



# Webinar: The Role of Ammonia in a Future Carbon-Free Energy Landscape

18 January 2021

When Fritz Haber and Carl Bosch developed an artificial nitrogen fixation process (the so-called Haber-Bosch process), they put ammonia in the centre of the first chemical global revolution, enabling the expansion of the population with its use as fertilisers and setting the current geo-political borders with its use in explosives. This webinar will present the technological, environmental and political challenges to enable a second ammonia revolution as portable long-term (days to months) energy storage vector versus the short-term storage (seconds to hours) offered by electrochemical storage (i.e. batteries).

Indeed, the future of a carbon-free society relies on the alignment of the intermittent production of renewable energy (solar, wind, tidal, geothermal) with our continuous and increasing energy demands. In this context, ammonia offers unique opportunities due its high hydrogen content, known handling and existing infrastructure. If/when realised, green ammonia can reshape the current energy landscape by directly replacing fossil fuels in transportation, heating, electricity, etc. In addition, new economic opportunities will arise as many countries will inevitably become net-energy importers/exporters with the outlook of a renewable energy market similar to the current one based on fossil fuels.

Speaker: Dr Laura Torrente-Murciano, Department of Chemical Engineering and Biotechnology, University of Cambridge

**Time:** 9:00 - 10:00 GMT

**Location:** Online via GoToWebinar

**Cost:** Free of charge, open to all

Registration: [www.icheme.org/role-of-ammonia](http://www.icheme.org/role-of-ammonia)