January 2024

EERA
European Energy Research Alliance
Smart Grids

NEWSLETTER

Joint Programme on Smart Grids (JP SG)

EU POLICY UPDATE

European Commission proposes Action Plan to boost the roll-out of electricity grids

To support the delivery of the European Green Deal, **the Commission proposed an Action Plan on 28 November to ensure that European electricity grids function more efficiently and are deployed further and faster in the future.** This Action Plan aims to address the most critical challenges associated with the expansion, digitalisation, and enhanced utilization of EU electricity transmission and distribution grids. It identifies a series of concrete and customized actions to unlock the required investment, standing at €584 billion, needed to bring European electricity grids up to speed. Key actions include accelerating the implementation of Projects of Common Interest and developing new projects; improving the long-term planning of grids to accommodate more renewables and electrified demand in the Tenergy system; introducing regulatory incentives; boosting better usage of the grids with enhanced transparency and improved network tariffs; improving access to finance for grid projects by increasing visibility on opportunities for EU funding; stimulating faster permitting for grid deployment; and improving and securing grid supply chains.

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IN THIS NUMBER

EU Policy update(p.1)

International Policy update(p.5)

News & Opportunities (p.7)

For your agendas (p.8)

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Critical Raw Material Act: the Council and the European Parliament reached a provisional deal

After less than two months of negotiations among the European Commission, the European Parliament, and the Council of the European Union, an agreement was reached on the Critical Raw Materials Act (CRMA). Introduced in March 2023 alongside the Electricity Market Design (EMD) reform and the Net-Zero Industry Act (NZIA) as part of the Green Deal Industrial Plan (GDIP), the CRMA aims to secure the EU's critical raw material supply and reduce dependencies on countries like China. The European Commission's proposal created a new subcategory of Critical Raw Materials (CRMs), the so-called 'Strategic Raw Materials,' a list of 16 elements vital for key industries of the future and essential to the EU's net-zero ambitions. The text aimed for the EU to extract 10%, recycle 15% and process 40% of its annual SRM needs by 2030, with no single country providing more than 65% of any of those. The agreement, while similar in essence, differs from the original proposal on notable points. Although the target is not legally binding, **the EU now aims to recycle at least 25% of its annual consumption of SRMs, up from 15%.** Additionally, aluminium has been added to the list of SRMs, bringing it to 17. The text received formal approval by the Parliament on December 12, and now azaits the formal endorsment of the Council, before publication in the Official Journal.

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Member states gear up for 2040 climate target talks

The European Commission is set to unveil its proposed climate target for 2040 on 6 February. While the bloc is committed to reducing carbon emissions by 55% compared to 1990 levels by 2030 and achieving net-zero emissions by 2050, this intermediary target is considered the “legacy” of the EU policymakers currently in charge, and it will undoubtedly shape the direction of climate and energy initiatives for the incoming College of Commissioners and the European Parliament, both taking office in the second half of the year.

Early discussions and statements by Commissioners Hoekstra and Šefčovič have suggested a target of a 90% reduction, aligning with recommendations from the scientific community and environmental groups. However, the European Commission’s proposal will undergo the ordinary legislative procedure, with the European Parliament and the Council of the EU expected to provide input and negotiate a compromise.

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European Scientific Advisory Board on Climate Change: EU not on track to reach climate neutrality goals

The European Scientific Advisory Board on Climate Change, a panel of 15 climate experts providing the EU with scientific knowledge and advice on climate change, published a report on 18 January detailing the **insufficient progress of the EU towards reaching its climate neutrality goals**. Of particular interest to the EERA community, the report calls for EU policies to play a greater role in incentivising energy and material demand reduction: a policy recommendation that strongly resonates with the findings of EERA’s report on Energy Demand Reduction published in late 2023. Moreover, on greenhouse gas emissions, the report emphasises the need to double the current rate of reduction to achieve at least a 55% cut in emissions by 2030 compared to 1990 levels.

Read more here

EU Net-Zero Industry Act edges closer to finishing line

The EU is working towards driving forward the Net Zero Industry Act, with rising optimism that an agreement will be secured in the coming weeks. The negotiations between the European Parliament and the Council of the EU, which commenced in December, will continue with two upcoming rounds of talks on the 22 January and 6 February. Regarding the negotiations at present, the Parliament and Council are close to settling a deal on the Parliament's recommendation, which was not present in the initial Commission proposal, to give member states the opportunity to nominate certain geographical regions as 'net zero industry valleys.' This initiative aims to establish clusters and advance the alignment of administrative processes in the development of domestic green technologies. Another area of harmonious views between the two negotiators relates to the inclusion of nuclear energy and carbon capture and storage on the list of technologies benefiting from the Act. However, the wider scope of the full list of technologies is expected to face extensive debate. Moreover, further contentious points persist, among them the issue of obliging authorities to include sustainability and resilience criteria in public procurement and renewable energy auctions due to their potential to place constraints on member states' own decision-making.

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Norway greenlights deep-sea mining amid mounting criticism across Europe

On 9 January, **Norwegian MPs voted in the national parliament to authorize deep-sea mining exploration around the Arctic Archipelago of Svalbard**. The Norwegian government sees this move as a means to enhance access to raw materials crucial for developing technologies in the green transition. These materials include copper, manganese, cobalt, and lithium, all designated as strategic raw materials in the recently passed EU Critical Raw Materials Act. Reducing dependence on external mineral supply chains is increasingly a central priority for Europe. However, environmental groups opposing deep-sea mining have warned that this decision could have irreversible effects on the ocean's ecosystem. Moreover, countries such as France and the UK have criticised Norway's stance on deep-sea mining. Approximately 100 MEPs advocated to their Norwegian counterparts to reject the proposal last November, while the European Commission has also raised concerns regarding the potential environmental impact of the move.

Read more here

European Commission awards €172 million to Horizon Europe projects in support of EU's energy independence

The European Commission has announced a €172 million investment through Horizon Europe towards 13 projects that will actively contribute to the EU's energy independence goals. The central focus of these projects is on the key objectives of the RePowerEU plan, launched by the European Commission in May 2022, in supporting affordable European energy, ensuring security of supply, and reducing European dependence on Russian fossil fuel imports in advance of 2030. Followings calls in March and April of 2023, the selected projects fall under Horizon Europe Cluster 5 (Climate, Energy and Mobility) and incorporate three broad themes including sustainable, secure and competitive energy supply; efficient, sustainable and inclusive energy use; and clean and competitive solutions for all transport modes.

Read more here

France and the Czech Republic join forces to promote nuclear power

In a joint press conference on 9 January, **France and the Czech Republic renewed calls for nuclear power to be positioned on equal terms with renewable energies across the EU policy portfolio**. This comes one year after the inauguration of the French-led "Nuclear Alliance," which has worked towards securing nuclear power on the EU's strategic list of net-zero technologies, along with acting as the driving force behind the Commission's upcoming industry alliance on small nuclear reactors. Speaking at the conference, French Energy Minister Agnès Pannier-Runacher emphasised the need to further develop nuclear power in order to decrease both European dependence on fossil fuels and overall CO2 emissions. This sentiment was boosted by Czechia's Energy Minister Jozef Síkela, who asserted that nuclear plays a key role in advancing decarbonisation measures across Europe. However, nuclear technology has faced much opposition in Brussels due to the associated environmental and safety risks. In 2022, although nuclear power plants made up almost 22% of EU electricity production, the 13 nuclear electricity-producing member states generated 16.7% less nuclear electricity compared to 2021. This can be principally attributed to both reactor maintenance and repairs in France, who continue to be the largest nuclear power producing country in the EU.

Read more here

2023 SET Plan Progress Report underscores EERA's key role in coordinating research initiatives for the clean energy transition

The primary goal of the 2023 SET Plan Progress Report is to offer a concise overview of the SET Plan landscape, examining its actors and their core activities. The document introduces a new section on key stakeholder inputs, spotlighting the contributions of the European Energy Research Alliance (EERA) and the European Technology & Innovation Platforms (ETIPs). **Specifically focusing on EERA, the report highlights its achievements in implementing the 10 SET Plan key actions for the EU energy system transformation and its assessment of cross-cutting issues within the SET Plan Implementation Working Groups (IWGs). EERA is also credited for its crucial role in aligning funding priorities and shaping the Strategic Research and Innovation Agendas (SRIAs) of key European Partnerships.**

Read the recently published SET Plan Progress Report 2023

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INTERNATIONAL POLICY UPDATE

COP28: EERA's first year as Observer Organisation saw a conference filled with key advancements and lingering controversies

As COP28 has come to a close, the final text has sparked a range of opinions. While the climate community has welcomed the inclusion of the term 'fossil fuels,' there is a prevailing sentiment that this step alone falls short of achieving the crucial goal of keeping the 1.5-degree target within reach. But it also serves as a glimmer of hope.

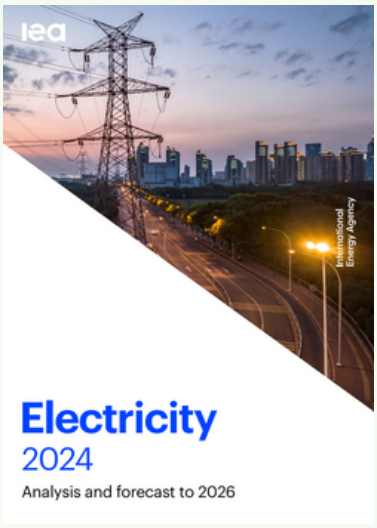
As is often the case, the final negotiations extended beyond their originally scheduled duration, but it is important to acknowledge the immense complexity of reaching a consensus among 200 countries on such a contentious issue. Fingers cannot be pointed easily in such a case, even less when at least 2,456 people affiliated with oil and gas industries were given access to COP28 talks, signifying a record number of fossil fuel lobbyists in attendance, which served to further heighten concerns about the impact of the fossil fuel industry on this year's conference.

Now, **the next crucial phase will be the translation of these agreements into actions**, particularly in the form of upgraded and ambitious national climate plans and policies.

This COP marked several firsts. **It was also the first one for EERA as an officially admitted observer organisation, with Secretary General Adel El Gammal in attendance in Dubai.** In this context, he participated as a speaker in several events, among which a high-level European Commission side event on a topic of vital importance to EERA - Critical Raw Materials, which also served as a crowning moment for the work the community carried out this year on the topic.

Read more here

Latest IEA electricity report published



Global electricity demand is set to surge over the next three years, driven by the clean energy transition, as per the IEA's Electricity 2024 report. Anticipating a 3.4% average growth from 2024 to 2026, the report notes 85% of the increase will be from emerging economies, notably China, India, and Southeast Asia. Low-emission sources, including renewables and nuclear power, are expected to cover the additional demand, making up nearly half of the world's electricity generation by 2026. Renewables are forecast to surpass coal in comprising one-third of total electricity generation by early 2025. The report highlights a structural decline in the power sector's CO2 emissions, predicting a 2.4% decrease in 2024, with further declines in 2025 and 2026. Electricity prices varied globally in 2023, with Europe experiencing a decline, while the United States saw a 15% increase compared to 2019. Despite declining demand in the European Union, emerging economies, particularly in Asia, are expected to experience robust growth in electricity demand through 2026, with China leading the way.

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Latest issue of IEA renewables market report published

The International Energy Agency's (IEA's) latest Renewables Market Report shows a **rapid expansion in global renewable electricity capacity, the fastest in three decades, positioning it to potentially triple by 2030**. In 2023, the addition of renewable energy capacity grew by 50%, reaching about 510 GW. Solar PV dominated these additions, contributing three-quarters globally. China led the surge, commissioning as much solar PV in 2023 as the entire world did in 2022, and its wind power capacity grew by 66% year-on-year. Record increases were also seen in Europe, the USA, and Brazil. This report is the first detailed assessment since COP28, indicating that tripling the 2022 global renewable capacity by 2030 would result in 11,000 GW, in line with the IEA's Net Zero Emissions by 2050 Scenario. Under current policies, global renewable capacity is expected to reach 7,300 GW by 2028, significantly contributing to new power capacity but falling short of the 2030 tripling goal.

Read more here

IEA: Oil Demand in 2024 will grow higher than was previously forecasted

In its latest Oil Market Report, **the International Energy Agency (IEA) forecasts a higher oil demand in 2024**, projecting a global increase of 1.24 million barrels per day, up from the earlier 1.1 million. Global supply is expected to hit a record 103.5 million barrels per day, with significant contributions from the U.S., Guyana, and Brazil, despite their leaders' commitments to reduce fossil fuel reliance. Oil demand is still growing but the speed of this growth has been decreasing. The IEA anticipates a decrease in annual growth from last year's 2.3 million to 1.2 million barrels, influenced by factors like electric vehicle adoption and fewer pandemic restrictions. In contrast, OPEC+ predicts stronger demand growth of 2.2 million barrels daily in 2024 and 1.8 million in 2025. Additionally, Middle East tensions, especially Houthi attacks in the Red Sea, pose potential market disruptions. These have not yet impacted oil and LNG production but have led to longer shipping routes, notably around the Cape of Good Hope, adding substantial delays.

Read more here

20 industrial clusters from 10 countries across the globe commit to reach net zero

In Geneva, **20 industrial clusters from 10 countries across four continents, including China, France, and the United States, have committed to achieving net zero emissions as part of the World Economic Forum's Transitioning Industrial Clusters initiative.** Launched at COP26 in 2021, in collaboration with Accenture and the Electric Power Research Institute (EPRI), this initiative aims to support industrial clusters in their net-zero journey. All signatories have pledged to improve governance and reduce carbon footprints, with a combined potential to cut 626 million tonnes of CO2e emissions, equivalent to Australia's annual output. These clusters contribute USD 362 billion to GDP and sustain 3.5 million jobs. Accenture's Miguel Torreira highlights the challenge of reducing industrial emissions, stressing the importance of shared infrastructure and resources among clusters for technological advancements and competitiveness in a net-zero future.

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NEWS & OPPOTUNITIES

EERA Flagship report on energy demand reduction

The **Flagship report on Energy Demand Reduction** was launched during the EERA High Level Policy Conference which took place on October 17 in Brussels. Download **here** the relevant **infographic** with key messages. Watch **here** the **key takeaways video** in which EERA's Clean Energy Transition Expert and lead author Ganna Gladkykh speaks on the distinctive and timely nature of this report in gathering key perspectives from different disciplines within the research community, including social sciences which, although of crucial importance, are not yet common for this CET field.

EERA Critical Raw Materials Policy Analysis

The **Critical Raw Materials Policy Analysis** was launched during the EERA High Level Policy Conference which took place on October 17 in Brussels. Download **here** the relevant **infographic** with key messages.

EERA Vision Paper on Energy System Modelling

EERA recently published a **Vision Paper for a more collaborative Energy System Modelling.** Click here to learn on the main highlights or click here to download the full paper.

Call for abstracts

A **call for abstract** is open for oral and poster presentations at the **IX Symposium on Hydrogen, Fuel Cells and Advanced Batteries**, that will take place in **Milazzo** (Italy) from **30 June to 3 July 2024** - Deadline for abstracts submission is 15th February 2024. More information here.

EERA ExCo elections

During the next EERA General Assembly which will take place on 14th May 2024, the new **EERA Excecutive Committee (ExCo) will be elected**. All representatives of Full Members are eligible for membership in the ExCo. A **Call for applications** is open until 11 March 2024.

January 2024

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FOR YOUR AGENDAS

1 February 2024

EERA JP Smart Grids: online meeting of SP1 "Technologies and tools for the management of future power systems"
JP Smart Grids closed door meeting

15 February 2024

EERA JP Smart Grids: 2-hours online Steering Committee meeting from 14.00 to 16.00 (CET).
JP Smart Grids closed door meeting

20-21 March 2024

European Research and Innovation Days (R&I Days) 2024

23-24 April 2024

EERA JP Smart Grids: in presence Steering Committee meeting, field visit and workshop (2 days event) at DTU Risø Campus (Denmark).
JP Smart Grids closed door meeting

14-15 May 2024

EERA General Assembly and Annual Strategy Meeting - Brussels.
Only-EERA members event

11-13 June 2024

European Sustainable Energy Week

18-21 June 2024

EM-Power Europe

30 June-3 July 2024

IX Symposium on Hydrogen, Fuel Cells and Advanced Batteries