



TÜV SÜD CMS 77 standard

1. December 2023

## TÜV SÜD introduces new standard for Low Carbon Hydrogen and Blue Hydrogen

**Munich, Germany. Hydrogen is set to play a central role combating climate change and driving energy transformation as energy carrier and storage medium. To meet the rapidly growing global demand, low carbon hydrogen is indispensable in addition to green hydrogen. TÜV SÜD has developed a new standard for the certification low carbon hydrogen and blue hydrogen and for its derivatives (currently ammonia).**



At present, the chemical industry accounts for the largest share of global hydrogen demand. In the future, hydrogen will also be used as storage medium for energy from renewable sources, for the decarbonisation of various industry sectors and in the transport sector. “Hydrogen is pivotal in combating climate change, driving transition to cleaner energy and promoting sustainable economic growth worldwide”, says Thore Lapp, Business Unit Manager Green Energy & Sustainability, TÜV SÜD.

“Given that a fully renewable future with green hydrogen and its derivatives will take some time, low carbon hydrogen and its derivatives have to bridge the time until there is enough green hydrogen available to cover the demand”, adds Bratin Roy, Senior Vice President, Industry and Sustainability, TÜV SÜD South Asia, South-East Asia, Middle East & Africa Region.



To support and promote the emergence of a low carbon economy, TÜV SÜD has developed the TÜV SÜD CMS 77 standard for the certification of low carbon hydrogen or blue hydrogen and their derivatives (currently ammonia). Introduced in 2023, the new standard will be continuously adapted to current and future developments and legal and normative requirements. The TÜV SÜD CMS 77 standard is applicable to all companies worldwide seeking to demonstrate their compliance with criteria set in the regulatory frameworks of various countries and regions, and to show their commitment to a sustainable, future-proof energy supply.

## Additional requirements for Blue Hydrogen and Blue Ammonia

The TÜV SÜD CMS 77 standard sets a maximum threshold for greenhouse gas (GHG) emissions reduction potential allowed in the production process for hydrogen and its derivatives to be considered as “low carbon products”. According to the standard, the greenhouse gas reduction of low carbon hydrogen/blue hydrogen and low carbon ammonia/blue ammonia must be at least 70 per cent compared to the global benchmark of 94 gCO<sub>2</sub>eq/MJLHV. This corresponds to a GHG value of not more than 28.2 gCO<sub>2</sub>eq/MJLHV. Further the claim of blue hydrogen/blue ammonia, the TÜV SÜD CMS 77 standard additionally requires the construction and use of facilities for carbon capture and geological storage with robust proof of permanency of geological storage.

Similarly to the green hydrogen certification standard CMS 70, TÜV SÜD has defined the requirements and guidelines for the quantification and reporting of the carbon footprint of low carbon hydrogen and blue hydrogen and its derivatives in a way that is consistent with international standards, such as ISO 14040, ISO 14067, ISO 27915 and ISO 17029.

**Get more Information** about the TÜV SÜD CMS 77 standard directly from Thore Lapp (E-Mail: [thore.lapp@tuvsud.com](mailto:thore.lapp@tuvsud.com)) or <https://www.tuvsud.com/CMS77>.

**Note for editorial staff:** The press release and high-resolution photos of Thore Lapp, Business Unit Manager Green Energy & Sustainability, TÜV SÜD, and Bratin Roy, Senior Vice President, Industry and Sustainability, TÜV SÜD South Asia, South-East Asia, Middle East & Africa Region are available at [www.tuvsud.com/newsroom](http://www.tuvsud.com/newsroom).

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