



**Hydrogen Europe
Research**

Policy Working Group

11 October 2022

Agenda

1. Welcome & Approval of the agenda
2. Updates on activities
 - CountEU Emissions to be submitted
 - Open consultations - participation to be discussed
3. Latest updates on EU institutions' activities
 - European Act for Critical Raw Materials and related consultation
 - Views on hydrogen regulations
 - Energy situation in the EU
 - Transport Committee activities
 - New IPCEI on hydrogen
4. Reports and Studies
 - IEA - Global Hydrogen Review 2022
 - Others



Updates on

- ▶ activities

Answer to the CountEU Emissions consultation

Consultation on the upcoming legislative initiative - Count your transport emissions.

- Changes discussed on the consultation text were included.
- Other additions:
 - Speaking of transport and logistics emissions (storage, cooling, loading/unloading, consignment, etc.)
 - "Cleaner" instead of "greener"
 - Calling for a comprehensive tool encompassing the several aspects of environmental sustainability, beyond GHG emissions (question 26)

To be submitted after the meeting and the supporting paper will be uploaded on our website.

Open consultations / call for evidence

- **Call for evidence on EU energy policy - revamping the Strategic Energy Technology Plan - closing on 2/11 ([here](#))**

Foreseen revision of the SET Plan to fit the new political context.

Action considered: give our opinion on the existing SET Plan and how to improve it through a short paper. Any expertise on the SET Plan and opinion on what should be included?

- **Consultation on new rules on environmental impact of photovoltaics - closing 16/12, [here](#)**
Action considered: No Hydrogen Europe Research answer foreseen, but for your information.

- **Consultation on the critical raw materials act ([here](#)) - closing on 24/11 [See next slide more details]**

Action considered: reply to the consultation and highlight in a position paper the challenges on CRM for the hydrogen value chain.



Latest updates on ▶ EU institutions' activities

European Act for Critical Raw Materials



On 29 September, France and Germany presented a joint paper at the Competitiveness Council highlighting 3 pillars:

1. To strengthen crisis management of critical raw material supplies (criticised for the risk of duplication with the Single Market Emergency Instrument);
2. To verify and evaluate existing financing instruments to support the necessary investments in raw materials and critical metals production projects inside and outside the EU;
3. To ensure a sustainable market framework based on fair trade.

Furthermore, France and Germany:

- called for updating the 2020 action plan on raw materials;
- consider the creation of an IPCEI for raw materials (asking for the extension of the eligibility period);
- propose to include commodities in the scope of the sustainable finance taxonomy
- suggest the creation of a sovereign public/private investment fund combining equity, loans and guarantees, to invest in the mining sector, refinery activities, primary processing and recycling.

The European Commission's proposal is expected in Q1 2023, a consultation is opened.

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I don't know / no opinion
a. The potential to extract critical raw materials from primary sources in the EU is currently underexploited.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. The EU's processing and refining capacities for critical raw materials are currently insufficient.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. The potential to re-use or recycle critical raw materials from waste is currently underexploited in the EU.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. The potential to diversify the EU's external supply of critical raw materials is currently underexploited.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. The potential to substitute critical raw materials is currently underexploited in the EU.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. The potential to increase efficiency of critical raw materials use is currently underexploited in the EU.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Industry is not able to tackle critical raw materials sourcing challenges on the global market without further EU policy intervention.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Current EU policies on critical raw materials are insufficient to effectively manage supply chain disruptions, shortages and price hikes.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

GENERAL CHALLENGES

For which waste stream(s):

- the potential to re-use or recycle critical raw materials from waste is currently underexploited in the EU
- the potential to substitute critical raw materials is currently underexploited in the EU.
- the potential to increase the efficiency of critical material use is currently underexploited in the EU.

Consultation Critical Raw Materials Act

REASONS FOR SUPPLY CHAIN DISTURBANCES

What are the underlying reasons for supply chains disturbances and supply constraints of raw materials?

- Insufficient global production.
- Increased geopolitical tensions.
- Market manipulation.
- Volatile trading conditions.
- Untransparent market mechanisms.
- Other.

NEW POLICY OPTIONS

To what extent do you agree that the following policy options could help strengthen the EU critical raw materials value chain?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I do not know / No opinion
a. A specific list of raw materials of strategic importance for the EU (and thus deserving priority attention) to guide investment decisions of companies and financial institutions.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. A specific list of raw materials of strategic importance for the EU (and thus deserving priority attention) to target public support at EU and national level.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

c. Setting EU objectives for increasing domestic production capacity along different stages of the value chain (exploration, extraction, refining, recycling) to guide national and European efforts (i.e. in relation to the materials on the list mentioned under a.).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Identifying Strategic Projects across the critical raw materials value chain with strong environmental and social performance and contributing to reducing EU dependencies.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Ensuring that these Strategic Projects benefit from streamlined and quicker permitting procedures.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Ensuring that these Strategic Projects benefit from easier access to public and private finance.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Ensuring that Strategic Projects and Partnerships initiatives outside of the EU also benefit from de-risking if they comply with social and environmental standards and can contribute to securing EU supply.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CIRCULARITY

To what extent do you agree with the following statement regarding the circularity of critical raw materials projects in the EU?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I do not know / No opinion
a. EU product legislation does not sufficiently incentivize the use of secondary raw materials in products.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. EU waste legislation does not sufficiently incentivise the recovery and recycling of raw materials.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Shipments of waste containing critical raw materials between Member States are difficult, which limits possibilities for viable recycling projects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
d. Export of waste containing critical raw materials increases the shortage of critical raw materials in the EU and limits potential for circularity.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

CIRCULARITY

Would the following measures help develop the market for secondary raw materials in the EU, hence lowering the pressure on demand for primary raw materials?

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	I do not know / no opinion
a. Developing targets for waste operators related to the recycling efficiency of critical raw materials from different waste streams (electronics, vehicles, etc.).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Developing targets for waste operators related to the material recovery of critical raw materials from different waste streams (electronics, vehicles, mining waste etc.).	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Requiring Member State to design waste management plans including specific measures to promote the recovery of critical raw materials, from historical mining waste.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Setting design requirements for products containing critical raw materials to increase their ease of dismantling and recycling.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

e. Setting minimum content of recycled critical raw materials in relevant products.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Setting design requirements for products containing critical raw materials to increase the length of product life.	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Strengthening support for EU research and innovation funding on recycling and material recovery technologies for critical raw materials.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Strengthening exploration and documentation of critical raw materials in secondary deposits and waste streams.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other policy options that would facilitate the circularity of critical raw materials?

Consultation on the Critical Raw Materials Act



Other questions include:

- Challenges in monitoring supply of critical raw materials supply chains
- Challenges affecting the roll out of CRM projects (mining, refining and recycling in the EU) in the EU
- National permitting procedures for CRM projects
- Useful tools to strengthen the monitoring, risk management and governance for CRM supply chain in Europe and the data streams that should be monitored
- Storage of strategic stocks of CRM - how and at which level (industry, States, EU?)
- Facilitating access to finance for critical raw materials project
- International dimension of supply chain - partnership with third countries, etc.
- Skills - lack of a skilled workforce?
- Products containing CRM should be accompanied with:
 - information on the environmental footprint of producing those materials?
 - information on the ethical sourcing of those materials
- **Which measures would you propose to increase resource efficiency and reduce the pressure on primary raw material consumption?**
- **Which measures or techniques would contribute to lower the environmental impact of extraction?**

Views on hydrogen regulations

From the French State

On 10 September, the French Minister for Energy Transition sent a letter to the Energy Commissioner:

- Defending the place of nuclear energy in hydrogen production
- The principle of additionality "*does not apply well to countries with an electricity mix that is already largely decarbonised, where the supply of electricity from the grid must be treated on an equal footing with direct supplies through contracts with renewable sources*"
- Ask for a derogation for "*countries whose energy mix has a carbon content of less than 80gCO₂/MWh*".
- Criticizing that renewable H₂ cannot be produced with public financial support
- Call to ensure that EU requirements apply to imported hydrogen

From industry (Renewable Hydrogen Coalition and Hydrogen Europe)

- Call on adopting the Delegated Act on RFNBOs as soon as possible
- Phasing in additionality
- Applying a monthly temporal correlation for all projects
- Providing flexibility on the geographical correlation to Member States (one single zone or several bidding zones)

Energy situation in the EU

On 30 September, the Energy Ministers reach an agreement on the EU Council regulation proposed by the Commission to introduce emergency measures to mitigate soaring energy prices.

The main changes introduced are the following:

- On the €180/MWh cap for inframarginal revenues: possibility to maintain or introduce measures that further limit these revenues, “including the possibility to differentiate between technologies”, and including possible exemptions.
- On the targets for reducing electricity consumption: Member States introduced more flexibility on the reduction targets for energy consumption.
- On the temporary solidarity contribution: more flexibility on the calculation of the contribution
- On Support for SMEs: support through regulated prices is no longer limited to 80% of the consumption rate
- Specific derogations for outermost regions as well as for Cyprus and Malta.

The proposal was adopted by written procedure on Thursday 6 October.

Energy situation in the EU



- On 28 September the European Commission unveiled a new package of sanctions to Russia, including the creation of a legal basis for a cap on the international price of Russian oil and oil products in the EU.
- 15 Member States call on European Commission to put a general price cap on fossil gas through a [joint letter](#). This measure is not widely accepted (reluctance from some countries: DE, NL, EE and the Commission) but there is a broad agreement among Member States on the need to make greater use of the EU's common negotiating power to define price corridors

Transport Committee activities



Alternative fuels infrastructure

The draft report of the TRAN committee on the Alternative fuels infrastructure regulation was adopted on 3 October:

- Member States will have to present an action plan for the deployment of infrastructure by 2024.
- Hydrogen refuelling stations: the report wants to reduce the maximum distance between two stations to 100 km (150 km in the EC report).

FuelEU Maritime

The draft report of the TRAN committee on FuelEU Maritime was adopted on 3 October:

- It aims to cut maritime sector GHG emissions from ships by 2% as of 2025, 20% as of 2035 and 80% as of 2050 (Commission proposed a 13% and 75% reduction).
- Apply for ships above a gross tonnage of 5000
- 2% renewable fuels usage and use on shore in EU ports as of 2030
- Penalties that would fund the Ocean Fund

Next steps for both files:

- Vote in plenary session: 17 October
- Start of trilogues

New IPCEI on hydrogen



On 21 November the European Commission authorized a second IPCEI (important project of common European interest) entitled 'IPCEI Hy2Use'.

- Scope of the IPCEI:
 - the construction of **hydrogen-related infrastructure** (large electrolysers and transport infrastructure for the production, storage and transport of renewable and low-carbon hydrogen);
 - the development of innovative and more sustainable technologies for the **integration of hydrogen into industrial processes** in several sectors (including steel, cement and glass).
- **13 Member States** are represented (AT, BE, DK, FI, FR, GR, IT, NL, PL, SK, ES, SE) + NO
- Budget: **€5,2 billion provided by Member States, €7 billion expected in private investment**
- **29 companies and 35 projects**

Foreseen completion of the project: 2036



▶ Reports and studies

IEA - Global Hydrogen Review 2022

Some key numbers - Find the full report [here](#)

- Hydrogen demand reached 94 million tonnes (Mt) in 2021 (equivalent to 2019, pre-pandemic), drove mainly by traditional uses (refining and industry)
- Estimate: hydrogen demand could reach 115 Mt by 2030. 130Mt would be needed to meet existing climate pledges and nearly 200Mt needed to be on track for net zero emissions by 2050.
- The production of low-emission hydrogen was less than 1 Mt in 2021 (most with CCUS).
- If all projects currently in the pipeline were realised, by 2030 the production of low-emission hydrogen could reach 16-24 Mt per year, with 9-14 Mt based on electrolysis and 7-10 Mt on fossil fuels with CCUS.
- A significant portion of projects are currently at advanced planning stages, but just a few (4%) are under construction or have reached final investment decision.
- IEA analysis suggests that with today's fossil energy prices, renewable hydrogen could already compete with hydrogen from fossil fuels in many regions

Stakeholders News & Reports

- **LEGAL ACTION AGAINST THE COMMISSION OVER THE INCLUSION OF GAS AND NUCLEAR IN THE TAXONOMY.** The legal action is carried out by Greenpeace who announced it will go to European Court of Justice if the institution does not reverse its decision.
- The **2022 EUROPEAN INNOVATION SCOREBOARD** has been published
- **AVERAGE CO2 EMISSIONS FROM NEW CARS DROP OF 12% IN 2020** according to the European Environment Agency ([EEA](#))
- Germany proposed the creation of a **EUROPEAN ALLIANCE FOR TRANSFORMATION TECHNOLOGIES**. It would cover photovoltaic energy systems, power grid equipment, heat pumps and electrolyzers.



Hydrogen Europe Research

Thank you for your participation!

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