

Arnaud de Lhoneux - Hydrogenics Europe N.V.

Hydrogenics is a leading technology provider of water electrolyser technologies for hydrogen production in industrial processes and delivers turnkey hydrogen refueling stations for the hydrogen mobility sector. The company provides hydrogen fuel cells for fuel cell electric vehicles and also for stationary applications. Hydrogenics has pioneered the “Power-to-Gas” technology.

The objective of the presentation is to present the latest status about the water electrolysis technology developed by Hydrogenics, to explain the challenges of the different valorization routes, to show how electrolysis can be combined with renewable energy and how green hydrogen can compete with other cleantech technologies towards a decarbonized energy system, with a special emphasis on the CO₂ valorization routes.

Some concrete project examples where Hydrogenics’ electrolysers are used will be briefly presented as a support for the discussion: BioCat (1 MW power-to-methane project in Denmark), MEFCO₂ (1 MW power-to-methanol project in Germany), Store&GO (3 power-to-methane project in Europe with 2 of them – Germany and Italy – using Hydrogenics’ electrolysers).

The EU regulatory framework will be briefly presented with comments from Hydrogenics on the expected future market development of CCU projects. Finally, a concept design for very large scale power-to-hydrogen plants will be presented with key success factors for such projects to emerge in Europe.