

VALENTIA ISLAND

DAIRBHRE

'OAK ISLE'

H₂ORIZON



CONTEXT



H2ORIZON represent islands and regions that need energy resilience and security to support their economy, matched by community and industry support to ensure success.

H2ORIZON has identified suitable locations to address a diverse range of H2 production, storage, consumption needs/challenges that can be replicated.

Regions - Ústí nad Labem Region in the Czech Republic, Valentia Island in Western Ireland, Tory Island in North-West Ireland, Rathlin Island in Northern Ireland and Zasavje region in Slovenia. These regions are at the end of energy grids and opportunity,

Socially and technically remote.

Energy connectivity for remote island communities is essential,

We also sought to analyse the incorporation of a blockchain platform will trace the production and flow of green hydrogen and examine the ability to monitor the impact of the project within isolated communications



VISION

- Centred around developing a replicable model, to be first demonstrated in Ireland, which can then be transplanted across Europe to provide benefits at multiple levels, including:
 - Energy supply resilience
 - Development of renewable energy
 - Addressing grid constraint issues
 - Regenerating rural and remote communities
 - Decarbonising multiple sectors, including transport and industry

New off-island scope needed for bankable project Anchor demand Data centre Back-up: · Industrial offtaker Whiskey distillery Industry stakeholder Tourist boats refueller Hotel with 25 Distribution kg H₂/day MCP storage On island small scale demonstration to build interest Energy ahead of demand growth once conditions more cooperative favourable (i.e. electrolyser cost reductions, local renewable supply, grid capacity upgrades)



OUTCOMES – VISION IS AHEAD OF H2 REALITY

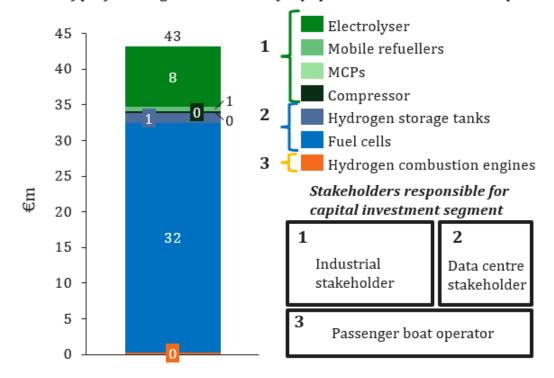
Developing an anchor demand

This is critical to enabling further hydrogen deployments outlined earlier. A data centre concept has been identified as the most promising anchor demand for the project. Several next steps will be required to develop this anchor demand.

- Development and conversation of data centre concept with data centre stakeholder
- Development of business case and feasibility
- Integration of data centre into project
- Further development of project scope

Discussions were held with other potential hydrogen offtakers, such as the ferry, a group of demands were identified to support the deployment of a large-scale anchor demand in the region.

Overview of project budget breakdown by equipment and stakeholder responsible





- GenComm Website nweurope.eu/gencomm
- LinkedIn GenComm
- Twitter @GenComm_CH2F
- Community Hydrogen Forum CH2F communityh2.eu
- Hydrogen Ireland website <u>hydrogenireland.org</u>

Hydrogen Project Animation

► GenComm main animation-2023 | Interreg NWE (nweurope.eu)

