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2<sup>nd</sup> September 2022

## **EDFR Response to the DECC Consultation on Electricity Interconnection Policy**

Dear Electricity Interconnection Policy Team,

### **Introduction**

EDF Renewables (EDFR) is part of one of the world's largest electricity companies and our investment and innovation is bringing down costs for consumers and delivering significant benefits for communities. We operate in more than 20 countries around the world. We develop, construct and operate wind farms (onshore and offshore), solar and battery storage projects, and have more than 25 years' experience in delivering renewable energy generation.

We are in advanced discussions in relation to an onshore wind development pipeline of almost 1 GW with aspirations for far greater growth in Ireland across all renewable generation technologies. This ambition is illustrated by our investment in 50% of the Codling Offshore Wind Park Development, off the East Coast of Ireland and the development of a solar portfolio which now has projects under construction.

Given the large level of renewable generation installed and being proposed for Ireland, we welcome DECC's consideration of the most appropriate policy for interconnectors in Ireland. EDFR welcomes the opportunity to engage with DECC and to respond to this consultation.

### **Policy Context**

The future role of interconnectors must be assessed in an integrated way, taking account of the overarching policy objectives for the future Irish energy system.

An important factor to be considered is that, in the context of the Climate Emergency, the accelerated pace of all renewables development is urgently required to decarbonise the system. The Irish Government has, in July 2022, increased the country's offshore wind target for 2030 from 5 GW to 7 GW after reaching an agreement on Sectoral Emissions Ceilings. The agreement set maximum limits on greenhouse gas (GHG) emissions for Ireland to reach a 51% reduction in GHG emissions by 2030, delivering on a key Programme for Government (PfG) commitment.

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The revised Climate Action Plan 2021 (CAP)<sup>1</sup> has increased our 2030 renewable electricity targets to 80%, sets out new electricity sector emissions reduction targets of 62% - 81% from 2018 levels and aims to complete the phase-out of coal and peat-fired electricity generation, among other targets. Realising the full potential of the Irish renewable energy sector is one of the central elements of the CAP and it includes a suite of actions to decarbonise the electricity sector and increase the quantity of renewable generation, to meet our 2030 targets.

Offshore wind will play a key role in delivering a net zero electricity system. It should be noted that a Sustainable Energy Authority of Ireland (SEAI) Energy in Ireland 2020 Report<sup>2</sup> found that in 2019, electricity generated from renewable sources amounted to 11,780 GWh, already accounting for 37.6% of gross electricity consumption (compared with 33% in 2018). Wind was the largest renewable energy generator, furthermore, wind energy was the second largest source of electricity generated in 2019 after natural gas.

We are fully committed to contributing to the national 2030 targets on emissions reduction and renewable energy at the lowest cost to the end consumer, as set out in the CAP 2021 and the National Energy and Climate Plan 2021-2030 (NECP).

#### **EDF Renewables Positions**

EDFR believes that interconnectors will play a role in delivering a net zero energy system in Ireland and supports the building of new interconnectors, subject to robust cost benefit analyses (CBA). Successful use and deployment of interconnectors, however, will require careful consideration and management of a range of challenges arising. In this EDFR response to the Consultation on Electricity Interconnection Policy we have set out both the potential benefits from interconnection and the key issues that will need to be addressed, taking full account of the policy context that we have summarised above.

We would like to highlight the following points:

#### **Export Opportunities**

- Ireland's renewable energy resource potential is one of the largest in Europe, particularly for offshore wind, of which SEAI outlined the potential for 30 GW of capacity by 2050. However, given Ireland's relatively small market size and lack of a means to export capacity, this will present a challenge to meeting this potential. Increased interconnection capacity would enable the export of Irish energy to the wider European market. A robust CBA is recommended, to examine the impact on customers in both markets and to consider the full costs of interconnection.

#### **Renewable Energy Integration**

- We support indigenous renewables generation as part of the wider technology mix, of which interconnection plays a part. We therefore believe that over the short-medium term, it's important that interconnection is not viewed or presented as a substitute for increased indigenous renewable

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<sup>1</sup> <https://www.gov.ie/en/press-release/b0e43-the-climate-action-plan-2021-securing-our-future/>

<sup>2</sup> <https://www.seai.ie/publications/Energy-in-Ireland-2020.pdf>



generation, but as a complementary component of the future energy system. EDFR is concerned that there is a possible perception that as more interconnectors connect onto the Irish system, the need to develop indigenous renewables generation will be less pressing, as the increasing demand for low carbon electricity can be met with imported energy from the EU and GB. This perception could potentially undermine investors' confidence in the business case for further renewables development in Ireland.

- In order to meet our 2030 targets, both increased indigenous renewable generation and new interconnection will need to be developed in parallel, in order to deliver an efficient and secure low carbon electricity system.

#### **Grid Reinforcement**

- We recognise that increased interconnection could support the delivery of Ireland's energy policy. This has the potential to ensure a secure and sustainable supply of electricity, provide the flexibility essential for higher penetrations of intermittent renewable electricity, and to reduce electricity costs.
- The challenge for electricity transmission and distribution is supporting a rapidly evolving generation mix that must be capable of providing secure, reliable power to customers, 24 hours a day, 365 days a year, while decarbonising the power sector. The Irish grid is currently subject to very high levels of dispatch down and in order to reduce these, major grid reinforcements and building additional onshore grid should be given the highest priority. Delivering interconnectors should not be seen as a substitute to strengthening the onshore grid, however they can operate as complimentary technologies.

#### **Domestic security of supply**

- As part of a wider technology mix interconnectors can strengthen the resilience of a network by transferring energy from other networks. However, this can be at cost; Commercial markets will dictate the interconnector flows and system operator involvement will be limited to ensuring system security particularly if there is concurring system tightness across neighbouring markets. Therefore, ensuring greater energy self-reliance is critical at this time, particularly given the current geopolitical climate and cost of living challenges.
- We would welcome a holistic approach to ensuring security of supply. If the aim of further interconnection is to enhance security of supply, then its contribution must be analysed in the context of the steps already taken across the capacity remuneration market (CRM) market design and the DS3 workstream, both of which aim to enhance security of supply and further facilitate renewable integration.
- It should be noted that with rapid interconnector development, the electricity market may change in ways that are not be immediately obvious and might not be beneficial for consumers in both countries. Increased imports and reduced gas-fired generation could reduce system inertia below critical levels more often. To rectify this situation, the system operator at times may have to curtail windfarms - or indeed interconnectors themselves - off the system, thus raising costs for customers.



This increase in consumer costs should be captured and factored into any further Government's cost benefit analysis (CBA).

#### **Level Playing Field**

- There are limited opportunities to connect additional sources of electricity generation to an already strained transmission system and we request that a balanced and fair approach is taken with regard to the market conditions and grid connection costs applicable to all technologies, from windfarms to interconnectors. The Celtic Interconnector, for example, will be exempt from standard rules, as a Project of Common Interest<sup>3</sup> (PCI) and will benefit from "improved regulatory conditions". While it's understood that additional support and investment is helpful for the successful deployment of PCI projects, a level playing field for all technologies is welcomed.

#### **Market Distortion**

- Due to Ireland's location at the edge of Europe, further interconnection may enable access to the wider EU energy market, increase the range of electricity sources available and allow Ireland to avail of differences in market prices. We believe that it's important to consider interconnectors in terms of what they deliver, which is transmission infrastructure that connects two markets. This is not the same as installed generation, which facilitates Ireland in terms of ensuring domestic security of supply.
- We note the potential risk that Ireland could become a captive market, given its small scale and its location, as there may be a limited opportunity for generators to compete equally, given the specific system and transmission limitations that the TSO must manage. Large transmission assets bidding into the capacity market, such as the Celtic or Greenlink Interconnectors, with limited exposure to underlying wholesale markets or specific penalties that incentivise performance, may create market distortions. We therefore recommend that a mechanism is put in place to prevent market distortions this from occurring, which could in turn undermine the achievement of the all-island Reliability Standard<sup>4</sup>.
- The European Commission's REPowerEU plan, published in May 2022, sets out measures to reduce EU's dependence on Russian fossil fuels by accelerating the clean energy transition and increasing the renewable electricity target in the directive to 45% by 2030. We believe it's critical that Ireland maintains focus on increasing indigenous renewables deployment, in line with this European Plan.

#### **Recommendations**

Ireland has set an ambitious target of 80% renewable electricity share by 2030, and the challenges around meeting these targets are clear. As stated in previous consultation responses to DECC, we strongly recommend that the Government, EirGrid and the Planning Department continue to focus on:

- Reinforcing the existing onshore grid in order to connect the 2030 pipeline of RES-E projects.

<sup>3</sup> [Key cross border infrastructure projects \(europa.eu\)](https://europa.eu)

<sup>4</sup> [EirGrid-Group-All-Island-Generation-Capacity-Statement-2019-2028.pdf \(eirgridgroup.com\)](#)



- Supporting the development of an offshore grid by defining a clear offshore grid policy; and
- Seeking to resolve the issues<sup>5</sup> faced by generators in the planning system.

This will in turn enable the investment in both new interconnectors and new renewable projects both on- and offshore to the transmission system and enable Ireland to meet its RES-E targets to 2030 and beyond.

Electricity will play a significant role in cost-effective decarbonisation and this will require solutions to some major challenges such as impacts on network infrastructure, fair allocation of costs across users, and political certainty for long term infrastructure investment.

In EDFR's view, many of the benefits of interconnectors such as optimal RES-E integration, can be delivered alongside network reinforcements. Security of supply can be achieved by striking a balance between domestic market sufficiency, reasonable dependence on imports, and external market interconnection with access to other markets. We believe the optimal approach to is a combination of indigenous grid and generation, with the addition of interconnection.

We recommend that the Government and EirGrid undertake analysis, to examine the complete system development required, to meet the decarbonisation targets at least cost to consumers. The appropriate regulatory framework needs to be put in place and finally, we would welcome confirmation regarding the Government's priorities, which we recommend being security of supply, decarbonisation and cost reduction.

#### Conclusion

In conclusion, we would like to thank the Department of the Environment, Climate and Communications for the opportunity to engage on this matter.

Should you wish to discuss any of the issues raised in our response or have any queries, please contact [REDACTED] or me.

Yours sincerely,

DocuSigned by:  
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[REDACTED]  
Director for Offshore Wind and Ireland

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<sup>5</sup> Issues such as planning delays could be addressed by increasing resourcing



## Answers to the Questions

### Ireland's increased energy ambition

- 1. To what extent would a commitment by Government on delivery of further interconnection capacity, beyond the proposed Celtic and Greenlink interconnectors, impact achievement of Ireland's 2030 and post 2030 energy objectives?***

A commitment by Government on further interconnection would help to incentivise investment in renewable generation in Ireland, particularly in the area of offshore wind. Ireland has a significant offshore wind resource with the potential to export significant levels of power to Europe. Further interconnection has the potential to enable increased export for Ireland. However, a CBA should be carried out by the Government on each proposal for an interconnector, to confirm that there is a net benefit in each individual case, noting that the level of benefit received by each country connecting the interconnector may not be equal. Furthermore, it should be considered that the country to which the energy is being exported may not have the same level of interest in or can accept the export capacity.

Ireland has some of the highest average wind speeds in Europe averaging more than 12 m/s at 100m hub height on the west coast, according to Wind Energy Ireland (WEI). Ireland's significant offshore resource exceeds national demand by several orders of magnitude.

Offshore wind will play an important role in Europe's fight against the climate emergency. At least 400 GW of offshore wind is planned to be installed in European waters by 2050. Ireland also has ambitious offshore wind plans, with a target of 7 GW for 2030, and at least 30 GW of floating wind possible for post-2030, as set out in the Programme for Government.

Ireland has set an ambitious target of 80% renewable electricity share by 2030, but the rapidly increasing electricity demand highlights the challenges around the plans to meet the 2030 targets set. The current method of grid planning to meet demand needs to be accelerated in order to facilitate renewable targets.

The Irish offshore area does not yet have an electricity grid, and it is unclear how these major offshore wind capacities will connect into the energy system. The delivery of a pan-European offshore electricity network will be key to enabling and accelerating Ireland and the EU's ability to incorporate offshore resources and meet 2050 climate targets. Ireland has an opportunity to develop an offshore grid that integrates a high level of offshore renewables and a potential energy export opportunity, subject to robust Government CBA.

EDFR is concerned, however, that there is a possible perception that, as more interconnectors connect onto the system, the need to expand indigenous renewables generation will be less pressing, as the increasing demand for low carbon electricity can be met with imported energy from the EU and GB. This perception could potentially undermine investors' confidence in the business case for further renewables development in Ireland.



In reality, both increased indigenous renewable generation and new interconnection are required in parallel in order to deliver an efficient and secure low carbon electricity system. We believe it is important that interconnection is not viewed or presented as a substitute for increased indigenous generation, but as a complementary component of the future system.

New interconnection should neither be viewed as a single solution to guarantee greater renewables penetration, nor as a means to address the locational and network issues that limit renewables penetration at the moment. Rather, network issues and locational constraints require to be resolved directly, for several related reasons.

**2. *In the context of Ireland's increased climate and energy ambition, should Government establish future minimum interconnection targets, with capacity to be delivered by a specific point in time? If so, what should these targets be?***

Rather than setting minimum interconnection targets, we believe that the Government should instead focus on strengthening existing onshore grid and developing the offshore grid. This will help to enable further indigenous renewable energy development and therefore allow Ireland to meet its 2030 RES-E targets. It will also enable the Irish electricity system to accommodate higher levels of future interconnection.

In theory, interconnectors can assist with intermittency issues, which facilitate higher levels of intermittent renewable generation on the system. This can in turn facilitate further levels of renewable integration in Ireland. However, the reality is more complicated, taking into consideration the current network capabilities of the Irish electricity system.

The existing network constraints and locational issues may limit the benefits of interconnection, and these therefore need to be resolved in the short term, to enable interconnection and facilitate both existing and new renewable generation.

The Irish electricity network is currently lacking the infrastructure required to meet the rapid pace of renewables penetration. Grid reinforcements are needed to facilitate additional renewable generation and interconnection. We recommend that network and locational issues are resolved in the short and medium term. It would be helpful if the impact of new interconnection were considered in an impact assessment, to avoid system issues such as locational constraints.

We further note that interconnectors provide asynchronous capacity, which means that they reduce inertia, and therefore have the potential to exacerbate inertia and frequency issues.

With RESS volumes coming online and the CRU's target for EirGrid to reach 80% SNSP by 2023 and 85% SNSP by 2025, interconnectors may well help to deliver higher SNSP levels and minimise dispatch down over the coming years, but this will only be possible if the Irish grid is fully prepared. Areas with interconnections between grids can more easily accommodate high penetrations of renewable energy generation. Increased deployment of grid-scale energy storage may help intermittent generation meet peak demand.



Through reinforcing the electricity grid, the number of constraints on the system can be reduced. Reinforcements can include the construction of interconnectors to link the Irish grid to other electricity systems, building new battery storage units that help maintain the system, or 'uprating' the existing transmission system.

**3. *Regarding the location of future interconnection, should priority be given to developing further interconnection with Great Britain or the EU IEM, or both?***

It will be important that Ireland engages with both other EU member states and the GB on future interconnection opportunities. The GB and the EU both have an interest in working together with Ireland in a future energy system. We recommend that the focus should be on developing interconnection that helps Ireland meet its post-2030 climate and energy objectives.

**4. *What are the primary benefits associated with increased interconnector capacity? For instance, would the primary benefit relate to enhanced security of electricity supply or de-risking future renewables development?***

Interconnection has an important role to play in the energy system, and can deliver benefits to consumers, including:

- Short-term balancing of EU markets
- Diversification of security of supply
- Short term consumer benefits from lower wholesale prices or price arbitrage

Greater interconnection has the ability to facilitate larger levels of renewables on the grid while also contributing to the reduction of curtailment levels. Integrating higher levels of renewables with insufficient interconnection or storage results in increased curtailment.

Security of supply of energy across the European energy system can be increased through provision of additional capacity by interconnection to neighbouring systems. Provision of European energy for European consumption reduces reliance on energy imports from external markets and increasing resilience. Europe is striving to reduce its reliance to imported Russian fossil fuels; this can be achieved by reinforcing its electricity system through greater interconnection.

Interconnection ensures that electricity can flow to where it is most valued and that consumers benefit from international competition, and, as a result, lower prices. Electricity interconnectors can flow in both import and export directions. This helps to lower the long-term costs of electricity for the consumer. At times of high prices in Ireland, interconnectors can facilitate the importation of cheaper electricity from other markets. Equally, interconnections offer an opportunity for increased energy exports to European markets when necessary. Ireland has a considerable offshore wind potential, but to derive the full benefit of wind resources, greater grid interconnection will be crucial.

There are some further areas of consideration with interconnection in Ireland which include:





Level Playing Field - All technologies should be subject to the most appropriate level of support which means that they can fairly compete in the market. The market conditions and grid connection costs applicable to each technology or method should be reflective of this.

Market Distortion - It is important to ensure that interconnectors are treated in a similar manner to other parties with whom they are will be allowed to compete. Otherwise, the misalignment in treatment effectively distorts markets in which interconnectors are allowed to compete, which is likely to result in inefficient investment. Without fully taking this accounting for such market distortions, any CBA of increased interconnectors' value for Ireland would be invalid. There is a risk that Ireland could become a captive market, given its small scale and its location, as there may be a limited opportunity for generators to compete equally, given the specific system and transmission limitations that the TSO must manage. Interconnectors are transmission infrastructure that connects two markets. This is not the same as installed generation, which facilitates Ireland in terms of ensuring domestic security of supply. There is a concern that large transmission assets bidding into the capacity market, such as the Celtic or Greenlink, with limited exposure to underlying wholesale markets or specific penalties that incentivise performance, may create market distortions that could undermine the achievement of the all-island Reliability Standard<sup>6</sup>.

Security of Supply - Interconnection can help security of supply, however, it also exposes countries to risks from events far outside their own borders, which makes it essential that the analysis is capable of looking at these wider risks and associated costs. Secondly, interconnectors can often be the largest loss on the system and as such can cause large deviations in frequency. This is a security of supply issue and which requires the system operator to ensure adequate response is available or, in certain network situations, reduce flows over interconnectors altogether. Interconnectors could therefore be seen to create a need for additional cost to the network, but a CBA would be needed to identify how significant this is.

Renewable generation business case - There is a risk that as more interconnectors connect onto the system, the need to expand indigenous renewables generation will be less pressing, as the increasing demand for low carbon electricity can be met with imported energy from the EU and GB. This perception could potentially undermine investors' confidence in the business case for further renewables development in Ireland and a subsequent overreliance on energy supplies from neighbouring systems, similar to the Irish gas market. In reality, both increased indigenous renewable generation and new interconnection are required in parallel in order to deliver an efficient and secure low carbon electricity system. We believe it is important that interconnection is not viewed or presented as a substitute for increased indigenous generation, but as a complementary component of the future system.

How interconnectors affect competition, flexibility, security of supply, decarbonisation, etc. cross-border, particularly given the difference in treatment of interconnectors and generation across interconnected countries, cannot be known without robust analysis.

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<sup>6</sup> [EirGrid-Group-All-Island-Generation-Capacity-Statement-2019-2028.pdf \(eirgridgroup.com\)](#)



#### National Legislation

**5. *Is the existing legislative framework contained in the 1999 Act appropriate to secure future development of interconnector capacity?***

EDFR is not commenting on this question.

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

There are several areas of legislation which must be checked in the 1999 Act to ensure that they are appropriate.

The first is that any pan EU legislation is appropriately supported to ensure cross market compatibility in both market and technical terms.

The second is to ensure that appropriate arrangements are made in terms of ownership and operation of the interconnectors, including how they interface with the existing TSO.

Consideration should be made of the role of the CRU and EirGrid as regulator and TSO, respectively. This must include ensuring the best outcomes for the consumer in terms of security of supply, cost and climate change impact reduction.

Finally, it is unclear as to whether existing provisions cater for hybrid interconnection and we would welcome clarity on this aspect.

#### Brexit and future EU-UK Interconnection

**7. *To what extent will the development of future interconnection between Ireland and Great Britain be impacted by the removal of Great Britain from European Market Coupling?***

It is possibly too early to say, however, this is not a matter for Ireland to try to resolve on its own. Issues such as the distortions caused in pricing and flow direction for EWIC post-January 2021 (Brexit) due the type of market rules being applied will need to be considered as more Europe and Great Britain or Ireland and Great Britain interconnection is considered.

**8. *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?***

Given the relatively long development period for interconnectors, it is worth pursuing new interconnection, as the urgency of resolving the EU-GB interconnection relationship should give solutions before any new interconnection is ready to move into the construction phases.

We support future interconnection between the SEM and GB which provides the opportunity for connection to a large market, a relatively short distance away. GB is also the world's leading offshore wind market, with significant opportunity for joint projects in the Irish and Celtic Seas. The recent Crown Estates seabed auction for sites in Celtic Sea highlight this potential, and it is important to



develop market arrangements under North Seas Cooperation. It would be advantageous for Ireland to have GB included in this.

#### The Role of the CRU

***Are the technical criteria employed by the CRU in assessing interconnector development applications appropriate?***

In EDFR's view, an appropriate methodology to use for assessing interconnector development applications is that which was approved by ACER, to estimate the cost benefit of a grid project. This methodology<sup>7</sup> has been used for projects included in the future Ten Year Network Development Plans (TYNDP), and for selecting the Projects of Common Interest (PCIs) at European level. Interconnection projects between Ireland and France will be considered as PCI, and it therefore makes sense to use this ACER methodology.

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

The cap and floor regulatory model may be the most viable, as this strikes a balance between providing incentives for interconnector developers and owners, to minimise cost and optimise performance, providing protection for consumers from risks such as excess cost and excess returns, and providing protection for debtholders to ensure project financeability. This model is already in place for the Greenlink Interconnector. It is also possible that other regulatory models will be more appropriate for different interconnectors based on the type and scale of the proposed project.

#### Hybrid Interconnection

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

EDFR is not commenting on this question.

***11. What is the appropriate policy and regulatory framework to provide for development and operation of dual-purpose hybrid interconnectors?***

The most appropriate policy and regulatory framework depends on what the overarching policy and regulatory framework is for offshore and interconnectors. As a starting point, it will be necessary to set out detailed definitions of an electricity interconnector, a hybrid interconnector and offshore windfarm.

The appropriate framework will depend on an interconnector is one to which a generator can connect to, or a dual-purpose hybrid, which can also supply power to meet demand at either end. In relation to this, a protocol to establish the capacity of the interconnector will be necessary, to ensure that all

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<sup>7</sup> [https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2003-2020%20on%20ENTSO-E%20Guideline%20for%20cost%20benefit%20analysis.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2003-2020%20on%20ENTSO-E%20Guideline%20for%20cost%20benefit%20analysis.pdf)



stakeholders have the same expectations of the interconnector performance. For example, the Irish system could be promoting a 1 GW interconnector, but a generator could be considering a two 500 MW grid connection, to export in two directions.

**12. *What if any amendments to national legislation may be necessary to provide for the above? Should hybrid interconnectors be considered as new electricity market infrastructure, separate from conventional point to point interconnectors?***

Any part of the hybrid interconnector that is a transmission asset must be unbundled from generation, in the same way as unbundling rules must apply to onshore assets. It is important that there is a level playing field between companies with regulated assets and regulated incomes and companies operating on a market basis.

Distortions between interconnected markets should be removed (i.e., network charging) before increased interconnection, as hybrid interconnectors could amplify markets distortions further.

Generators connected onshore or to a hybrid interconnector should not benefit from different charging or commercial arrangements without proper justification and appropriate regulatory approval.

Finally, an appropriate charging regime for offshore generation needs to be developed.

**13. *What are the principal barriers in existing EU electricity market rules, most notably the Electricity Market Directive and Electricity Market Regulation, to development and operation of hybrid interconnectors?***

Enabling private ownership of electrical infrastructure can increase the level of renewable electricity on the Irish grid and be a key enabler to further interconnection with other jurisdictions. This would better place Ireland to achieve decarbonisation targets while also increasing security of supply.

We would welcome the removal of the regulatory and legal barriers preventing the use of private wire generation. Enabling private ownership of electrical infrastructure has the potential to unlock multiple benefits to the Irish and European grids. We would welcome the completion of the following at the earliest opportunity:

- The relevant government bodies must Implement the EU Electricity Directive (2019/944) Article 7 on direct lines.
- Action 115 of the Climate Action Plan needs to be progressed and completed. The Consultation on Private Wires was due in Q1 2022 and is still pending publication.

There is enormous offshore wind potential off our South and West coasts. For Ireland to play its full role in Europe's decarbonisation, significant quantities of this power will need to be exported to Europe through electricity and hydrogen/e-fuels. The revised Renewable Energy Directive (RED II) sets out minimum criteria for renewable fuels including hydrogen and e-fuels. RED II strongly promotes the use of private wire connections for the production of these fuels.