



Institute for Sustainable
Process Technology

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Revolutionary application of an age-old substance: Power2Ammonia

Discussions on Ammonia business cases and value chains during NH₃-Cafe

On Thursday May 18th over 100 hundred people with an interest in Ammonia-related processes and innovations joined the Power2Ammonia Process Technology Cafe organized by ISPT in collaboration with NPT and InnovatieLink at the RDM Kantine. Attendees participated in an interactive panel-discussion which hosted the expert-views of Birgitta Westgren (Director Energy Market & Innovation at the Ministry of Economic Affairs), Geert Laagland (Head of Engineering at Nuon), Gert-Jan de Geus (CEO at OCI Nitrogen) and Tjeerd Jongsma (Director of ISPT).

Starting point for the discussion was the recently released [feasibility study](#) by ISPT, Nuon, Stedin, OCI Nitrogen, CE Delft, Proton Ventures, TU Delft, TU Twente, AkzoNobel and ECN into the storage of renewable energy in ammonia (NH₃) for three business cases.

The panel and attendees where unanimous in their appreciation for the Power2Ammonia principle. This principle describes the way a surplus in sustainably generated energy (through solar and wind for example) is being 'stored' in Ammonia, to be used in a CO₂-free burning process to generate energy when sustainably generated energy is in low supply. Yet broad implementation of Power2Ammonia is hindered by several key factors: a restricting business case, public concerns regarding safety and the need to create an energy infrastructure that links Chemical industry with the general public. Conclusion: in addition to being a proven concept, a technology must also prove to be cost-effective, integrable and be supported by the general public before the next major step towards implementation can be made.

Although the panel and public determined some existing barriers towards Power2Ammonia-implementation, the shared opinion stated that these barriers could be resolved. The general mood reflected the need to transition from "talking about Power2Ammonia, to working towards Power2Ammonia implementation", to have new policies from government to support this push and to assure the public of the safety and benefits of a sustainable energy system facilitated by energy storage in Ammonia.

The Power2Ammonia-Cafe was part of the 1st European Power to Ammonia Conference, the first edition of a two-day event on Sustainable Ammonia Solutions organized by Proton Ventures. The conference aims to gather knowledge institutes, industries and academics, including well-known experts, developers and scientists to present the latest research results, present achievements, application fields and business prospects in Ammonia related energy solutions. The conference hosted researchers, industrialists, scientists as well as student and corporate delegates.



ISPT

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For NPT, InnovatieLink and ISPT connecting people and knowledge are as important as developing new knowledge for the innovative strength of the industry. Every two monthes Technology Cafes are organized to link process technologists across all sectors. These cafes offer the opportunity to speak with peers in a different way, to be engaged in your profession, to chat and to get inspired. Each Cafe takes place at a different location and focuses on a different subject. Make sure to visit the Process Technology Cafe -facebookpage for photo's of past Cafe's and to stay up to date with upcoming editions!