



Interreg
Atlantic Area



Co-funded by
the European Union

HYDEA is a 3-year Interreg Atlantic Area project with a total budget of €3.43M which aims at boosting the hydrogen transition in the Atlantic Area ports.

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HYDEA key figures

The [HYDEA project](#) was created to accelerate the development and application of technologies based on the use of green hydrogen as an energy alternative in different types of fleets and vehicles, thus taking another step forward in research for the development and application of alternatives to current energy sources.

The main objective of the project is to assess, develop and promote the use of technologies based on green hydrogen from renewables like marine energy in Atlantic Area ports.

This is articulated through the achievement of several specific objectives, which will address the following challenges:

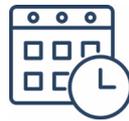
- Promoting a clear role of hydrogen in the strategic energy plans of ports.
- Increasing knowledge on various hydrogen production technologies that are viable for use in ports.
- Implementing technology demonstrators to attract investor interest in viable business models.



€3.43M
budget



10
partners



3 years
(2023-2026)



11 ports
4 countries

A map of the hydrogen initiatives

The first output of the HYDEA project is an interactive map that contains information on the main present and planned initiatives related to hydrogen in ports in the Atlantic Area regions.

This map serves to locate the main projects, their characteristics and the partners that compose them. It offers a complete vision of the role that ports are taking in the hydrogen economy and a vision of the project models that are being carried out. The information on this map is completed with partners' searches, but also with information coming from promoters who want to make their respective projects more visible. It is freely available on the [HYDEA project website](#).

Name	Bay of Biscay Hydrogen
Objective	To establish a 100 MW renewable hydrogen production facility in the vicinity of the Port of Bilbao, the Left Bank, and surrounding districts. This plant will be responsible for reducing carbon emissions from major industrial consumers in the region.
Status	N/A
Partners	Repsol, Petronor, Port Authority of Bilbao.
Investment [€]	200M
Source of Funds	European funds IPCEI
Duration	N/A
Technology	100 MW of electrolysis capacity, 385 MW PV capacity, 190 MW wind capacity and 73 MW battery.
Renewable Gas	GreenHydrogen
Market/Final use	Industrial, Non-marine, and marine mobility.
Production/Consumption	N/A
Website	N/A



Identification of opportunities in ports

The main objective was the identification of initiatives in the field of hydrogen in ports. Up to now, there is no repository offering this information, and it is very useful for practitioners and the general public to have a site where they can locate up-to-date information on this particular topic.

The first step was to identify the most **promising green hydrogen technologies** and applications, based on statistical analysis of the literature considering critical aspects like cost, energy efficiency and decarbonisation effects.

Then, an important work was carried to describe the main technical, economic, social, and regulatory **bottlenecks** to the implementation of hydrogen-based infrastructures in ports in the study regions. This work was built on literature review and experts' knowledge.

Then, a study was carried out to identify **opportunities** for the development of the hydrogen economy in ports of Brest, Leixões, Vigo, and Seville, considering their reliance with the hydrogen value chains. All this work has led to public reports that can be downloaded from the [HYDEA project website](#).



Watch the replay of the first HYDEA [webinar about hydrogen production](#)

International discussions

To reach the goal of greener maritime transport, ports, shipping companies and energy industries must work together to align their own transition plan, with realistic steps crossing the maturity of new green fuels, the availability of energy distribution network and appropriate transportation fleets.

Indeed, there are several strategic challenges that must be identified, discussed, and mitigated. So, it is important to organise events to build a common vision and framework to set out a roadmap shared by all European stakeholders. In close collaboration with 4 European brother projects - Green Supply Chains, North Sea H2 Valley Ports, DIOL, and REDII Ports - the HYDEA partners organised a workshop and an open discussion on 16 October 2024 in Brest, France, during the [Sea Tech Week](#) international event.

The **workshop** was dealing with the challenges, risks and ways forward regarding green fuels for the maritime sector. A first session was dedicated to hydrogen maritime applications and a second one was outlining a common framework for the whole sector.

Discussions on the strategy to build a roadmap shared by all were facilitated by a **meeting** bringing together stakeholders from the different countries and the European Commission.

> *Reports related to these events will be available soon on [HYDEA project website](#).*



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