



**Public Consultation on the Electricity Interconnection Policy August 2022**

### **Reply from: Hydrogen Ireland Association**

“Hydrogen Ireland” is an all island association composed of academics, individuals, NGO’s, students and small and large industrial partners from all over Ireland and the UK and a few from wider afield, so that it is an all Island Association, but not limited by the island.

“Hydrogen Ireland Association” aims to:

- *Promote the role of hydrogen as a clean fuel and energy vector and related technologies in the energy, mobility, heat, domestic, industrial and agricultural systems to enable them to become key components of our future low carbon economy on the island of Ireland (Northern Ireland and the Republic of Ireland)*
- *Contribute to the introduction of sustainable clean technologies and processes for the benefit of citizens and of all sectors of the economy through the promotion, use and development of safe hydrogen technology.*

“Hydrogen Ireland” achieves this by:

- Hydrogen Ireland Association facilitates public and business awareness of the potential of hydrogen via informing, showcasing and demonstration of the latest scientific data & technology.
- Hydrogen Ireland Association provides clear, informed and current view on best practice for hydrogen technologies.
- Hydrogen Ireland Association engages with government on both sides of the border to develop policy and support for the inclusion of hydrogen, and its related equipment, within this energy transition.
- Hydrogen Ireland Association expects to create new high-tech jobs and skill sets in all areas of society to enable the green economy.

Hydrogen Ireland welcomes the opportunity to respond to the Public Consultation on the Electricity Interconnection Policy.

Please do not hesitate to contact us for further information or clarification.

+44 (0)78 7283 7939 

[info@hydrogenireland.org](mailto:info@hydrogenireland.org) 

Hydrogen Ireland Cl G Redcross Co. Wicklow AG7PD 29  
<https://hydrogenireland.org>



*The Association for Energy, Mobility, Industry & Community*  
[www.hydrogenireland.org](http://www.hydrogenireland.org)



<https://www.gov.ie/en/consultation/ca3b4-electricity-interconnector-policy-technical-consultation/>

**What amendments, if any, do you consider necessary to the 1999 Act?**

1).

The Electricity Regulation Act, 1999, as amended ("1999 Act") Part1, section 2, Interpretation should include "green Hydrogen" in its "renewable, sustainable or alternative forms of energy" list, as the definition relates to energy used in the production of electricity as its primary source or a combination of.

Part 2; 9G "Gas works" In this section "works" should also include "or hydrogen rated fitting" as well as "natural gas fitting or an LPG fitting".

Overall however it would be warranted to include a full section on hydrogen within the Electricity Regulation Act, 1999, as amended ("1999 Act").

2).

Considering Hydrogen Ireland's industry scope, attention should be brought to Part 4, Section 37 of the 1999 Act: **Direct Lines**.

The role of direct lines and private networks in achieving Ireland's commitment of 80% renewable energy generation by 2030, with the ability to cost-effectively and quickly couple Large Demand Users with proximate renewable energy generators with minimal energy loss, must be recognised and supported by market regulation. This is reflected in our Climate Action Plan, 2021 which includes a specific action point, Action 113 to:

"Review the policy position on the development of private networks/direct lines"

Therefore, Hydrogen Ireland recommends amendments that enable the deployment of direct wire solutions in appropriate circumstances such as other EU Member States have implemented and that have enabled many beneficial energy projects.

**To what extent will clarity over the future energy relationship between the EU and UK be necessary in order to provide for future interconnection between Ireland and Great Britain?**

Large scale energy storage is a necessary requirement for any country aiming to have high penetration of renewable energy and at the same time following an electrification strategy in heating & transport.

Ireland is aiming for both with little thought for large scale energy storage.

However there is large scale energy storage capability in Northern Ireland, at Larne, where over 10TWh of energy can be stored in the form of green hydrogen.

The 500MW electrical interconnector infrastructure at Moyle is a strategic interconnector from the island of Ireland to mainland Britain, allowing stored hydrogen to be regenerated to electricity and sold to markets in the UK & the Single Energy Market in Ireland.



**What of the above three regulatory models offers the most viable route for development of future interconnection between Ireland and neighbouring countries?**

With regard to the Merchant, Fully regulated, and the Cap and floor regulatory models under consideration, it is recommended that CRU assessments of technical, economic and regulatory criteria; including their socio-economic impact; include on-going reference to Carbon Budgets and Climate Action Plan targets for decarbonising all Group 1 sectors of the Irish economy. It will be important to ensure that Ireland's progress in meeting national and EU decarbonising commitments is not compromised by exporting electricity that could be used directly or to produce green hydrogen for use in decarbonisation on the island of Ireland.



**To what extent can dual purpose hybrid interconnectors contribute to Ireland's post 2030 climate and energy objectives?**

Offshore wind capability (floating & fixed bottom) in Ireland's waters has become exploitable potentially enabling Ireland to become a major European producer and exporter of renewable energy, beyond domestic consumption requirements.

The scale of electricity generation compared to maximum domestic consumption for prolonged periods of time may be in the range of 5:1 in just a few years; necessitating technologies such as classical cable interconnection, hybrid or multipurpose interconnection, but also requiring hydrogen production, distribution, TWh hydrogen storage and hydrogen regeneration to electricity.

In light of the required offshore wind targets, point to point interconnector transmission links are not likely to be economically and environmentally optimal for even the current interconnectors being developed. Hybrid or Multi-Purpose Interconnector projects combine offshore wind with market-to-market interconnection and have the potential to provide more coordinated and efficient offshore development.

Potential benefits include:

- Reduction in associated energy infrastructure requirements
- Cost reduction compared to reference case
- Consumer benefits
- Trigger new offshore wind and interconnector capacity
- Reduced spatial/environmental impact
- Efficient use of offshore network
- Enables PowertoX (hydrogen production) where it is required
- Transition to Net Zero 2050

Hybrid connections should also be able to allow for connecting electricity directly from renewable resources and when this resource is unavailable the same infrastructure should be able to take production capacity from peaking plants running on green hydrogen fuel from storage.

The Greenlink interconnector will cross a section of the Celtic sea where the UK Crown estates are planning to deliver 4GW of floating offshore wind power by 2035, fuelling almost 4million homes. It might be timely to revise the planned interconnectors of Greenlink & Celtic Interconnectors to become hybrids to facilitate very near future Irish, UK & French offshore wind development and connection.

**Some notable references:**

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/972441/uk-hybrid-project-forum-march-2021.pdf#:~:text=Hybrid%20or%20Multi%20-Purpose%20Interconnector%20Projects%20combine%20offshore,to%20provide%20more%20coordinated%20and%20efficient%20offshore%20development.](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972441/uk-hybrid-project-forum-march-2021.pdf#:~:text=Hybrid%20or%20Multi%20-Purpose%20Interconnector%20Projects%20combine%20offshore,to%20provide%20more%20coordinated%20and%20efficient%20offshore%20development.)

<https://www.ofgem.gov.uk/publications/multi-purpose-interconnectors-pilot-regulatory-framework>

[https://www.theguardian.com/business/2022/jul/05/floating-windfarms-cornwall-wales-crown-estate-celtic-sea?CMP=Share\\_iOSApp\\_Other](https://www.theguardian.com/business/2022/jul/05/floating-windfarms-cornwall-wales-crown-estate-celtic-sea?CMP=Share_iOSApp_Other)

*The Association for Energy, Mobility, Industry & Community*  
[www.hydrogenireland.org](http://www.hydrogenireland.org)