

Ørsted Submission

An Coimisiún um Rialáil Fóntais

Review of Large Energy Users Connection Policy

Introduction

The Ørsted vision is a world that runs entirely on green energy. Ørsted develops, constructs, and operates offshore and onshore wind farms, solar farms, energy storage facilities, renewable hydrogen and green fuels facilities, and bioenergy plants. Ørsted is recognised on the CDP Climate Change A-List as a global leader on climate action and was the first energy company in the world to have its science-based net-zero emissions target validated by the Science Based Targets initiative (SBTi).

Across the island of Ireland, Ørsted employs over 100 people in our Cork office and operates over 378 MW of wind assets powering almost 250,000 homes. Our Irish team have established Corporate Power Purchase Agreements with Meta, Amazon, Stryker and Johnson&Johnson and we have multiple CPPAs in place globally for both our onshore and offshore assets. Our development pipeline is multi technology, including onshore and offshore wind, solar, hybrid, repower and storage. As such we offer a balanced renewable multi-technology view that we believe will contribute to a resilient energy generation and ancillary service mix.

We thank the CRU for facilitating this consultation and the significant policy that it will inform. We have responded in a concise manner under each of the themes set out. We believe that clear Large Energy User policy, in parallel with private wire policy and contemporary interconnection policy could make a significant contribution to decarbonising industry while contributing to growth.

The key items that Ørsted would like to make clear for consideration are:

- Renewable energy production and demand growth are closely linked. Ireland needs more generation capacity and to help achieve this, demand needs to be stimulated.
- The co-location of renewable energy at the point of interconnection to the grid and demand from LEUs, creating Green Energy Parks, would be key to enabling green and carbon neutral growth for all involved parties. This should also be supported by private wire policy and non-standard interconnection policy.
- That to enable co-location, key stakeholders from industry and the government at the national and local level (e.g. DECC, DETE, EirGrid and local county councils) should come together to develop a framework for identifying suitable sites and the development of these sites via a steering group.
- That any advancement of accounting practices for green energy consumption, such as granular certificates, should be developed for use across the entire Irish grid, rather than left to individual LEUs and other interested parties. The changes should be implemented clearly and absolutely, to avoid parallel markets or competing products.

Demand and Growth in Ireland

Stimulating demand and growth in Ireland has the potential to unlock and realise the full potential renewable energy reserves that Ireland has, especially offshore wind, while continuing to bring substantial economic benefits to Ireland.

Examining the most recently available 2023 Generation Capacity Statement from Eirgrid and SONI shows how demand and generation have roles to play here. The report shows a trend of falling system wide availability and increasing forced outage rates in recent years. It concludes that in all but the lowest demand growth scenario – a scenario where Ireland misses its Climate Action Plan goals and sees limited economic growth – has prolonged adequacy deficits for the next 10 years for the Republic of Ireland and from 2030 onwards for the All-Island system.

To achieve a stable and efficient electricity system that can enable Ireland's Climate Action Plan goals and achieve economic growth, renewable energy at scale will need to be built and connected to the grid. Designing an LEU connection policy that enables demand to be placed at the right locations will be the most cost effective way of achieving all of these goals.

Green Energy Parks

The development of *Green Energy Parks*, that is the co-location of one or more LEU near the point of interconnection of large volumes of renewable energy generation such as offshore wind could be a very powerful solution to Ireland continuing its journey as a net zero country. The Green Energy Park concept echoes how industrial demand developed next to coal mines in the Industrial Revolution. This could be Ireland's equivalent in the Green Revolution.

Industry in the form of energy developers, such as Ørsted, and demand from industrial players, such as pharmaceuticals, data centres and food and dairy production, can and will work together. Renewable energy profiles, demand and potentially storage could be designed and optimised to efficiently couple with each other leading to most cost-effective solution for all parties including the Irish taxpayer. The generation and demand could either be separately connected to grid or joined so that the grid connection was via the LEU. There should also be flexibility in policy to enable innovative solutions via private wire and non-standard interconnection also. Co-location reduces both the amount of additional grid infrastructure required to transmit the power and the stress placed on the grid. Building multiple LEUs or demand sources at the same site would allow the required storage and electrical infrastructure to be optimally used thanks to increased scale.

Implementation and Locations

The role of government and industry are complimentary in the implementation of Green Energy Parks.

The government's strength lies in providing a clear framework for achieving Green Energy Parks. Ideally, this could be in the form of a plan-led approach where the government identifies key criteria for a green energy park. A steering group consisting of industry and the government could work together to establish these criteria and ensure alignment. The government should provide support for the alignment of key stakeholders in Ireland and for identifying suitable sites, gaining access to, and appropriately zoning land.

Initial criteria for the identification of ideal locations for Green Energy Parks could be based around existing infrastructure: strong grid and industrial infrastructure could be leveraged to increase the likelihood of delivering Ireland's energy parks and green goals.

Denmark is currently examining a law proposal to strategically allocate land for renewable energy production and potential co-location of Power to X technology or other industries. The government has identified key areas of the country for development and is assisting the local municipalities to go through the required steps to appropriately assess and zone the land. In some locations, there were local concerns about the municipalities' roles in the process. The municipalities' roles have now been clarified, and are to be included in discussions as early as possible. An industry and government steering group could ensure engagement with all key stakeholders.

Ørsted believes that another key role for the Irish State and the CRU is in the development of appropriate grid codes for the connection of these mixed generation-load centres and build understanding around the complexities of such systems. In the right scenarios Green Energy Parks could provide services to the TSO enabling new revenue streams and contributing to a stable Irish grid. Ørsted is aware of, and looking forwards to hear the outcomes of, the ongoing Private Wires Consultation from DECC. Clarity will be needed to ensure such systems do not conflict with EU laws on vertical integration.

It is important however that the identification of Energy Parks does not impact negatively on the ability to bring opportunities to market in other locations and that it promotes the potential rather than confining it.

Transition Periods and Glide Paths

Green Energy Parks would require grid connections to increase flexibility for generation and demand but would be designed to minimise the impact on the grid. This could be mutually beneficial as it enables additional services to the grid such as balancing while serving as security of supply both ways.

Therefore, Green Energy Parks would represent substantial investments from both LEUs and developers in Ireland and its infrastructure, that could enable an accelerated path to unlocking Ireland's renewable power potential while maintaining a stable grid. As such, a pragmatic approach to real time net zero is requested to secure a cost effective, efficient, and long-term reliable net zero solution.

Transitional and long-term frameworks need to be clear. If generation and demand become dependent on each for their co-development, then negative impacts on one or more parties could be detrimental to the whole Green Energy Park and jeopardise Ireland's transition. The failure of a non-firm connection to become firm would have knock on effects throughout the energy market.

Measuring performance

Developing a measurement approach to drive the grid towards to net zero is commendable and supported by Ørsted. However, we'd like to draw attention to the complexity of a new system of carbon accounting and highlight some key points for its design:

Firstly, such a scheme should be designed at a national level by a party such as the TSO. If there is not clear national policy, non-LEU users could potentially be locked out of a scheme that could provide them a route to decarbonisation.

There should be a clear start date, and then the immediate grandfathering of existing systems. If this is not done, then there could be two parallel markets created which may undermine both schemes.

A new trading commodity would be generated which will add complexity. Import of interconnected energy would need to be considered in any accounting system design. Ideally such a scheme would be compliant with other similar schemes across the EU.

It would be expected that if it was created with renewable energy, that a MWh within a storage unit would be issued with a new green timestamped certificate.

Finally, Ørsted sees green timestamped certificates as a potential starting solution allowing for the tracking of generation of electricity, if designed correctly. The difficulty of this should not be underestimated, especially when the power system is itself changing to a zero carbon setup.

Collaboration across all stakeholders eg. Government, Generation, Demand etc is essential for success in all sectors. However, we recommend that CRU investigates other potential systems to ensure the optimal system design. A new accounting scheme should provide market incentives to support the grid, both in regular and private wire scenarios. In any scheme developed by CRU, and other parties such as the TSO, it should be assessed that the scheme will achieve CRU's and Ireland's goals of achieving a net-zero grid.