

Opinion of the European Economic and Social Committee on the communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Hydrogen Bank

(COM(2023) 156 final)

(2023/C 293/18)

Rapporteur: **Thomas KATTNIG**

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Section responsible	Transport, Energy, Infrastructure and the Information Society
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Outcome of vote (for/against/abstentions)	162/0/2

1. Conclusions and recommendations

1.1. The European Economic and Social Committee (EESC) welcomes the European Commission's idea of setting up a European Hydrogen Bank (EHB) and calls on the Commission, considering the detailed comments and recommendations set out in its opinion on the European Hydrogen Strategy, to specify the following points in greater detail or to take them into account in the design and implementation of the EHB from an economic, environmental and social policy perspective.

1.2. The EESC stresses that fossil fuels must not be subsidised with EU funds. Therefore, the 'do no harm' principle must also be applied to funds associated with the EHB: hydrogen (H₂) must be financed through EU funding only if the electricity used comes from sources that are compatible with the Taxonomy Regulation and that are considered to make a considerable contribution to decarbonisation.

1.3. EHB financing should prioritise the production of green H₂ and must be compatible with EU rules on hydrogen. The EESC believes that, in order to manage demand and availability in hard-to-electrify sectors (especially in the steel sector) in the best possible way, the EHB should serve as a demand management tool. In addition, a common procurement mechanism in sectors that are difficult to electrify should help to avoid intra-European price competition, especially during the start-up period.

1.4. The EESC opposes using (non-renewable) energy sources from Europe's electricity grids for energy-intensive electrolysis processes, thereby increasing the overall demand for energy. The EESC stresses the need to promote H₂ use in conjunction with the development of renewable energy resources and to use it only where direct electrification is not possible.

1.5. In times of multiple crises, it is essential to fully explore the potential for job creation in developing sectors. The EESC therefore calls on the Commission to carry out an analysis to identify the skills of workers in declining industries that would be useful for new jobs in the H₂ sector.

1.6. According to the REPowerEU Plan, 10 million tonnes of green H₂ should be produced in the EU by 2030. Priority should be given to accelerating the development and expansion of Europe's production capacity in order to achieve energy independence and avoid contributing to new strategic dependencies.

1.7. The EESC believes that the cost-effectiveness of the projects to be supported should not be the only factor considered when drawing up the guidelines for allocating funding from the EHB. Rather, a number of further quality criteria, including environmental and social sustainability standards, should be included.

1.8. The EESC believes that the existing EU emissions trading system (ETS) must be further strengthened; this includes effective protective measures aimed at imports (border adjustment mechanism). A predictable and less volatile price path can help create investment certainty for indispensable investments in green H₂. The Commission's top priorities should be ensuring investment security under the EU ETS, eliminating natural gas subsidies, and providing research, technology and innovation support for green H₂ production and distribution technologies.

1.9. The EESC stresses that the use of H₂ must be subject to high technical safety requirements, particularly for operational installations, and that conditions and monitoring will need to be imposed in order to identify and reduce risks.

1.10. The EESC regrets that insufficient thought has been given to the implementation of the strategy in the various sectors and calls for greater involvement of the public in this transformation process — at company and political level. Furthermore, the EESC calls on the Commission to assess the impact of the development of green H₂ on household energy costs.

1.11. The EESC recommends that the Commission clarify transition periods for industry according to sector-specific needs based on emission reduction pathways and targets. The steel, cement and chemical industries must be supported in converting their energy systems and production methods, as well as parts of the transport sector. The EESC stresses that these CO₂ emission-intensive industries may otherwise not survive the change.

1.12. The EESC believes that the EHB, in coordination with the Member States and their authorities, and with other EU funding tools and institutions, should ensure that funds are coordinated in such a way as to maximise their benefits while avoiding overfunding.

1.13. The EESC is of the opinion that the EHB should include provisions on prevailing wages, workforce development, and apprenticeships similar to the provisions in the US Inflation Reduction Act (IRA).

1.14. The EESC agrees with the idea behind the EHB that incentives must be created for the emergence of a H₂ market. The planned tightening of rules towards ownership unbundling of vertically integrated companies would stifle many municipal projects. This would hinder the H₂ ramp-up and bring locally integrated municipal utility projects to a quick end.

1.15. The EESC calls for public and municipal companies not to be disadvantaged compared to market-based companies under the EHB's funding programmes.

1.16. The EESC is of the opinion that the European energy transition can only succeed if global trade in raw materials, and especially energy, is also based on the principles of ecological and social sustainability and the promotion of renewable energy sources.

2. Background

2.1. The Communication on the EHB⁽¹⁾ sets out general ideas on the design of the EHB as a financial instrument to kick-start and promote the production and import of green H₂ in the EU, as well as public and private funding and, therefore, market and value chain creation for it. Therefore, the EHB is not a bank. The initiative sets out four pillars of the EHB that should be operational by the end of 2023. The idea is that the EHB will close the cost gap between green H₂ and fossil fuels for early projects through an auction system and a fixed price payment per kg/H₂ produced for a maximum of 10 years. A system to ensure transparency and coordination regarding availability is planned, including arrangements or agreements with third countries to acquire H₂.

2.2. The Communication lacks a clear link between EU H₂ policy and the strategic approach of open autonomy and EU industrial and competition policy. There is only limited information on the use of resources from the innovation fund, the planned reallocation of resources and the expected relationship between public and private investment. Similarly, no priorities for the production, use and distribution of green H₂ have been identified.

(1) https://energy.ec.europa.eu/system/files/2023-03/COM_2023_156_1_EN_ACT_part1_v6.pdf

2.3. With a budget of EUR 3 billion, the EHB is intended to help develop a H₂ market, reduce dependence on fossil fuels and lower greenhouse gas emissions to net zero by 2040. The investment needed to develop H₂ production has been estimated at EUR 335-471 billion ⁽²⁾, which means that most of the funding needed must come from Member States and private sources, even when taking other available EU funds in account.

2.4. In this regard, the Commission stresses that green H₂ has a key role to play in creating a smart, better integrated, optimised and secure independent energy system. Green H₂ and its value chain can play an important role in offsetting variations in renewable energy flows and supplying in a targeted way sectors which are difficult or impossible to electrify.

2.5. H₂ can be produced in a variety of ways but is often not climate-friendly, green or even climate-neutral. The decisive factor is the energy source used to produce it, e.g. there is 'brown' H₂ produced from the gasification of coal, 'grey' H₂ produced from the use of fossil energy and 'red' H₂ produced through the use of nuclear power. The production of 'blue' H₂ generates large amounts of methane (the resulting carbon dioxide is captured and stored). However, without exception, only 'green' H₂, produced through the use of surplus energy from renewable energy sources (wind, water or solar energy) ⁽³⁾, is green. In this regard, the EESC highlights its opinion TEN 718 ⁽⁴⁾, where it welcomes the Commission's clarifications regarding the definition of clean H₂. It further states, however, that, in the short and medium term, the strategy remains open to other forms of low-carbon H₂ produced using fossil fuels with carbon capture and storage (CCS), a technology which is still being deployed. Worldwide, only 1 % of the energy needs could currently be met with green H₂ — it is a very rare, scarce and therefore strategic resource.

2.6. In the proposal for a REPowerEU Plan, the Commission called for accelerating the development of H₂ technology by summer 2023 so as to create the infrastructure for producing, importing and transporting 20 million tonnes of H₂ by 2030 ⁽⁵⁾.

2.7. The InvestEU Programme aims to support public and private investment in climate-friendly technologies, including H₂ propulsion technologies. The GDIP proposes simplifying InvestEU procedures and adapting them to current needs. The Innovation Fund aims to support innovative technologies and solutions helping to decarbonise energy-intensive industries and expand the use of renewable energy and energy storage. According to the GDIP, EUR 40 billion will be provided for this purpose this decade. The EHB will provide EUR 3 billion to support the development of the EU H₂ market. Therefore, the bulk of the investment needs must be met by Member States and private investment.

2.8. According to estimates from Hydrogen Europe, EU H₂ production will create approximately 1 million new jobs, including about 150 000 highly skilled jobs.

3. General comments

Supporting green hydrogen without exception

3.1. The EESC stresses that fossil fuels must not be subsidised with EU funds. The 'do no harm' principle that is explicitly mentioned in the EU taxonomy must therefore also be applied to funds associated with the EHB. The EESC stresses that H₂ electrolysis must be financed through EU funding only if the electricity used for this purpose ⁽⁶⁾ comes from a source that is compatible with the Taxonomy Regulation and that is considered to make a considerable contribution to decarbonisation. In this respect, the EESC emphasises that green H₂, as the only option compatible with climate-neutrality objectives, must be prioritised under the EHB ⁽⁷⁾.

⁽²⁾ European Commission Staff Working Document SWD (2022)230, page 28.

⁽³⁾ *Wasserstoff-Farbenlehre* (hydrogen colour system) | SOLARIFY.

⁽⁴⁾ Opinion of the European Economic and Social Committee on 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — A hydrogen strategy for a climate-neutral Europe' (COM(2020) 301 final) (OJ C 123, 9.4.2021, p. 30)

⁽⁵⁾ COM(2022) 230 final, p. 7 and SWD(2022) 230 final, p. 26.

⁽⁶⁾ For example, if an electrolyser operator shows that it receives electricity for electrolysis directly from a newly-built renewable energy plant, or has an electricity supply contract that is activated only when wholesale market prices are negative.

⁽⁷⁾ Opinion of the European Economic and Social Committee on 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions — A hydrogen strategy for a climate-neutral Europe' (COM(2020) 301 final) (OJ C 123, 9.4.2021, p. 30).

3.2. In the long run, only the production of green H₂ should receive financial support. The EESC recommends that the first auction announced by the Commission for autumn 2023 to support the production of green H₂ be limited to so-called hard-to-electrify sectors.

3.3. At the same time, the EESC acknowledges that the use of 'blue' H₂ will be necessary pending availability in adequate quantity and at an acceptable price. To manage demand, the EHB should serve as a demand aggregation tool, providing an overview of the demand for and availability of H₂ in hard-to-electrify sectors and pooling it to make the supply price as low as possible, meaning it will function similarly to the EU Energy Platform, as suggested in the EHB Communication.

3.4. The EESC shares the view set out in the EHB Communication that a joint procurement mechanism for H₂ in hard-to-electrify sectors could help to avoid competition within Europe and instead promote joint procurement. This joint procurement could help to build the first functioning value chains for imports into the EU. The EESC notes that being in charge of both financing and coordinating will require that the EHB command considerable professional capacity in several different fields.

3.5. The EESC opposes using non-renewable energy sources from Europe's electricity grids for energy-intensive electrolysis processes, thereby increasing the overall demand for energy — instead, clear and transparent rules are needed for exclusively using surplus electricity from renewable energy sources to expand green H₂ production. The EESC stresses the need to promote H₂ use in conjunction with the development of renewable energy resources and to use it only where direct electrification is not possible.

3.6. As outlined in the Hydrogen roadmap Europe ⁽⁸⁾, the use of green H₂ is not suitable for widespread, everyday use by the end consumer, especially in the areas of private transport and heating systems.

3.7. The EESC believes that the cost-effectiveness of the projects to be supported should not be the only factor considered when drawing up the guidelines for allocating funding from the EHB. Rather, energy security, environmental sustainability, the promotion and maintenance of high-quality jobs and the urgency of the investment needs must be key criteria. In addition, ensuring competitiveness, establishing social and environmental criteria and deploying renewable energies within the supplier countries should be mandatory.

3.8. The EESC believes that the existing EU ETS must be further strengthened; this includes effective protective measures aimed at imports (border adjustment mechanism). A predictable and low-volatility price path can help create investment certainty for the required investment in green H₂. The Commission's priorities should be effectively managing volumes and ensuring investment certainty under the EU ETS, eliminating natural gas subsidies and providing research, technology and innovation funding for technologies to produce and distribute green H₂.

3.9. The EESC stresses that the development of a sectoral and application-specific H₂ economy requires the acceptance and participation of the public, whether entrepreneurs, workers or consumers. It regrets that insufficient thought has been given to the implementation of the strategy in the various sectors and calls for greater involvement of the public in this transformation process — at company and political level. Furthermore, the EESC calls on the Commission to assess the impact of the development of green H₂ on household energy costs.

3.10. The Commission has already paved the way for investment in green H₂ technology and infrastructure development by approving the IPCEI Hy2Tech. The EESC calls for coherence between EHB support measures, and existing initiatives, support programmes and IPCEI projects.

Reducing strategic dependencies

3.11. According to the REPowerEU Plan, 10 million tonnes of green H₂ should be produced in the EU by 2030. Priority should be given to accelerating the development and expansion of Europe's production capacity in order to achieve energy independence and avoid contributing to new strategic dependencies. With this in mind, sources of supply and supply

⁽⁸⁾ Clean Hydrogen Joint Undertaking (2019): Hydrogen roadmap Europe, A sustainable pathway for the European energy transition Hydrogen roadmap Europe — Publications Office of the EU.

contracts should also be diversified and European values must be taken into account when importing H₂. The geographical realities (e.g. a country's production and exporting capabilities and capacities) and the EU's strategic autonomy targets must be considered in this process. A commitment to environmental, social and economic sustainability should be part of agreements with third countries.

3.12. Furthermore, the EESC is of the opinion that import agreements for green H₂ should only be concluded if the added value also benefits national producers in the supplier countries and if the H₂ imported from third countries is only produced using surplus electricity from renewable energy. This is to the benefit of the net-zero transition of the economy in the EU and in third countries.

3.13. The EESC believes that the European energy transition can only succeed if global trade in raw materials, and especially energy, is also based on the principles of ecological and social sustainability and the promotion of renewable energy sources. EU energy and industrial policy must not hinder the countries of the global south in their own just transition and prevent them from building their own capacities in the H₂ sector. Strategic energy extractivism is detrimental to the global energy transition and thus also to the European energy transition in the long term. Instead, new approaches are needed to conclude international climate and energy cooperation agreements.

Funding and institutional implementation

3.14. The EESC believes that the EHB, in coordination with the Member States, and with other EU funding tools and institutions, should ensure that funds are coordinated in such a way as to maximise their benefits while avoiding overfunding. At the same time, to ensure the EHB's success, bureaucratic obstacles to accessing funds must be minimised, especially in light of the simplicity of the US IRA. The EESC draws attention to the need to provide an attractive and secure environment for investors in order to prevent investments from going elsewhere, attracted by favourable long-term conditions such as those offered by the US IRA.

3.15. The EESC is of the opinion that the EHB should include provisions on prevailing wages, workforce development and apprenticeships to ensure that a larger, more diverse pool of skilled workers has access to good jobs and that workers have the skills necessary to meet clean energy goals similar to the provisions in the IRA.

3.16. Since major private investment is required alongside public investment, an *ex ante* estimation is needed on the multiplier effects of the latter, based on the precise *ex post* evaluation of recent programmes' (InvestEU, IPCEIs, etc.) multiplier effects.

3.17. The EESC believes that incentives such as the development of smart grid networks, infrastructure, storage capacities and legal frameworks must be created for the emergence of a H₂ market. The planned tightening, from 2031 onwards, of rules towards ownership unbundling of vertically integrated companies — often municipal utilities — that may be active in either H₂ production or grid operation, would stifle many municipal projects. This would hinder the H₂ ramp-up and bring locally integrated municipal utility projects to a quick end.

3.18. The EESC calls for public and municipal companies not to be disadvantaged compared to market-based companies under the EHB's funding programmes.

Social dimension

3.19. In times of multiple crises, investment in future-proof jobs is essential. The EESC, therefore, stresses the importance of providing good-quality training for workers and the need to make the energy sector more attractive to young Europeans. With this goal in mind, the EU could set up centres of excellence for apprenticeships in jobs that will be needed in connection with green H₂. Coherence should be ensured here with the net-zero industry academies proposed in the Commission's GDIP. These academies should also introduce upskilling and reskilling programmes in strategic energy and production sectors such as green H₂. Furthermore, the Commission should work in close cooperation with the Member States to create standardised accreditation processes, ensure mutual recognition of qualifications and produce guidelines for education and training in the field.

3.20. In addition to these sectoral and company-specific up- and reskilling programmes, there also needs to be a broader focus in society on vocational training and further education. More must be done throughout the education system to raise awareness of the just transition and provide the necessary skills.

3.21. Fostering job creation by deploying green H₂ technology requires support for SMEs, which account for almost two thirds of European private sector jobs outside of the financial sector⁽⁹⁾. The EESC calls on the Commission to pay particular attention to supporting SMEs when designing the EHB.

3.22. The EESC also points out that, in order to become more competitive and resilient, the EU must keep control of its assets and industries, and address the issue of industrial dumping from other global regions.

Safety requirements

3.23. The EESC stresses that the use of H₂ must be subject to high technical safety requirements, particularly for operational installations, and that conditions and monitoring will need to be imposed in order to identify and reduce risks.

Brussels, 14 June 2023.

The President
of the European Economic and Social Committee
Oliver RÖPKE

⁽⁹⁾ <https://www.toutleurope.eu/actualite/les-entreprises-dans-l-union-europeenne.html>