



Rialtas na hÉireann
Government of Ireland

National Policy Statement

Electricity Interconnection

July 2023

Prepared by the Department of the Environment, Climate and Communications
[gov.ie](https://www.gov.ie)

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1 Our ambition

Electricity interconnection will play a central role in Ireland's journey to Net Zero transition. Increased interconnectivity is needed to enable our renewable energy ambitions and improve collective security of supply.

Although geographically peripheral to the continent and bloc, Ireland's offshore energy potential makes it central to Europe's shared energy future. As well as providing significant market, consumer, decarbonisation, grid resilience and energy security benefits increased connectivity is a key enabler of realising Ireland's energy ambition as it transitions to becoming a net energy exporter.

Increased interconnection helps balance electricity supply and demand between countries and provides a valuable backup power supply for when the Irish electricity system has reduced capacity. This would allow for increased imports in the case of an adverse shock such as extreme weather or the failure of a major power plant. The role of interconnection will increase in importance as variable renewables become a larger proportion of supply in the Irish and European electricity system both in relation to import and export of electricity.

The primary drivers of Ireland's interconnectivity needs are:

- Creating the necessary export opportunities to match the State's growing renewable energy generation capacity;
- Ensuring electricity security and resilience through diversified energy supply and market access;
- Lowering energy prices by gaining access to other electricity markets;
- Facilitating the achievement of a Net Zero power system; and
- Supporting the carbon budget programme.

We will take a structured and integrated forward planning approach to deliver the necessary infrastructure to both meet Ireland's need and make Ireland central to Europe's energy future.

2 Policy commitments

1. We will increase Ireland's electricity interconnectivity with more capacity, in more cables, to more countries, consistent with our emerging needs, capabilities and grid opportunities.
2. We will continue to ensure all new interconnection benefits the State and is in the long-term interests of final customers pending detailed project specific consideration by the Commission for the Regulation of Utilities (CRU) as set out in the Electricity Regulation Act.
3. We will transition to a more structured forward planning approach aligned with renewable energy generation growth and the State's strategic needs and to provide certainty for the citizen and for industry.
4. We will continue to prioritise proposed projects with the earliest possible delivery prospects and those of specific strategic importance irrespective of whether they have been designated as priority EU cross-border infrastructure through the Projects of Common Interest/Projects of Mutual Interest process.
5. We will support a further connection to Great Britain by 2030 beyond the completion of the Greenlink Interconnector in 2024. This will require comprehensive engagement between the Department of the Environment, Climate and Communications (DECC), the CRU, and EirGrid with the proposed projects that have the most realistic prospects of delivery by 2030 as soon as possible.
6. We will continue to engage with appropriate projects with regard to inclusion on the EU Projects of Common Interest (between EU Member States) and Projects of Mutual Interest (Third Countries) list. Receipt of this designation is not a pre-requisite for project development.
7. We will integrate interconnector forward planning with:
 - a. Offshore renewable energy (ORE) forward planning, identifying site specific electricity export requirements;
 - b. terrestrial grid planning to identify and develop opportunities both for traditional point to point cable and the growth of renewables; and
 - c. broader European forward planning to maximise benefits for all parties, collectively increasing energy security and market diversity.

We will feed the necessary inputs into the proposed Designated Maritime Area Plans (DMAPs) for ORE and relevant regional or local plans.

8. We will establish our anticipated interconnection needs to be tested against technical feasibility, financial viability and benefits to the State and people. We will include the following as a minimum in our consideration.
 - a. A second connection to France by the middle of the next decade. This will build upon the collaborative relationship between EirGrid and the French TSO in progressing the Celtic Interconnector.
 - b. A connection to Spain, if feasible considering the practical geographical challenges
 - c. A connection to Belgium/Netherlands, potentially a hybrid or multi-purpose project.
 - d. A further connection to Great Britain potentially a hybrid interconnector, beyond 2030 seeking to give effect to the April 2023 Ostend declaration of energy Ministers.
 - e. Any further interconnection required to support export of renewable electricity in the context of other uses such as green hydrogen and new demand centres.
9. We will express our integrated planning in an Offshore Transmission Strategy to be updated on a 5-year cycle with a horizon of 2040 ORE delivery ambitions. This strategy will be coordinated and coherent with both the ORE Future Framework and National Offshore Wind Industrial Strategy and it is intended to publish alongside those two documents in Q1 2024.
10. We will aim through the strategy to reach and then surpass the EU target of interconnectivity of 15% generation capacity (peak load methodology). The capacity required will increase as our renewable energy generation ambitions are realised.
11. We will establish a structured framework to align future interconnector development with forward planning, enhance industry certainty, and channel State resources accordingly.
12. We will develop a Memorandum of Understanding with the United Kingdom to establish a cooperation framework on renewable and low carbon energy with a particular focus on electricity interconnection.
13. We will develop the necessary political agreements with EU Member States to support and enable additional connections to the EU. Subject to our forward planning processes we will also explore the potential for additional connections to other Member States.

14. We will help shape evolving EU policy to best meet Ireland's needs and, if required, further adapt our policy approach to align with it.
15. We will explore the potential for multipurpose (Hybrids) interconnectors to: maximise export opportunities; reduce development intensity; and facilitate ORE development.
16. We will establish the necessary legislative, institutional, and regulatory arrangements to facilitate delivery of interconnectivity. It is intended to build upon existing structures and statutory roles, where possible increasing coherence and minimising complexity.
17. We will embed these developments into the next iteration of the National Marine Planning Framework and the National Planning Framework.

3 Background

Circumstances have changed radically since the publication of the first National Policy Statement on Electricity Interconnection in July 2018. Ireland's plan-led offshore renewable energy ambitions have gained considerable momentum. The EU's energy and interconnection ambitions have grown substantially. Maritime development is now guided holistically under the National Marine Planning Framework. A strengthened consenting regime is being established with the Maritime Area Regulatory Authority and a new role for An Bord Pleanála. The UK has left the European Union. The level and pace of change is unprecedented and will continue to evolve.

This statement builds upon the 2021 Policy Statement on the Framework for Ireland's Offshore Electricity Transmission System and the 2023 Policy Statement on the Framework for Phase Two Offshore Wind.

The development of this statement comprised consideration of the EU, Irish and third country policy contexts, European regional energy development initiatives & terrestrial grid development. This was augmented by a public consultation and a research report into economic, financial, climate and technical impacts of additional interconnection.

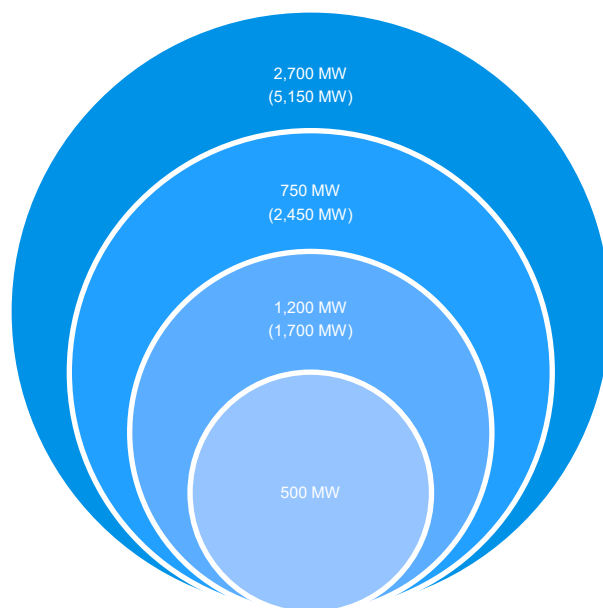
This updated national policy statement on electricity interconnection seeks to set out Ireland's high level policy perspective. It is intended to provide clarity to the public, policy makers, regulators, transmission operators and developers about the broad policy direction Ireland is taking to enable the achievement of the EU's and Ireland's energy ambitions and manage evolving circumstances.

4 Current position

Ireland's interconnection framework was set out in the 2018 National Policy Statement on Electricity Interconnection. That policy statement set out the strategic importance of electricity interconnection and crucially, the role of the Commission for the Regulation of Utilities.

Interconnector development under the existing policy was primarily developer led with case-by-case cost benefit analysis by CRU and anchored to terrestrial grid opportunities. Projects were developed iteratively based on existing circumstances without a forward looking central strategic direction.

Ireland's interconnection capacity currently stands at 500 MW in a single connection to the UK. Facilitated by the 2018 policy statement, capacity is set to more than treble by 2026 to 1,700 MW including a return of direct interconnection between Ireland and the EU via the Celtic Interconnector. Further proposals, although at the conceptual stages of project development, indicate potential capacity of more than 5,000 MW by 2033.



The locations and capacities of these early proposals may not align with Ireland's emergent interconnection needs or terrestrial grid opportunities. The expansion of renewable energy generation and interconnection capacity must in future progress in a coordinated fashion in the wider context of supply security and diversity.

4.1 Projects of Common Interest

EU Projects of Common Interest (PCIs) are key cross-border infrastructure projects that link the energy systems of EU countries. PCIs are intended to help the EU achieve its energy policy and climate objectives. The process has proved to be a successful means of developing electricity interconnector projects since its inception under the TEN-E Regulation No 347/2013 with both the Greenlink and Celtic Interconnectors both being developed under this regime.

PCI status offers significant benefits, the recognition of a project as one of this status. Projects are entitled to accelerated planning with the pre-application and the statutory permit granting procedure to take no more than 42 months per Article 10 of the TEN-E Regulation. Electricity Interconnectors on the PCI/PMI list can also explore the possibility of regulatory incentives as set out in Article 17 of the TEN-E. Under Article 18 of the Regulation projects with this status can also apply for European funding through the Connecting Europe Facility.

The TEN-E Regulation has been updated since the first National Policy Statement on Electricity Interconnection which was published in 2018 – the new Regulation came into effect in 2022 with the first PCI list under this regulation being the 6th list which will be published in 2023 and come into effect in 2024.

The new Regulation has added a new category of infrastructure project – Projects of Mutual Interest (PMI) which allow for EU projects connecting to third countries such as the United Kingdom. Upon granting of PMI status, a project benefits from the same support as those with PCI status.

The Union-wide Ten-Year Network Development Plan process carried out by ENTSO-E is the process for identification of projects that can go forward for consideration for PCI and PMI status. Projects must be on this list to apply for PCI or PMI status. Once the Offshore Transmission Strategy is in place, only proposals that align with these plans will be considered for inclusion.

4.2 Role of CRU

As outlined in the previous Policy statement CRU has responsibility for:

- Deciding on appropriate regulatory support to underpin interconnection investment.
- Cooperating with other National Regulatory Authorities and the Agency for Cooperation of Energy Regulators in the PCI process.
- Cross border cost allocation decisions as part of the PCI process.

- Approving EirGrid’s submissions on national grid infrastructure upgrades that may be associated with new interconnectors connecting to the transmission system.
- Granting licences to transport electricity and maintain an interconnector as per the Electricity Regulation Act 1999.
- Granting authorisation to construct an interconnector, along with the appropriate regulatory regime for the specific interconnector, taking into account the interests of final customers of electricity.

CRU will continue to effectively deliver these functions in future. Additionally CRU’s considerable regulatory experience will inform the development and evolution of the Offshore Transmission Strategy.

CAP 23 requires CRU to publish an updated interconnector policy in Q4 subsequent to the publication of this statement. Given that we envisage a period of continuity pending the publication of the Offshore Transmission strategy CRU should consider aligning their revised policy in line with the strategy to be reflected in CAP 24.

4.3 Role of Eirgrid

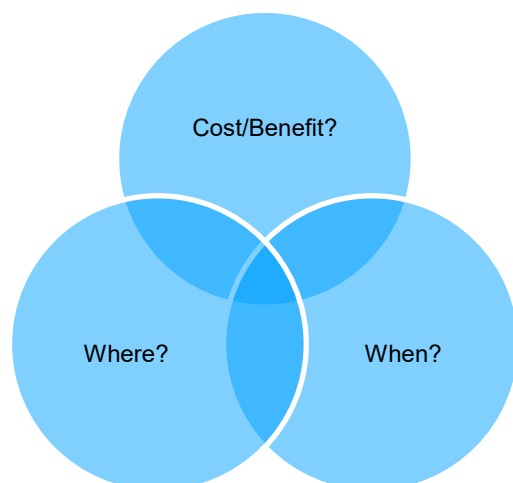
EirGrid as the certified independent transmission system operator in Ireland will play a vital and central role in the expansion of Ireland’s offshore grid.

As per SI 445/2000, EirGrid will operate and ensure the maintenance of and, if necessary, develop a safe, secure, reliable, economical and efficient electricity transmission system, and to explore and develop opportunities for interconnection of its system with other systems, in all cases with a view to ensuring that all reasonable demands for electricity are met and having due regard for the environment.

The 2021 Policy Statement on the Framework for Ireland’s Offshore Electricity Transmission System set out EirGrid’s intended role relating to offshore grid development. In addition to its central role in design and construction EirGrid’s technical expertise and experience will be fundamental informing the Offshore Transmission Strategy.

5 Policy development context

There are fundamental and interdependent questions to be answered in determining Ireland's future interconnection policy approach:



These include but are not limited to balancing the costs and benefits of further interconnection while aiming for the best locational advantage alongside developing projects in step with our energy ambitions. Arriving at the best answers is a complex process.

The broader context of interconnection and energy policy is that the landscape of policy is currently fast-moving with policies in the process of coming into being i.e., **emergent**. Ireland has high ambitions in terms of becoming a net renewables energy exporter, but the current policies need to work and projects need to be consented and deliver so interconnection policy will be **contingent** on these factors coming together. The manner in how we create, consume and transmit renewables is on a **fast-evolving** trajectory. New technologies are emerging, breakthroughs are coming all the time and our policy needs to be flexible enough to allow for and harness these advances.

5.1 Emergent factors

- **ORE forward planning:** DMAPs, that process will play a significant role in determining precise interconnection requirements.
- **Existing & planned Interconnector projects:** If and when progressed, each project have a knock-on impact on further development in terms of overall needs
- **Offshore Hydrogen:** As policy and technology evolves and matures, we will gain further clarity on the necessary balance between electricity and hydrogen export requirements.

- **National Industrial Strategy for Offshore Wind:** As this Strategy is established and evolves, further geographical and capacity interconnection requirements are likely to emerge and conversely new interconnection will create industrial opportunities.

5.2 Contingent factors

- **Generation Growth:** The pace of delivery of Ireland's renewable energy capacity, both on and offshore, will be a key driver of interconnection need. European generation growth will likewise shape export opportunities and requirements.
- **National & European Grid Expansion:** The strengthening of Ireland's terrestrial grid will present further point to point interconnection opportunities and be a key factor in determining the balance of energy to be exported. European Grid expansion will also present opportunities for collaboration to meet mutual needs.
- **National & International Demand:** Ireland's electricity demands are set to grow. Increased interconnector capacity growth will need to be cognisant of Ireland's energy needs. Growing European energy demand will play a key role in determining the business cases for future interconnection.

5.3 Evolving Factors

- **Irish Policy:** ORE policy relating to the future framework is nearing culmination, Ireland's first DMAP is being developed in the context of Phase II. More DMAPs will be developed in the near and long-term. Consideration needs to be given to the potential of multipurpose interconnectors. Green hydrogen policy and the potential for different energy type export may also impact on electricity export requirements.
- **EU Policy:** EU policy impacting on interconnection is also maturing in particular in relation to multipurpose interconnectors and market design.
- **Technological Developments:** emergent technologies in relation to energy generation, transmission and storage will need to be accommodated, where relevant and feasible.
- **Energy Security:** As Ireland's energy system becomes increasingly dependent on electricity for decarbonisation reasons it is important that sufficient resilience and diversity in supply is maintained to mitigate risks to energy security. Interconnection policy will need to be sufficiently flexible to adapt to changing levels of fuel diversity.

5.4 Other factors

External analysis carried out on behalf of the Government by DNV suggests interconnector business cases will exist in a number of different scenarios out to 2050. The DNV report broadly shows the benefits of a range of further interconnection along with strengthened business cases for development of those links in the scenarios presented in the research. Further, more detailed, consideration and analysis will be needed for specific proposals to ensure the benefits to the State and the people of Ireland.

A public consultation was held in 2022 to which 21 responses were received. Responses were overwhelmingly supportive of the need to develop further interconnection, highlighting that further cross-border connectivity would be expected to have a beneficial impact on the achievement of Ireland's climate and energy objectives, including the delivery of offshore renewables.

In addition to technical and geographic constraints a careful balance will have to be achieved. Each new interconnector will impact on the business case for subsequent interconnection despite the increase in generation growth. Similarly, a careful balance will have to be struck between connections to the EU Internal Energy and UK Markets.

Ireland's future offshore grid will also need to account for generation intermittency, mitigation of curtailment and the need to balance electricity flows between different countries in the context of their respective outputs and demands. This balancing is carried out by National TSOs. EirGrid will work very closely with its future connected counterparts to ensure balance across the system.

As with terrestrial grid connection, interconnection is a valuable and limited resource which must be apportioned appropriately to best meet Ireland's needs. Careful sequencing and timing of delivery of future interconnection will be necessary.

6 Integrated forward planning

To deliver the optimal amount of interconnection, in the right places at the right times, moving to an enhanced integrated forward planning approach is necessary. This strategic forward planning needs to consider the factors highlighted above and most particularly be aligned with:

- ORE forward planning
- Terrestrial grid forward planning
- International grid forward planning
- National Industrial Strategy for Offshore Wind
- National Planning and National Marine Planning Frameworks

Terrestrial and international grid strengthening will help determine the constraints and opportunities both for traditional point to point interconnectors and those directly related to energy generation.

As the ORE Future Framework matures to specific project development, interconnection needs and opportunities will emerge. Likewise, the interconnection opportunities may have a significant bearing on the location of new generation.

A co-ordinated approach is necessary to identify with more precision the number, location, timing, and capacity of interconnector requirements. In short, we need to assess the future and plan now for it.

It is intended that this high-level forward thinking will feed into the detailed planning and considerations of relevant proposed DMAPs. These DMAPs may be ORE specific and any regional or local plans where such connections may need to be considered. The outcomes of those processes will provide the necessary level of certainty to finalise informed detailed proposal design and enable the required investment decisions.

Prior to the conclusion of these forward planning processes we have identified the need for an additional connection to Great Britain by 2030. That connection's specific strategic importance is to:

- help Ireland meet its carbon budget programme sectoral emissions ceiling and commitments for electricity – analysis carried out by DNV shows evidence that an additional connection will be beneficial in this regard; and

- provide greater resilience and mitigation to potential disruption of existing interconnectors.

7 Offshore Transmission Strategy

It is intended to draw together the strategic forward planning strands into an Offshore Transmission Strategy to be coherent and coordinated with the Future Framework and National Industrial Strategy on Offshore Wind. The Strategy will evolve in a 5-year cycle (with a 20-year horizon) to manage contingent and emergent nature of process. It will convert the policy requirements into specific goals.

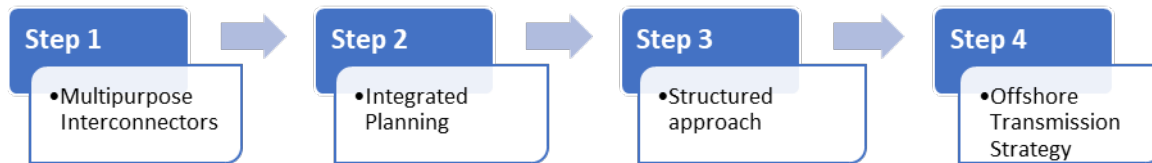
Subject to further development and finalisation the Strategy will set out matters such as

- The number, capacity and indicative locations of interconnection cable requirements
- The appropriate option for the specific cable, i.e., traditional Point to Point or Multi-purpose,
- The terrestrial grid connections required to support offshore renewable generation
- Intended anticipatory offshore grid investment to support and future proof further offshore generation.
- Prioritisation and sequencing of interconnection cables
- The intended regulatory treatment of interconnection cables.
- Any necessary inputs into DMAPs, ORE specific and those to be developed by local and regional authorities.

8 Structured framework

The increasing level of certainty generated by this approach will not in itself be sufficient and an appropriate framework will need to be developed and established to channel project promoter efforts to State needs and requirements, and align CRU, Eirgrid, ESB and other state resources accordingly. Appropriate structures and criteria will be necessary to manage potential competition and/or sequencing between developers. It is also intended to explore and establish appropriate processes to integrate interconnection development with emergent generation capacity. These will also be set out in the Strategy.

9 Further policy development



Irish Interconnection policy needs to evolve in tandem with the expansion of the offshore energy sector and grid development in Ireland, the EU and third countries. This adaptive approach is necessary due to the pace of expansion, technological development, and evolution of EU energy policy.

This statement is the first step in strengthening the policy framework for electricity interconnection. The next step required to develop the strategy is to establish an appropriate policy framework for multipurpose interconnectors. It will be necessary to define multipurpose interconnectors and how they might best fit into Ireland's offshore grid and generation ambitions. While multipurpose interconnectors have the potential to bring wider benefits, this potential has to be confirmed in an Irish context and appropriate regulatory treatment will need to be established.

Building upon that work and the learning that will be achieved through the development of Phase II, a robust means of integrating interconnection planning with ORE, terrestrial and international grids will be established. This structure will then be finalised and system-inculcated to enable delivery within a proper, transparent and predictable forward planning context.

10 Appendices

10.1 Glossary

- CRU – the Commission for the Regulation of Utilities, Ireland’s independent energy and water regulator.
- Curtailment – the deliberate reduction in output of renewable generation below what could have been produced in order to balance electricity demand and supply due to transmission constraints.
- DMAPs – Designated Maritime Area Plans, sub-national detailed marine spatial planning
- EirGrid – Ireland’s transmission system operator.
- ENTSO-E - the European Network of Transmission System Operators.
- Hybrid or multipurpose interconnection – a new and developing category of electricity interconnection which has some combination of point-to-point interconnection and offshore generation.
- MARA – the Maritime Area Regulatory Authority, Ireland’s designated regulator for the maritime area.
- MW - Megawatt
- TYNDP – Ten Year Network Development Plan

10.2 Summary of DNV key points

A study carried out by external consultants, DNV, which was completed in February 2023 has helped inform the new electricity interconnection policy statement. The purpose of the study was to investigate the economic, financial, climate and technical impacts of additional interconnection with Great Britain, France and Spain – with three reference years considered, 2030, 2040 and 2050. The study found that:

- Additional interconnection in 2030 beyond existing projects, or projects that are already at an advance stage of development, has significant economic benefits for the Single Electricity Market and supports the achievement of Ireland’s 2030 energy objectives and de-risks offshore wind development.

- Development of additional interconnection by 2050 between Ireland and the countries included within the scope of the study is justified as it delivers increase socio economic welfare gains for both the SEM and the second country.
- Additional interconnection also facilitates a significant reduction in SEM curtailment, allowing the export of surplus green electricity and de-risking renewables development. The study showed that additional interconnection by 2030 would reduce curtailment by 2.2 TWh which would be a circa 20% reduction in curtailment for the SEM.
- The business case for further electricity interconnection development is strengthened by additional interconnection through congestion rents. Analysis in the study shows that investment in additional interconnection with Great Britain by 2030, for example, could pay back in 15 years. Increased congestion rents are observed in analysis of further links with France and Spain.
- Additional interconnection will aid in the decarbonisation of the SEM. Further interconnection by 2030 with Great Britain, for example, is shown to yield a 230 ktonne/year reduction for the SEM.

10.3 Summary of public consultation submissions

The process to update the 2018 policy was informed by a public consultation which ran from June to September 2022, and from which 21 responses were received. The public consultation respondents were overwhelmingly supportive of the need to develop further interconnection, including hybrid projects, highlighting that further cross-border connectivity would be expected to have a beneficial impact on the achievement of Ireland's climate and energy objectives, including the delivery of offshore renewables.

- Identify security of supply, de-risking renewable energy development and supporting Ireland's energy transition as benefits of further interconnection.
- Are in support of further interconnection with both the EU and Great Britain.
- Support regulatory models being employed on a case-by-case basis but were also broadly supportive of the use of a 'cap and floor' regulatory regime
- Are of the opinion that the current legislative framework is sufficient for point-to-point interconnection but that further consideration of multipurpose or hybrid interconnection will be required.

- See improved engagement with the Commission for Regulation of Utilities as essential for the development of both Projects of Common Interest and non-Projects of Common Interest electricity interconnectors.
- The future development of multipurpose interconnectors has the potential to unlock offshore wind development and optimise offshore network development, further consideration of both Ireland's legislative framework and the EU's existing interconnection rules is required.