

## European Solar and Energy Storage Solutions

# Ireland hydrogen home storage



## Overview

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Is hydrogen a 'major opportunity' for Ireland?

Describing hydrogen as a “major opportunity for Ireland”, he contends: “It provides the potential for long-duration energy storage, dispatchable renewable electricity, the decarbonisation of some parts of high-temperature processing, as well as a potential export market opportunity.”.

Could Ireland have a hydrogen future?

The potential for hydrogen in Ireland is an area of increased interest across the industry. As O’Grady explains: “The focus for offshore wind is, correctly, how it can deliver Ireland’s energy security and independence. Beyond that, Ireland’s significant and plentiful homegrown renewable energy potential could be used in other ways.

What does the Hydrogen strategy mean for Ireland?

“Hydrogen Ireland welcomes [the] release of the Government’s Hydrogen Strategy. The strategy marks a key milestone in the development of a green hydrogen sector in Ireland, one which can enable investment, increase skills and support regionally balanced economic growth.

How to promote green hydrogen production in Ireland?

Recommendation 4: Introduce financial instruments and incentives to support the development of green hydrogen production in Ireland. Recommendation 5: Demonstrate use of hydrogen as flexibility provider to perform power system balancing. Recommendation 6: Evaluate the blending of hydrogen into the existing Irish gas network.

How much hydrogen does Ireland use per year?

By comparison, Ireland currently consumes only 2,000 tonnes per year, roughly equivalent to full-year production from a 12MW electrolyser. “We are seeing a lot of development of hydrogen supply projects in Ireland but we are

not seeing huge developments in hydrogen demand,” states Monaghan.

Can hydrogen be used for maritime transport in Ireland?

Hydrogen could also have interesting application to maritime transport in Ireland. An interesting project is going to be undertaken in the Valentia Island in County Kerry, where there is a plan to use hydrogen to propel the Island’s ferry service. A second application considered is the energy supply of the power public lighting .

## Ireland hydrogen home storage

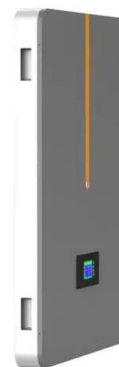


### Irish domestic appliances can operate on blends of 20% hydrogen ...

Over the last year, Gas Networks Ireland has been working with University College Dublin's Energy Institute (UCDEI) on a research project to investigate the potential use of hydrogen in Ireland and find out if we can heat homes and cook dinners with this renewable gas.

### Ireland

Preliminary assessments of storage have identified 271 potential salt caverns offshore which could deliver 0.1 TWh of hydrogen storage each, or 27 TWh cumulatively. Further assessment will be carried out. The regulatory regime for hydrogen storage will be reviewed as it is a barrier for development of hydrogen storage. CROSS-CUTTING



### Developing Ireland's hydrogen potential - Energy Ireland

Hydrogen's ability to be transported over long distances, its potential as a storage medium and the fact that it can be used in a range of different end-use sectors are clear benefits, however, as Monaghan points ...

### Hydrogen Stations in Ireland. Map and List

July 2, 2021. A Scottish company will build a £1.6m hydrogen filling station for Translink in Belfast Scottish company Logan Energy has been awarded a £1.6m contract with Translink to design and supply one of the largest capacity hydrogen refueling stations ever built in Europe.



## Hydrogen in the Irish Energy Transition

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## HyLIGHT

This WP will develop engineering and techno-economic descriptions of the means for storing and delivering hydrogen on the island of Ireland. Storage options include geological and pressurised/cryogenic tank storage, and conversion to hydrogen carriers (ammonia, liquid organics, power to gas, methanol).



## The road forward for hydrogen in Ireland - Energy Ireland

GH2 will position Galway as the home of Ireland's first hydrogen valley, providing green hydrogen for use in transport, industry, and within local communities in the greater Galway region. The GH2 SSE Thermal is also developing what could

be one of the world's largest hydrogen storage facilities, with an initial expected capacity of



## ESB and dCarbonX to Partner on Green Hydrogen Storage Development in

This partnership covers all subsea energy storage offshore in Ireland and will also support the creation of a proposed new 'Green Hydrogen Valley' centred around the Poolbeg peninsula in Dublin, which will enable green hydrogen production and storage that can be used to decarbonise heavy transport, shipping, industry and power generation. Pdraig O'Hiceadha, ...



## National Hydrogen Strategy

The Strategy considers the needs of the entire hydrogen value chain including production, end-uses, transportation and storage, safety, regulation, markets, innovation, and skills. It also sets out that Ireland will focus its efforts on the scale up and production of renewable "green" hydrogen, as it supports both our decarbonisation needs and



## The road forward for hydrogen in Ireland - Energy Ireland

GH2 will position Galway as the home of Ireland's first hydrogen valley, providing green hydrogen for use in transport, industry, and within local

communities in the greater Galway region. The GH2 consortium's intention is to develop a flagship pathfinder project at The Port of Galway, for the indigenous production and local supply of clean



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## Hydrogen in the Irish Energy Transition

Recommendation 8: Determine whether low carbon hydrogen obtained using carbon capture and storage technologies applicable to geological basins and structures may be a practical pathway for Ireland. Recommendation 9: Robustly evaluate feasibility of large-scale hydrogen storage in salt caverns.

## Ireland's green hydrogen export ambitions must take cost into ...

Ireland's ambition for green hydrogen is based on the premise that when offshore wind gets up and running at scale there will be times when excess electricity is being produced and, rather than



## Developing Ireland's hydrogen potential - Energy Ireland

Hydrogen's ability to be transported over long distances, its potential as a storage medium and the fact that it can be used in a range of different end-use sectors are clear benefits, however, as Monaghan points out, currently, most potential

end-use sectors are not using hydrogen and the vast bulk of hydrogen that is being used is as an



## Ireland National Hydrogen Strategy Released

Hydrogen Ireland welcomes today's release of the Government's Green Hydrogen Strategy. The strategy marks a key milestone in the development of a green hydrogen sector in Ireland, one which can enable investment, increase skills, support regionally balanced economic growth and system resource efficiencies. We look forward to supporting the ...



## Former Kinsale Head Gas Field Assessed for Hydrogen Storage in Ireland

DCarbonX's chief operating officer Dr John O'Sullivan said Kinsale Head is the third Irish offshore location they are assessing with ESB for green hydrogen storage. Highlight: ESB partnering with Tony O'Reilly's dCarbonX to examine site for gas storage; Former Kinsale Head gas field assessed for hydrogen storage, August 12, 2021

## Unlocking Ireland's hydrogen potential - Energy Ireland

Hydrogen is one of the leading options for

renewable energy storage. With the market expanding in both Europe and beyond, Kamila Waciega believes that Ireland must invest in hydrogen infrastructure, and suggests that there is an opportunity to become an export hub.



## Invitation Letter

Join the Canadian Hydrogen Convention, North America's premier event for hydrogen production, storage, and infrastructure. Connect with industry leaders, government officials, and innovators to drive the hydrogen economy forward. April 22-24, 2025, in Edmonton, Alberta.

## Hydrogen

We believe hydrogen produced from renewable electricity will play a critical role in the decarbonisation of many sectors. We plan to use our existing capabilities and future renewable growth to become a leading player in large scale renewable hydrogen production, thereby enabling renewable electricity, in the form of electrons or green modules, to meet the energy

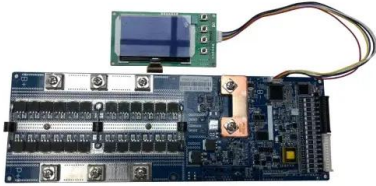
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## A Green Dawn

Twitter LinkedIn A Green Dawn As the days lengthen, we have crossed the threshold into Spring. Imbolg the Gaelic traditional festival marks the halfway point between the winter solstice and the spring equinox, the days are lengthening but we are facing many crises. Not only are we facing climate, ecological and energy

crises, together with...[Read More](#)



## HyLIGHT

WP2 - Hydrogen Storage and Delivery. This WP will develop engineering and techno-economic descriptions of the means for storing and delivering hydrogen on the island of Ireland. Storage options include geological and pressurised/cryogenic tank storage, and conversion to hydrogen carriers (ammonia, liquid organics, power to gas, methanol).



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