



“Develop Brunsbüttel, with its excellent conditions, into a hydrogen supply hub for northern Germany” / German LNG Terminal has an in-depth discussion with Hamburg University of Technology on the terminal infrastructure’s contribution to the development of a hydrogen supply system

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The contribution of the Brunsbüttel terminal project, which is currently going through the approval process, to the energy supply of northern Germany, as a relevant long-term infrastructure, has now been investigated by scientists at Hamburg Harburg University of Technology. “The potential contribution to the future supply of hydrogen of the LNG import and distribution terminal planned in Brunsbüttel” is the working title of a paper drafted by the university.

“The successful transformation of the German energy system to meet the 2045 climate protection targets will increasingly require more climate-neutral energy sources. Germany is characterised by a high demand for energy, which is countered by a domestic supply of renewable energies that is too low by comparison. Therefore, in order to be able to meet the energy demand in a climate-friendly way in the future, low-GHG energy sources will increasingly have to be imported. “Green” hydrogen and/or its derivatives are highly promising options. The question therefore arises as to what the planned LNG import terminal could contribute during the course of the energy system transformation through increasing imports of “green” energy – and thus how it could help to achieve the climate goals”, says Prof. Dr.-Ing. Martin Kaltschmitt from the Institute for Environmental Technology and Energy Economics (IUE) at Hamburg University of Technology (TUHH) in an initial outlining of the core areas of the ongoing discussions. “With this in mind, the intention is to first consider whether and how an import of low-GHG energies, in particular in the form of hydrogen and hydrogen derivatives, would be possible in the future via the planned LNG terminal in Brunsbüttel”.

A hydrogen supply for northern Germany and the potential contribution of Brunsbüttel

Initial findings show that Brunsbüttel possesses excellent conditions for being developed into an important hydrogen supply hub for northern Germany. This is supported, on the one hand, by its very good sea connections, the available connections to the existing

distribution and long-distance pipeline network for natural gas and, on the other hand, by the large number of industrial consumers in the region. Port facilities for the potential import of hydrogen and hydrogen derivatives (e.g. ammonia) and expertise in the handling of various goods are also available. Thus, a good to very good infrastructure for the import and distribution of hydrogen (derivatives) would be available now and, to some extent, in the future. "Thus, Brunsbüttel possesses excellent conditions to develop into a hydrogen supply hub for northern Germany", says Kaltschmitt in a preliminary conclusion.

At the interface between research, application and effective exploitation, there would also be the possibility of establishing an experience-based competence centre for the use of cryogenic gases in Schleswig-Holstein in connection with the terminal. "In this way, knowledge for the successful defossilisation of our energy system would be continuously developed and made available" was another suggestion by Kaltschmitt.

German LNG Terminal is planning to build and operate a multifunctional import and distribution terminal for liquefied natural gas (LNG) in Brunsbüttel. The terminal will also offer a range of services. RWE and German LNG Terminal already concluded a Memorandum of Understanding last summer to explore together the possibilities of importing "green" hydrogen at the site.

Further results of the discussions with Hamburg University of Technology are currently being compiled and will be available in August.

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