EREF European Renewable Energies Federation

EREF input to the public consultation on the Delegated Act on Low-carbon Fuels

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EREF welcomes the European Commission's initiative to establish a robust framework for renewable gases and green hydrogen, which are crucial for achieving the EU's climate and energy targets. However, we strongly recommend not to include nuclear-derived hydrogen and fossil-based hydrogen with Carbon Capture and Storage (CCS) under the definition of "low-carbon" fuels, as this undermines the integrity of the certification of renewable gases and risks prolonging reliance on fossil fuels, contrary to the EU's long-term decarbonization goals. Europe, which needs to be green-house-gas-neutral by 2050, has no time for these costly, unsustainable and smoke-screen deviations under a so-called "low-carbon" approach.

Nuclear-derived Hydrogen

Nuclear-derived hydrogen should be especially excluded due to its incompatibility with a flexible renewable energy system and significant environmental concerns. Uranium mining, processing, and enrichment generate substantial greenhouse gas emissions, negate the 'low carbon' benefits of nuclear energy. Moreover, unresolved radioactive waste management poses significant environmental and health risks that are not adequately addressed in life cycle assessments. Including nuclear hydrogen diverts investments from renewable technologies is essential for a sustainable energy system transformation, creating policy uncertainty and hindering progress toward achieving climate goals. Furthermore, heavily subsidised nuclear derived hydrogen will be difficult to account for or even distort a fair and transparent flexibility market.

Fossil-based Hydrogen with CCS

Fossil-based hydrogen with and without CCS should also be excluded. CCS should be reserved for capturing unavoidable emissions in hard-to-abate sectors, not to extend the lifespan of fossil fuels that are neither environmentally nor economically viable. Fossil gas extraction and transport result in significant methane emissions — an often-underestimated potent greenhouse gas. Without accurate site-specific methane leakage measurements, fossil-based hydrogen cannot be reliably labelled "low-carbon". Moreover, CCS technologies, particularly when used with fossil resources, lack demonstrated reliability and scalability to positively and meaningfully contribute to emissions reduction. Relying on fossil fuels with CCS as a relevant building block diverts resources from renewable energy development and delays phasing out fossil gas, thereby contradicting EU climate goals.

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Prioritising Green Hydrogen

Studies show that the prioritisation of green hydrogen from renewable sources is better in the long term. Renewable hydrogen - due to its relative scarcity in the beginning - should be reserved for sectors where electrification is still not easily feasible, such as steel, chemicals, aviation, and maritime transport. Investing exclusively in renewables-based hydrogen supports a sustainable transformation towards a net-zero economy within planetary boundaries. Public financial support, including hydrogen bank auctions, should be accessible only to renewable hydrogen, ensuring limited financial resources support genuinely sustainable pathways.

Strengthening Emissions Accounting

Strengthening life cycle assessment methodologies to include all upstream and downstream emissions, including methane and hydrogen leakages, is crucial. Studies indicate methane leakage from upstream gas production is significantly underestimated; default values should be adjusted to reflect realistic leakage rates. Accurate emissions accounting is essential for maintaining certification integrity and promoting truly low-emission technologies.

Setting clear timelines and restrictions

To accelerate the transformation, any use of “low-carbon” fossil-derived fuels must have a definite end date, supporting a full phase-out of fossil gas as soon as possible. The EU should prevent expansion of fossil gas supply for hydrogen production, limiting it to existing sources to avoid incentivizing new fossil gas production. Carbon capture should complement emission reductions, not replace them; energy savings and renewable technologies must remain the primary focus.

Conclusion

Summarising renewables and fossil-based “low-carbon” fuels in one category is opening multiple risks of greenwashing unsustainable sources and technologies. Therefore, excluding nuclear and fossil-based hydrogen with CCS from the low-carbon fuel definition aligns with the EU’s climate and sustainability goals, upholds certification integrity, and directs investments toward technologies that genuinely support the renewable energy transition.

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