

# Green hydrogen solutions from Norway

The Norwegian government has high ambitions for GHG reduction in the transport sector. Hydrogen and fuel cells are prominent solutions, giving green workplaces and business opportunities throughout the country as well as clean fuel for land and maritime transport. Norwegian companies and research institutes have over the last decades developed strong competence in hydrogen and fuel cell technologies. Especially within the maritime industry, Norway is now leading the way to clean transport solutions. The Norwegian Hydrogen Forum (NHF) and NCE Maritime CleanTech are proud to foster Norwegian technology and competence, together with our partners. We invite you to take part in the green hydrogen solutions from Norway!



NHF has since 1996 been a non-profit members' association for conveying and promoting the advantages of hydrogen as an energy carrier in Norway. Our more than 60 members span Norwegian industry, universities, research institutes and other organizations engaged or otherwise interested in hydrogen. NHF actively works for good framework conditions for hydrogen and fuel cells, and promotes green hydrogen solutions from Norway abroad.



NCE Maritime CleanTech represents one of the world's most complete maritime commercial hubs. Our cluster organisation uses the Norwegian maritime expertise as a springboard for the development of new energy-efficient and environmental friendly technologies. Our 90 partner companies focus on establishing sustainable innovation projects with commercial potential, and work together for new clean maritime solutions.



Nel is a global, dedicated hydrogen company, delivering optimal solutions to produce, store and distribute hydrogen from renewable energy. We serve industries, energy and gas companies with leading hydrogen technology. Since its foundation in 1927, Nel has a proud history of development and continual improvement of hydrogen plants. Our hydrogen solutions cover the entire value chain from hydrogen production technologies to manufacturing of hydrogen fueling stations, providing all fuel cell electric vehicles with the same fast fueling and long range as conventional vehicles today.



Hexagon Composites is a globally leading supplier of composite pressure cylinders and systems for gas applications. We deliver safe and innovative solutions for a cleaner energy future and adapt our leading composite pressure vessel technology for a wide range of mobility and storage applications. The energy transition towards a low-carbon society is constantly opening up exciting growth opportunities for us.

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N O R S K H<sub>2</sub>

Norsk H2 was established as a public limited company in 2016. It is a combination of companies and specialists in the fields of hydrogen research, hydrogen production, and the marketing of green energy from Europe. Norsk H2 produces and distributes green hydrogen. In the first phase, starting 2020 the production capacity is 120 tons green hydrogen per month. By 2021, Norsk H2 plans to increase the capacity to 1,500 tons per month. Norsk H2 has already developed a customer base that will guarantee a relevant capacity utilization for the product – carbon free green hydrogen.



Westcon Power & Automation is one of the worlds leading innovative companies within electrical power systems. We are located at four locations in Norway and we are 160 employees. We have experience from several maritime hydrogen projects the last years. Our ambition is to deliver a combined battery and hydrogen fuel cell system on a vessel within the next years.



SINTEF

SINTEF is a multidisciplinary, not-for-profit research foundation with about 2000 employees. Our hydrogen research covers the whole value chain from materials, via components and systems to demonstration activities. SINTEF has been engaged in hydrogen technology for more than 25 years, and since 2010 we have been involved in more than 20 FCH JU-projects, including having coordinated 8 of these.



MoZEEES (Mobility Zero Emission Energy Systems) is a Norwegian Research Center for environment-friendly energy focusing on zero-emission transport solutions. MoZEEES is hosted by Institute for Energy Technology and unites about 40 partners from Norwegian research institutions, public agencies and user partners from private sector and industry. The budget is more than 250 MNOK and the timeframe 8 years. The primary objective of MoZEEES is to contribute to the development of battery and hydrogen technologies for heavy duty transport applications on road, rail and sea.

**For more information about green hydrogen solutions from Norway, please contact:**



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