

FORTUM'S POSITION ON THE UPCOMING DELEGATED ACT ON LOW-CARBON HYDROGEN

Both renewable and low-carbon hydrogen (LCH) are vital elements of the emerging hydrogen economy and will play a significant role in the European energy transition. These fossil-free technologies will be particularly important for the decarbonisation of hard-to-abate industries. During the initial market ramp-up phase, especially LCH will be essential for various decarbonisation efforts, particularly where renewable hydrogen is not yet economically viable. The importance of LCH pathways underscores the need for the forthcoming Delegated Act (DA) specifying the methodology to certify LCH. This clarification will be crucial in enabling and facilitating the certification process within the hydrogen market and will provide the necessary certainty for investments to proceed at the anticipated pace.

Fortum supports electricity sourcing through PPA with low-carbon electricity for low-carbon electrolytic hydrogen

The definition of low-carbon hydrogen is outlined in the Directive on common rules for the internal markets in renewable and natural gases and in hydrogen (recast), specifically in Article 2(11): *Low-carbon hydrogen' means hydrogen the energy content of which is derived from non-renewable sources, which meets the greenhouse gas emission reduction threshold of 70% compared to the fossil fuel comparator for renewable fuels of non-biological origin set out in the methodology for assessing greenhouse gas emissions savings from renewable fuels of non-biological origin and from recycled carbon fuels, adopted pursuant to Article 29a(3) of Directive (EU) 2018/2001;*

Fortum supports a model for **low-carbon electrolytic hydrogen** where electricity is **sourced voluntarily through PPAs with all low-carbon electricity sources**, other than 'fully renewable' sources as defined in the existing DA for renewable fuels of non-biological origin (RFNBO). This includes electricity produced from nuclear energy. We believe a voluntary option to use PPAs offers significant advantages in predictability and robustness over the grid mix model, wherein hydrogen producers rely on the proportion of low-carbon electricity in the grid. Under the grid mix model, the low-carbon nature of the product hinges on the hourly verification of CO₂ emissions in the grid. However, when procuring electricity through PPAs, the certification process is based on Guarantees of Origin (GOs), ensuring independence from the grid's hourly verification.

To remain consistent with the methodology set for RFNBO, we consider it crucial to ensure that the **additionality exemption** for low-carbon bidding zones (<18gCO₂/MJ) is implemented similarly in the upcoming Delegated Act, and that the requirement for non-subsidised assets is removed for both existing and new assets.

Fortum recommends that the framework establishes an appropriate emission factor for nuclear electricity based on the latest studies, with upstream emissions valued between 0.2 to 0.3gCO₂e/MJ. Additionally, the framework should consider the LCH production pathway via **direct connection** to the energy production site as relevant for future nuclear new builds and small modular reactors.

Fortum advocates for equal recognition of all carbon removal solutions

The LCH framework should equally recognise all carbon removal solutions by adopting a more flexible approach, especially regarding other permanent and long-lasting CO₂ binding technologies (e.g. chemical feedstocks), aligning with the Certification Framework for Carbon Removals.

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Fortum advocates for establishing safeguards for the methodology of producing LCH from natural gas and carbon capture

It is important that all types of green and clean hydrogen truly contribute to the EU climate neutrality goal. Therefore, in the case of the natural gas pathway, i.e. producing low-carbon hydrogen from natural gas with carbon capture, the European Commission should establish safeguards for the methodology to ensure it aligns with the legal threshold of greenhouse gas emission 3.38 kgCO₂e/kgH₂. A maximum upstream methane leakage rate and a minimum value for acceptable carbon capture rate should be set up.

Summary

Fortum calls for the Commission and decision-makers to swiftly propose and endorse the Delegated Act to complete the regulatory framework for the hydrogen value chain. Upon adoption of this DA, Fortum urges the Commission to promptly approve European voluntary **certification schemes** for LCH and to open the upcoming European **Hydrogen Bank auctions** for low-carbon electrolytic hydrogen projects in a different basket or category than the one dedicated to RFNBO production. Since the LCH and RFNBO projects have different funding gaps and subsidy requirements, they should not compete against each other.

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