

Joint press release
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Global hydrogen market: Uniper and thyssenkrupp Uhde sign framework agreement on the use of ammonia cracking technology

- **Strategic partnership further expanded**
- **License packages for up to six commercial plants with a total capacity of 7,200 mtpd of ammonia**
- **Joint goal: Establishment of a scalable hydrogen import infrastructure**

Uniper and thyssenkrupp Uhde have signed a framework agreement that lays the foundation for the construction of commercial ammonia cracking plants. Uniper has secured license packages for the use of thyssenkrupp Uhde's ammonia cracking technology. The agreement covers up to six large-scale plants with a total capacity of 7,200 metric tons of ammonia per day (mtpd). The use of hydrogen from ammonia on an industrial scale will make a significant contribution to the decarbonization of national and European industry. The direct transport of hydrogen is both technically and economically challenging, while ammonia is an ideal transport and storage medium. Ammonia can be liquefied relatively easily and shipped long distances in large quantities. Without high-performance cracker technology, large-volume imports of hydrogen are not feasible. This project is therefore an important step toward establishing a resilient energy infrastructure in Europe.

The agreement establishes the terms for using the technology at Uniper's planned hydrogen import terminal in Wilhelmshaven. The license package includes engineering, services and the supply of main equipment and catalysts. Uniper is currently driving forward the pre-FEED (front-end engineering and design) for a commercial plant at its Wilhelmshaven site. This pre-FEED phase will establish the design basis for the project, define its scope in more detail, further review its technoeconomic feasibility, and reduce its uncertainties and risks. The goal is to create a solid foundation for the subsequent FEED phase. The FEED phase is scheduled to start at the end of next year.

Holger Kreetz, COO of Uniper: "Domestic production alone cannot meet future hydrogen demand – imports of hydrogen derivatives will be essential. Our agreement with thyssenkrupp Uhde marks a decisive next step toward enabling global hydrogen trading. Ammonia crackers are key to international hydrogen logistics, and together with thyssenkrupp Uhde, we are laying the foundations for the infrastructure that Europe needs for its energy future – including our planned hydrogen import terminal in Wilhelmshaven."

Nadja Håkansson, Member of the Executive Board / COO of thyssenkrupp Decarbon Technologies & CEO of thyssenkrupp Uhde: "Our partnership with Uniper shows how cross-industry cooperation creates real added value. With our world-leading ammonia technology and our experience in executing complex plant projects, we are making a significant contribution to decarbonization and the development of a global hydrogen market."

Back in spring 2025, Uniper and thyssenkrupp Uhde announced the construction of one of the world's first demonstration plants for ammonia cracking at the Uniper power plant site in Gelsenkirchen-Scholven, Germany. The plant, with a capacity of 28 metric tonnes of ammonia per day, serves as a technological foundation for the commercial scale-up that has now been agreed. Signing this framework agreement, which includes licenses for large-scale commercial plants, is the next logical step in bringing this key technology for global hydrogen trading to industrial maturity. The demonstration plant, which is funded by the Ministry of Economic Affairs, Industry, Climate Action and Energy of the State of North Rhine-



Westphalia, plays a key role in ensuring energy security and facilitating the sustainable transformation of energy-intensive industries.

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About thyssenkrupp Uhde

thyssenkrupp Uhde combines unique technological expertise and decades of global experience in the engineering, procurement, construction and service of chemical plants. We develop innovative processes and products for a more sustainable future and thus contribute to the long-term success of our customers in almost all areas of the chemical industry. Our portfolio includes leading technologies for the production of base chemicals, fertilizers and polymers as well as complete value-chains for green hydrogen and sustainable chemicals. www.thyssenkrupp-uhde.com

About Uniper

Düsseldorf-based Uniper is a European energy company with global reach and operations in more than 40 countries. It has about 7,500 employees and plays a key role in ensuring a secure energy supply in Europe, particularly in its core markets of Germany, the United Kingdom, Sweden, and the Netherlands. Uniper's 14 gigawatts of flexible power generating capacity make it a mainstay of reliable power production. Uniper is a leading gas trader and one of Northwestern Europe's most important LNG importers, and its broad procurement portfolio enhances supply security. Uniper's investments in renewables, hydrogen, and other low-carbon energy carriers propel the transformation of the energy system.

Uniper provides energy and services to about 1,000 municipalities and industrial companies in its home market, Germany. Uniper is also Germany's largest operator of gas storage facilities and hydropower plants.

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