

A large-scale offshore wind farm is shown at sunset or sunrise, with the sky transitioning from a deep blue to a warm orange. In the foreground, two large, white, cylindrical hydrogen storage tanks are visible, each with a set of stairs leading to a platform on top. The wind turbines in the background are silhouetted against the bright horizon, and their blades are blurred from motion. The overall scene conveys a message of clean energy and sustainable infrastructure.

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Major Policy Developments in Irish Offshore Wind and Hydrogen



In the last week, the Irish Government has published a number of policies, decisions and updates that aim to generate significant investment in energy transition infrastructure both offshore and onshore.

Ireland's first dedicated maritime consenting authority, hydrogen strategy and plan-led offshore renewables regime are intended to give stakeholders confidence in the Irish Government's commitment to the renewable energy sector and to encourage them to press ahead with an ambitious development pipeline that will depend on a predictable regulatory environment.

In this update, Matheson's Energy and Infrastructure team discuss the key details you need be aware of.



Summary

Offshore Wind:

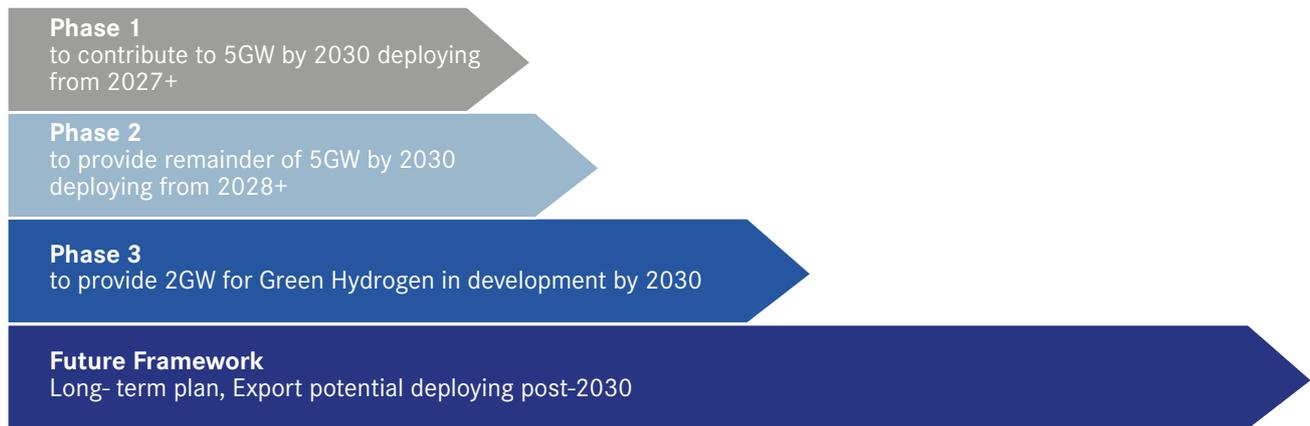
- The Irish Government has issued a consultation (the “**ORESS 2 Consultation**”) which sets out its **plan** for the next phase of offshore wind auctions in Ireland.
- Two auctions will take place in 2024 – the first, for a pre-determined south coast site with 900 MW capacity and the second, for one or more pre-determined east coast site(s) with an as yet undetermined capacity.
- The Irish Government's plans for ORESS 2, combined with the recent ORESS 1 auction and other policy developments, underpin its ambition to deliver 5 GW of offshore wind capacity by 2030.
- In terms of future offshore wind auctions (after ORESS 2), these are likely to take place under the ‘Future Framework’ – the term used for the Irish Government's longer-term offshore wind regulatory regime.

Hydrogen:

- The Irish Government has also now published its long-awaited **National Hydrogen Strategy** which supports an intention for Ireland to be “*a net exporter of renewable hydrogen in the longer term.*”
- The Hydrogen Strategy provides a roadmap for those looking to invest in the hydrogen sector, and touches on key topics such as hydrogen production, green hydrogen, transportation, storage and potential end-uses.
- The Hydrogen Strategy notes that from now until 2030, hydrogen will be produced in Ireland from grid connected electrolysis created from surplus renewables. During this time, 2 GW of offshore wind capacity dedicated to generating green hydrogen will be developed under an offshore wind phase known as ‘Phase 3’.



Offshore Wind – Key Points



Graphic adapted from Department of the Environment, Climate and Communications 2023 *Offshore Wind* Report

Offshore Wind Phases:

Following the success of four ‘Phase 1’ offshore wind projects in ‘ORESS 1’ (the first Irish offshore renewables subsidy auction), the next phase of offshore wind development in Ireland will be ‘Phase 2’. Phase 2 will be developed using plan-led approach (in contrast to Phase 1’s developer-led approach), with the Irish government identifying specific areas for offshore wind development.

ORESS 2 Auctions:

The ORESS 2 Consultation confirms that there will be at least two offshore auctions in Phase 2:

- **ORESS 2.1:** The first auction will be for a specified site (this auction will cover one site, currently labelled a ‘provisional development area’ (“**PDA**”), within a larger ‘DMAP’ area (see DMAP explainer below)) off the south coast of Ireland with a specified capacity (900 MW). ORESS 2.1 is scheduled to launch in November 2023, with bids expected in February 2024.
- **ORESS 2.2:** This second auction for one or more PDA(s) off the east coast of Ireland with a specified capacity (400 MW North Irish Sea and 700 MW South Irish Sea). ORESS 2.2 is scheduled to launch and conclude in 2024.

ORESS 1 vs ORESS 2:

The following table sets out some of the key features of ORESS 2 compared to ORESS 1, based on the ORESS 2 Consultation:

Feature	ORESS 1 Position	ORESS 2 Position
Number of Projects¹	Six offshore wind projects competed for subsidy support. Ultimately, four offshore wind projects were successful.	Multiple developers will compete for the rights to develop a single offshore wind project. A 'backfill' option is being considered, which will retain the second-best offer for a period of time.
MAC Award²	The prior procurement of a MAC was a qualifying criteria for ORESS 1.	ORESS 2 auctions will take place before MACs are granted, therefore it is not a qualifying criteria for ORESS 2. The ORESS 2 auction rules are expected to incorporate qualification requirements which are similar to the MAC assessment criteria for Phase 1. Bidders must demonstrate a capability to develop the project 'on a timeline consistent with the ORESS 2 auction in which it receives an award'. This should favour developers with more advanced projects.
Allowed Installed Capacity Range³	80% - 120% of MEC and Offer Quantity	100% - 120% of MEC and Offer Quantity. This higher minimum installed capacity level (relative to ORESS 1) means that ORESS 2 projects must deliver no less than 100% of their MEC and Offer Quantity.
Auction Price Cap⁴	€150/MWh	TBC, but the ORESS 2 Consultation envisions that the price cap will be lower than ORESS 1, reflecting the reduction in risk for the developer by virtue of the plan-led approach (ie, Phase 2).
Indexation⁵	ORESS 1 strike prices are indexed, based on HICP and Platts steel index.	No change anticipated vs ORESS 1
Unrealised Available Energy Compensation (UAEC)⁶	ORESS 1 projects will receive compensation under UAEC mechanism	No change anticipated vs ORESS 1
Support Duration⁷	20 years.	No change anticipated vs ORESS 1
Bid Bond⁸	€6/MWh (for one year of deemed production)	€12-27/MWh (for one year of deemed production)
Performance Security⁹	€20/MWh (for one year of deemed production)	€40-90/MWh (for one year of deemed production)

1 The number of offshore wind projects that will be developed under the ORESS auction.

2 Maritime Area Consents ("MACs") are a new Irish government consent. MACs entitle their recipients to carry out certain activities in maritime areas (eg, non-exclusive occupation, construction and operation of offshore wind farms).

3 The minimum and maximum levels of installed capacity which must be constructed under the ORESS terms and conditions.

These levels are determined by reference to a project's Maximum Export Capacity (MEC) and MW value offered into the ORESS auction (Offer Quantity).

4 The ORESS maximum bid price, above which bids will not be accepted.

5 The indexation of the ORESS 'strike price'.

6 A mechanism which compensates ORESS projects for curtailment (eg, due to oversupply or system limitations).

Compensation is payable at the level of ORESS support (ie, the project's strike price).

7 The duration of ORESS support.

8 The purpose of the Bid Bond is to provide credit support to cover scenarios where an ORESS applicant does not submit an Offer or execute the Implementation Agreement and post a Performance Security.

9 The performance security is used to guarantee ORESS participants comply with their obligations to develop their projects and reach commercial operation in accordance with the ORESS terms and conditions.

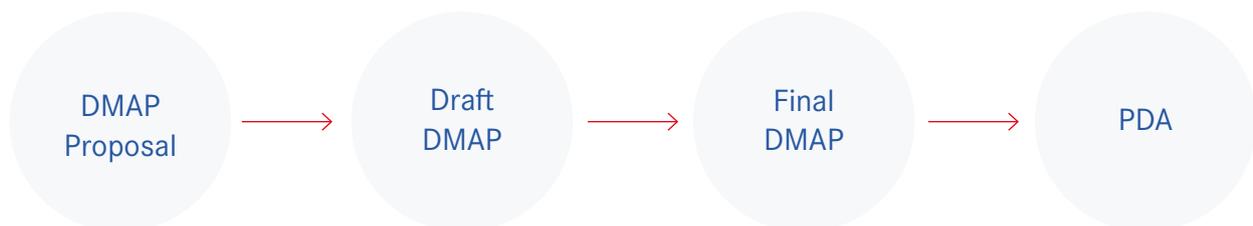
Development Sites – DMAPs and PDAs

- The ORESS 2 Consultation sets out key details on the approach to site selection:
 - In ORESS 2.1, developers will compete for the rights to develop an offshore wind farm within a PDA (which will be a sub-area within a wider Designated Maritime Area Plan (“DMAP”)).
 - The ORESS 2 Consultation indicates that the PDA (which will be the actual development site(s) that developers can bid for) will be located within the area stretching from near Kinsale (County Cork) to the demarcation point between the Celtic Sea and the Irish Sea roughly south-east of County Wexford (see map to the right). However, the precise location will not be confirmed by the Irish Government until November 2023.
 - For ORESS 2.2, it is suggested that the one or more DMAP(s), with one or more PDA(s), will be located along the east coast of Ireland with the precise locations being published in the later part of 2024.
- Note: A number of steps are required to bring a DMAP proposal into final form (including consultation and parliamentary approval) so timelines will be closely watched. For example, to align with ORESS 2.1 timing, the first DMAP (details below) will need to be fully approved by early 2024.
- Additional observations:
 - In future offshore wind ‘phases’ beyond 2030, further PDAs may be designated within existing DMAPs. For example, additional PDAs may be designated within the south coast DMAP (in which the ORESS 2.1 project will be developed).
 - Each PDA will be designated based on geophysical suitability, sea depth, metocean conditions and grid availability, among other factors.
 - The south coast DMAP publication appears to support the Irish Government’s recent suggestions that floating offshore wind technology may be more relevant for Phase 3 and beyond. It expressly notes that sea level depths in the south coast DMAP are “consistent with future development of fixed bottom offshore wind projects”.



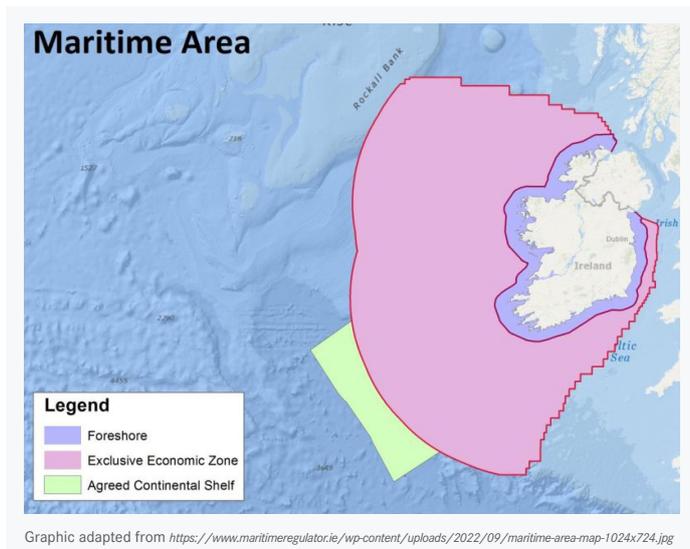
The size of each PDA will be informed by site MW density considerations and DECC is seeking feedback on this element (amongst other things).

Site Selection Process



- **MARA and the State ‘seabed’ consent (MAC):**

- MARA is now officially established as the consenting authority and regulator for Irish maritime and marine activities.
- It will look after all permitting, consenting (including MACs) and licensing for activities (from surveying to decommissioning and everything in between) in Ireland’s extensive maritime area.
- ORESS 2 winners will be required to obtain a MAC within a specified time period after the ORESS 2 auction (though the intended length of the period is not specified at this time), but will get ‘priority consideration’ by MARA for a MAC.



- **Development consent – planning permission:**

ORESS 2 winners will also get ‘priority consideration’ by An Bord Pleanála in accordance with the soon to be published Marine Planning Policy Statement (“**MPPS**”). The Irish Government emphasises that bidders should get comfort on planning risk by referring to the Irish Government’s marine planning prioritisation policy which will be reflected in the MPPS (see detail on page xi of the [ORESS 2 Consultation](#)).

- **Other Key Considerations**

- **Grid:** For ORESS 2.1, EirGrid, as Transmission System Operator (**TSO**), will develop the grid infrastructure out to an offshore substation into which the successful project will connect (two offshore connection points are planned with a combined capacity of 900 MW). For ORESS 2.2, recent announcements suggest that the process will more closely reflect ORESS 1 (where developers took responsibility for the development of offshore grid infrastructure).
- **Seafood-ORE Engagement:** The Irish Government has published a guide to provide stakeholders in both seafood and offshore renewable energy (**ORE**) industries with a framework for engagement and co-existence. This guide has been developed through extensive consultation between the relevant key stakeholders and we expect compliance with same may be reflected in the ORESS / MAC criteria in some way.
- **Site Data:** DECC is collecting and acquiring surveying data pre-auction in order to mitigate site-related risks (given that the Irish Government is designating the sites (ie, PDAs)) and will charge ORESS 2 auction winners a fee to recover its costs. It appears possible that DECC may pay third parties to acquire such data and it seeks views on this approach.



National Hydrogen Strategy – Key Points

On 12 July 2023, the Irish Government unveiled its first national hydrogen strategy (the “**Hydrogen Strategy**”) which represents a landmark point in the development of a renewable hydrogen sector in Ireland. The three primary strategic reasons for developing the renewable hydrogen sector in Ireland are decarbonisation, energy security and developing industrial opportunities.

Hydrogen Roadmap: Ireland’s Strategic Hydrogen Development Timeline Roadmap shows how the Irish Government expects the hydrogen economy to develop and scale up over the coming decades across the entire value chain. While it identified 21 short-term actions between now and 2030, no large scale development is envisioned until post-2028. Highlights of these actions (which will be reviewed and coordinated by the Interdepartmental Hydrogen Working Group) include:

- Develop and publish data sets showing the likely locations, volumes, and load profile of surplus renewables on our electricity grid out to 2030;
- Establish an early hydrogen innovation fund to provide co-funding supports for demonstration projects across the hydrogen value chain; and
- Develop the commercial business models to support the scale up and development of renewable hydrogen, targeting surplus renewable grid electricity pre-2030 and an initial 2 GW of offshore wind from 2030 (this offshore wind being developed under a dedicated offshore wind phase known as ‘Phase 3’).

Hydrogen Transportation: Initial hydrogen applications are likely to utilise compressed tankering solutions and hydrogen pipelines are envisioned to become the dominant transportation option as production progresses.

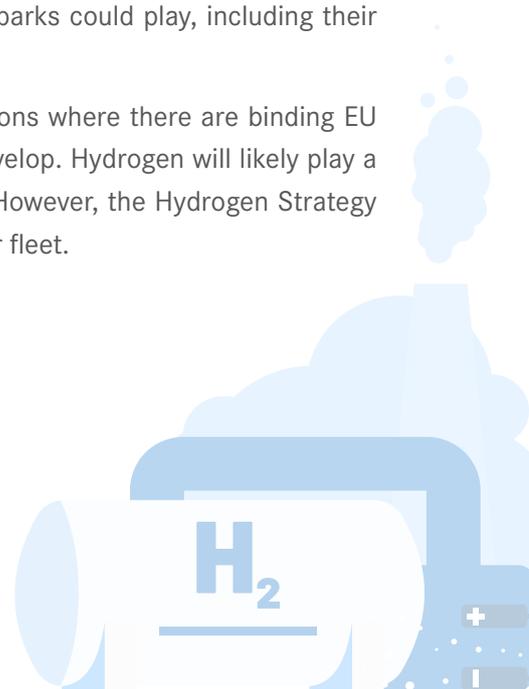
Hydrogen Storage: Hydrogen’s ability to act as a long duration store of renewable energy is one of its key strategic attributes and Ireland is currently exploring storage solutions including geological storage solutions.

Hydrogen Production:

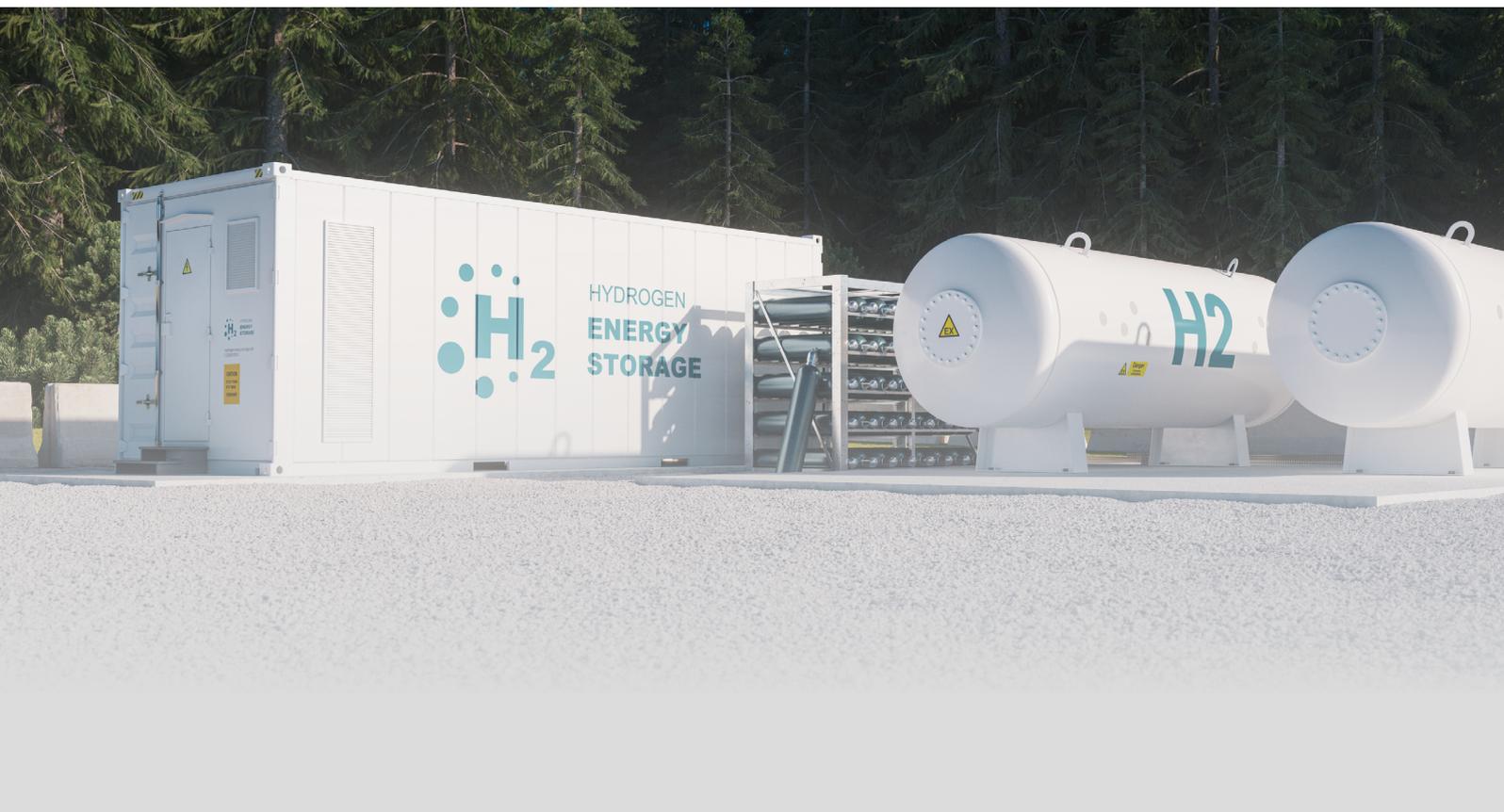
- **Green / Renewable Hydrogen:** Ireland will focus its efforts on the scale up and production of renewable hydrogen (ie, hydrogen produced by electrolysis powered by renewable electricity). The European Commission has developed its **delegated act** which sets out the criteria under which grid electrolysis can be deemed to be renewable.
- Now that this delegated act is implemented, a national certification scheme (in line with the current Guarantee of Origin schemes) will be required to certify the sustainability of hydrogen produced nationally.
- **Blue Hydrogen:** Significantly, the Hydrogen Strategy essentially rules out the development of blue hydrogen stating that its production would reinforce Ireland's dependency on fossil fuel imports and thus does not deliver benefits in terms of security of supply. Blue hydrogen, while reducing emissions, is not a zero-emission solution and therefore not in line with Ireland's climate targets.

Hydrogen Uses: In the Hydrogen Strategy, the Minister stressed *“Hydrogen provides us with an incredible opportunity in Ireland, but its use must be targeted to the uses where it will deliver the greatest benefits. We must not become distracted by the possibility to deploying hydrogen technologies where direct electrification would deliver a better outcome. If it is not efficient, if it is not the best use, and if it is not in line with our net zero plans, then we will not be doing it.”* The Hydrogen Strategy sets out the following hydrogen end-use priorities and indicative timelines:

- **Flexible power generation & long duration storage:** Hydrogen can be used to decarbonise conventional generation required during peak periods of demands to complement intermittent renewable generation and can be used as a method of storing electricity during periods of excess renewable generation.
- **Energy Parks:** While the Hydrogen Strategy provides that the use of hydrogen as a primary energy source for large electricity users, such as data centres, is considered a low priority end-use, the Hydrogen Strategy finds that integrated energy park developments which co-locate large demand users and renewable energy generation alongside energy storage or energy transport infrastructure may offer significant opportunities. The Hydrogen Strategy includes an action for the Irish Government to undertake further work to assess the role that integrated energy parks could play, including their potential benefits and the possible barriers that may exist.
- **Heavy duty transport applications:** Heavy duty transport applications where there are binding EU targets for 2030 are anticipated to be the first end use sectors to develop. Hydrogen will likely play a role in the long term for the railway, shipping and aviation industry. However, the Hydrogen Strategy clarifies that hydrogen is not envisaged to play a role in passenger car fleet.



- **Heating:** There is focus on renewable hydrogen deployment in the heat sector, primarily to produce high grade and medium grade heat in industrial manufacturing processes. This appears to effectively rule out the use of hydrogen in residential and commercial space heating.
- **Blending:** It is acknowledged that blending hydrogen into the gas grid to reduce emissions could play an enabling role in the absence of dedicated hydrogen infrastructure and could through the use of certification schemes offer an early commercial market for renewable hydrogen producers. However, it is not being given high priority for now. This element of the Hydrogen Strategy is particularly interesting given GNI's previously published plans to decarbonise the gas network through blending of renewable gases (including hydrogen).
- **Export:** The Hydrogen Strategy provides that while there is enormous potential for export of hydrogen due to Ireland's large offshore wind potential, hydrogen exports are not envisioned to have a significant role as a form of hydrogen demand until at least the mid-2030s. In addition, the development of commercial ports will play an important role in facilitating the establishment of a hydrogen economy.



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