the second year running, reaching levels last seen twenty years ago.
- A return to 2021 levels is expected by 2026 at the earliest, driven by electric vehicles, heat pumps and data centres.

Reports - Science Business

The next slides present publicly accessible data from the European Commission analysed by Science Business.

Percentage of Horizon Europe money won



Reports - Science Business

Only considering universities - excluding research networks and institutes.

Belgian, Dutch, Danish, Italian and Irish universities feature prominently in the top 20 recipients

Biggest university winners of Horizon Europe money in 2023

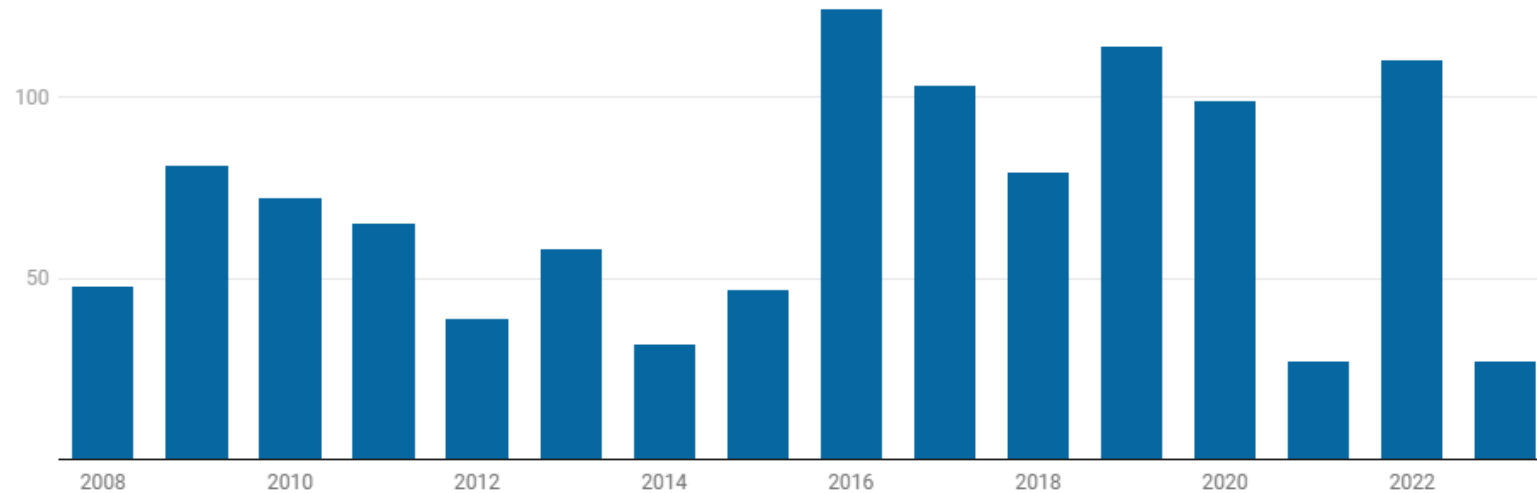
KU Leuven	€ 90.951.381,68
University of Copenhagen	€ 90.067.826,55
University of Gent	€ 75.009.823,03
TU Delft	€ 70.156.839,08
Lund University	€ 63.392.843,49
Technical University of Munich	€ 60.325.413,09
University of Utrecht	€ 60.287.571,94
Technical University of Denmark	€ 59.737.548,04
Tel Aviv University	€ 52.916.595,79
The Hebrew University of Jerusalem	€ 47.707.358,04
Polytechnic University of Milan	€ 46.864.939,17
University of Helsinki	€ 46.029.786,99
Aarhus University	€ 44.315.354,59
University of Bologna	€ 41.127.542,30
Leiden University	€ 40.814.220,42
University of Oslo	€ 40.339.886,03
Norwegian University of Science and Technology	€ 39.692.756,11
University College Dublin	€ 38.861.572,83
University of Twente	€ 37.196.258,08
Vrije University Brussels	€ 36.981.919,89
Trinity College Dublin	€ 36.876.437,79

Source: [European Commission](#) - Created with [Datawrapper](#)

Source: Science Business

Reports

Chinese participations in FP7, Horizon 2020 and Horizon Europe



Source: European Commission - Get the data - Created with Datawrapper

Source: Science Business

- 27 instances of Chinese institutions participating in projects that signed grants in 2023 - Lower than at any time during the last three framework programmes.
- This drop-off coincides with sharpening rhetoric from the Commission towards China and concern over an unequal scientific relationship; (March 2023, Commission president Ursula von der Leyen **warned** that the EU must make sure its technologies do not fall into the hands of the Chinese military)
- The EU has prohibited China from joining in close-to-market Innovation Actions.



**Hydrogen Europe
Research**

Thank you!

The slides can be retrieved on the intranet after the meeting.