

The Commission for the Regulation of Utilities,
The Grain House,
The Exchange,
Belgard Square North,
Dublin 24, D24 PXW0

15 February 2019

RE: IWEA's response to CRU18265 Celtic Interconnector - CRU assessment of the Celtic investment request.



On behalf of the Irish Wind Energy Association (IWEA) I would like to welcome the opportunity to respond to CRU's consultation CRU18265 Celtic Interconnector - CRU assessment of the Celtic investment request.

Overall, IWEA believes that further interconnection is a critically important energy policy decision facing Ireland in the coming years. It is a key enabling technology to allowing higher penetrations of wind, both onshore and offshore. Modelling¹ completed for IWEA suggests that a 70% wind target for 2030 is economically preferable to remaining at 40%, but critical to this is the development of suitable supporting technologies, such as interconnection, that enable Ireland to manage the fluctuations from variable renewable electricity such as wind and solar power. As outlined in **Table 1**, the results from IWEA's Energy Vision indicate that Ireland will need to add an additional 1450 MW of interconnection capacity to the existing 580 MW today (assuming 80 MW of export capacity for Moyle) by 2030. This is also supported by EirGrid's modelling within its 'Tomorrow Energy Scenarios'² which indicates that the same level of additional interconnection is required for Ireland to continue decarbonising its energy system (i.e. under the Low Carbon Living scenario).

¹ https://www.iwea.com/images/SYSTEM/IWEA_2030.pdf

² <http://www.eirgridgroup.com/site-files/library/EirGrid/EirGrid-Tomorrows-Energy-Scenarios-Report-2017.pdf>



Table 1: Key technologies required for the Republic of Ireland (RoI) to reach a 70% renewable electricity target by 2030 without increasing the cost of energy for the consumer.

	2020 Assumptions	Fossil Fuel 2030	Renewable Energy 2030
% RES-E	41%	37%	70%
% RES	13%	15%	25%
Total Electricity Demand (TWh)	31.9	36.3	38.8
Wind Power (MW)	3,700 ⁷	3,700	8,000
Solar Power (MW)	50	50	2,500
Interconnection (MW) – All Island	580	580	2,030
SNSP Limit – All Island	75%	75%	90%
Min Gen (MW) – All Island	1,000	1,000	700
Electric Vehicles (nr)	0	0	426,000
Heat Pumps (nr)	0	0	279,000
Small Scale Battery Storage (MW)	0	0	400
Large Scale Battery Storage (MW)	0	0	960

A more detailed in-house analysis of the various measures in the Energy Vision indicates that additional interconnection is likely to be one the most important measures to allow more variable renewables onto the electricity system. The results from this analysis, which are presented in **Figure 1**, indicate that interconnection can reduce curtailment significantly and more than the equivalent capacity of electricity storage.



Wind = 8000MW
Solar = 3000MW
Biomass = 750MW

Min Gen = 1250MW
SNSP = 80%

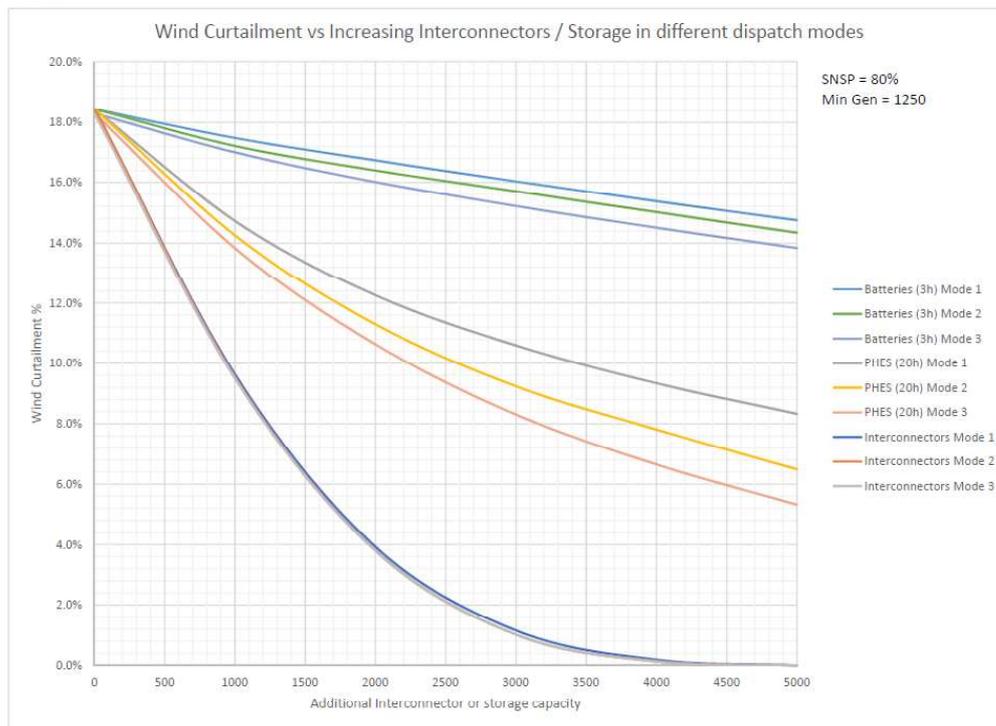


Figure 1: An in-house analysis by IWEA comparing the curtailment mitigation benefits of interconnection and electricity storage for a hypothetical future Irish electricity system with very high levels of variable renewable electricity.

Additional interconnection could also improve capacity adequacy, reducing the need for additional conventional generation to replace retiring plant (sharing capacity across jurisdictions and better utilising renewables). This was evident within the analysis carried out in the IWEA Energy Vision. Also, interconnection has the potential to reduced wholesale market prices, as concluded in a 2017 study by UCC Study³.

Building Celtic will create ties with the French market, allowing power to flow from the lower priced market to the higher. As noted in CRU18265, Celtic is of benefit to Ireland in a Brexit scenario. Connecting to France will ensure that Ireland remains connected to the single EU electricity market. Adding Celtic has a positive impact on the net welfare of all market participants in both jurisdictions, but wind farms in Ireland in particular see a very strong benefit.

The CRU notes in its consultation paper CRU18265 that Celtic has the potential to reduce curtailment of renewables in Ireland and reduce CO₂ emissions in both Ireland and France. This is a similar conclusion as IWEA's Energy Vision. In addition, balancing costs for wind are likely to be reduced. It's also likely that the cost of providing capacity and DS3 would be reduced as interconnectors can provide substantial volumes for little or no additional capital investment.

³ https://www.feem.it/m/publications_pages/ndl2017-037.pdf

Whilst supportive of greater interconnection it is important that any project is cost effective, that both the risks and benefits are shared proportionately between the connecting markets and that interconnector policy is not viewed in isolation of other policy goals. In order to assess the merits of any new proposal it is critical that an interconnector project should be accompanied by a comprehensive, transparent and scrutable CBA that shows quantifiable benefits for consumers in their respective markets.

The CBA will also need to look at whole system costs including deep reinforcement costs, any knock-on effect on the wider market and any ramifications for energy policy goals such as Decarbonisation, Sustainability, Security of Supply and Competition. In addition, consideration should be given to the impact a project may have on wholesale trading regimes when selecting which Country/Market to connect with.

IWEA believes that more explicit policies should be considered by all relevant policy makers to ensure that the development of interconnection is as low risk and efficient as possible for developers, whether they are from the private sector or the TSO.

These could include:

1. Devise a clear regulatory framework (such as cap and floor, merchant or fully regulated) so that developers can clearly model the allocation of cost and risk;
2. Improve the Strategic Infrastructure Development planning process so that it has fixed timelines to a decision, and enable much greater collaboration and interaction between the Board and developers to iron out potential issues with projects early in the design and planning process;
3. Retaining the “case by case” approach to grid connection treatment for interconnection; these projects are rare, large, slow moving and generally interact very differently to standalone generation, so it makes sense to manage them individually;
4. Set a clear timeline and process for applying for and receiving regulatory approval for the cost benefit case of any particular interconnector;
5. Implement the new Maritime and Foreshore Amendment (MAFA) Bill to clarify how sea-bed land leases for interconnectors are issued and charged for; create a clear option for lease structure to enable developers to secure preliminary rights to allow a 5-10 year period to permit, finance and construct an interconnector; implement fixed timelines between applying for and receiving survey licences.
6. Ensure EU policies around electricity market coupling and efficient allocation of capacity on interconnectors are implemented in Irish law and market designs;
7. Work with France and the UK to align the interconnection development process with Ireland’s own processes, so that both can proceed in parallel, with as few as possible interdependencies; preliminary and final approvals to proceed should be linked;
8. Begin work on a regulatory regime suitable for longer term interconnection which is likely to support mass export of renewable power from Ireland; such interconnection could be considered more as a long grid connection than a traditional interconnector, and will likely need to be regulated, funded and underwritten differently as a result; the UK OFTO regime is a useful comparator.



9. Ensure there is a level playing field as between private developers and the TSO when bringing forward proposed interconnectors; both private developers and TSOs bring their own perspective, skills and experience to the table, and the interconnector industry is stronger if both are active.

In our response to the National Energy and Climate Plan (NECP) 2021 – 2030⁴, IWEA notes that Ireland’s priorities for interconnection should be set to get the right quantity on the right boundary to match renewables and thus maximise consumer benefit:

1. Ensure that near-term interconnection such as Celtic is delivered as early as possible in the 2020s. This will bring direct savings to consumers, but also give confidence to renewable energy project developers to push ahead with development and construction.
2. The future estimates of curtailment will be built into RESS bids. Merely approving Celtic would send a positive signal to the market that would likely reduce RESS auction prices that would be in place for 10-15 years.
3. Determine the optimum quantity of interconnection based on a 70% renewables assumption. Consider both the base scenario of domestic renewable energy ambitions, but also examine the cost benefit case for Ireland becoming a net exporter of renewable energy (especially with large offshore projects).
4. Set a clear national roadmap for the quantity of interconnection expected to be built each decade on each boundary in line with wider energy policy, i.e. a level sufficient to support a full decarbonisation of the electricity and energy system by 2050.
5. Ensure that planning policy, interconnector regulatory treatment, grid allocation and foreshore lease policies all explicitly provide for interconnection up to the levels identified in the national roadmap.
6. Engage at senior minister level with France and UK to maximise support for the national interconnector roadmap.

IWEA believes that increased interconnection is a key component of Irish energy policy to ensure a secure and sustainable supply of electricity to Irish homes, schools and businesses. Interconnection provides flexibility and system services which are essential for higher penetrations of renewable electricity and for reducing electricity costs. Increased interconnection is of particular benefit to wind developers as it will decrease curtailment levels and improve the average wind capture price. However, IWEA’s support for Celtic While greater interconnection is important to Ireland IWEA’s support of the Celtic project is predicated on the CBA being comprehensive and considering wider impacts including grid, markets and Irish energy goals.

Yours sincerely,

⁴ <https://iwea.com/images/files/iwea-necp-response-nov-2018-final.pdf>