

NORDICH2UBS

NORDIC HYDROGEN HUBS- ROADMAPS TOWARD 2030 AND 2040

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ABSTRACT

The NordicH2ubs project¹ is one of five funded projects under the Nordic Hydrogen Valleys as Energy Hubs programme by Nordic Energy Research². The objective of the programme is to show the potential of hydrogen to become a zero-emission energy carrier in the Nordic countries, by demonstrating solutions that service the entire hydrogen value chain through five projects.

The overall aim of NordicH2ubs project is to identify and outline ambitious pathways towards Nordic hydrogen valleys in 2030 and 2040. This is being done by addressing four research topics crucial for wider diffusion of hydrogen innovation: demonstration of hydrogen technologies, safety and standardization, socio-economic barriers, and energy systems surrounding hydrogen valleys.

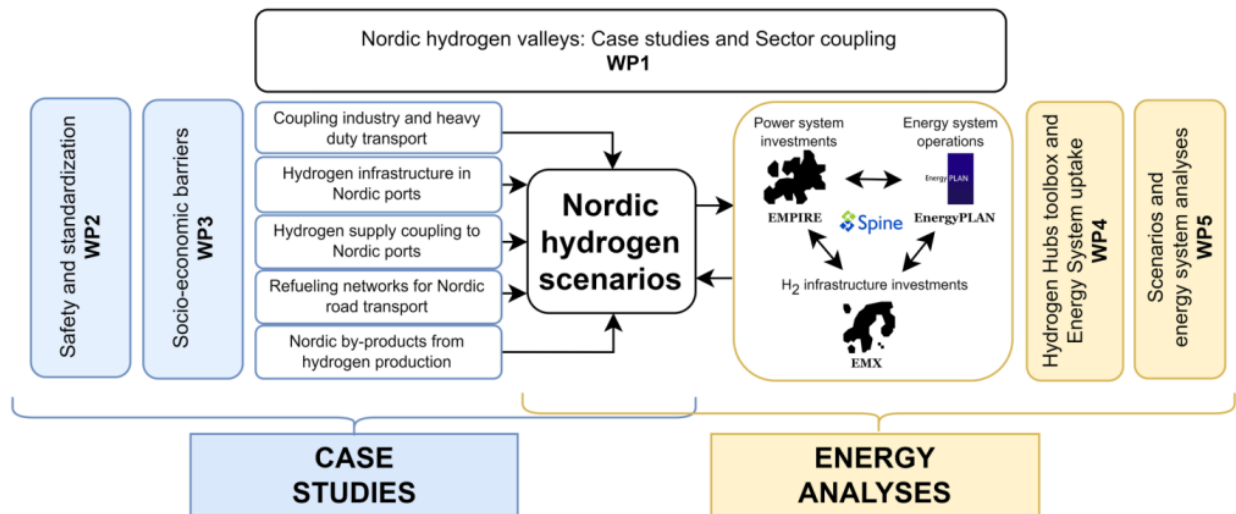


Figure 1: Overview of the NordicH2ubs project with work packages and case studies.

The research in NordicH2ubs is used to link different research perspectives while covering multiple industry sectors. Several case studies (WP1, Figure 1) are being conducted through close collaborations between research institutions, universities and industry partners. The project is also address key enabling elements towards successful Nordic hydrogen valleys (WP2-WP5). On the site level, NordicH2ubs is studying safety and standardization related to hydrogen storage in ports and quality assurance for hydrogen used NordicH2ubs in transportation. On a country level, socio-economic barriers related to cross-sectorial collaboration, including competence needs in the Nordics and regulations that hinder uptake of hydrogen and e-fuels in the Nordics will be identified. On the Nordic level, NordicH2ubs will develop a modelling toolbox based on three existing open-source models which will be used to study how Nordic hydrogen value chains interacts with the wider energy system, including long-term strategic investments and hourly operations between all relevant energy carriers.



Figure 2: The partners of the NordicH2ubs project

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References

1. <https://nordich2ubs.com/>
2. <https://www.nordicenergy.org/programme/nordic-hydrogen-valleys-as-energy-hubs/>