GDA Energy

GDA Energy Response to the Department of the Environment, Climate & Communications Interconnector Policy Review Consultation

2nd September 2022

1 Introduction

GDA Energy[1] welcomes this opportunity to respond to the Department of the Environment, Climate & Communications (DECC) consultation on Electricity Interconnection Policy.

GDA Energy is an Irish based infrastructure development company investing in infrastructure assets facilitating the transition to net zero. The management team has successfully delivered over 1GW of low carbon projects across the UK, Ireland and Australia with a further 9GW in development. Drawing on its experience of low carbon energy infrastructure development, GDA Energy is developing strategic sites to accelerate the transition to a low carbon future both in Ireland and internationally.

In addition to the specific consultation questions posed by DECC, we also comment in the following sections on the critical role of interconnectors in climate change mitigation and energy security, and the centralised planning of offshore electricity grids, including interconnectors.

2 The critical role of interconnectors in climate change mitigation and energy security

Our responses to the detailed questions posed by DECC highlight the critical role of interconnectors to Ireland's energy transition and security of supply of electricity to consumers.

In our view, there is clear evidence that the benefits from the proposed significant increases in Renewable Energy Sources (RES) in Ireland, both onshore and offshore, will not be fully realised without increased ambitions for interconnection. This dimension of interconnectors has been well recognised already in Ireland[2], at EU level[3], and in the UK[4].

Without significant additional interconnector capacity, Ireland's ambitious carbon reduction targets as set out in the Climate Action Plan are not achievable.

Ireland's energy security, on which urgent action is needed, would also be further compromised, compounding the inflationary and economic risks already being experienced by consumers.

Additionally, Ireland's widely communicated ambitions to be a significant exporter of energy generated from renewables is highly dependent on the development of interconnector capacity *in advance* of development of offshore wind and the further build-out of onshore wind and solar capacity. Given Ireland's island position, we consider that interconnectors play

[1] GDA Energy 4 Ltd; trading as "GDA Energy".
[2] Climate Action Plan 2021; Programme for Government 2000 (updated 2021).
[3] EU COM (2015) 82: EU Commission Communication on electricity interconnections; REPowerEU Plan May 2022; Regulation (EU)2019/943 on the internal market for electricity (the "2019 EU Electricity Regulation"), Recitals 8, 27 and 32.
[4] Energy White Paper December 2020; UK Government Net Zero Strategy October 2021; National Grid Network Options Assessment January 2022; NI Path to Net Zero Energy December 2021.

a critical role in providing route to market solutions for renewable energy generating assets in Ireland as well as providing increased integration into the EU internal energy market.

Finally, at a domestic level interconnectors assist in providing balancing solutions to EirGrid, in particular in scenarios in which the national electricity grid is at capacity, and to reduce RES output curtailment.

There are exciting new opportunities emerging from new technologies, which will increasingly be part of the infrastructure mix as we move beyond 2030. However, none of these have been clearly demonstrated at scale, nor do they have the unique abilities, of point-to-point interconnectors. Hybrid interconnectors offer similar capabilities, but enduring arrangements regarding asset classification, the applicable regulatory regime (including barriers arising out of the application of the 70% rule in the 2019 EU Electricity Regulation), financing, trading, and licencing need to be addressed, potentially delaying investment decisions for the next few years.

It is our view that Ireland needs to move ahead, as a matter of urgency, with a tranche of further point-to-point interconnector capacity, through "no-regrets" investments, to enable this transition. The window to deal with climate change is fast closing, and we must do what we can now to enable that change with the available technology and legislative framework. Moving quickly on additional interconnectors is a low risk action we can take now. Waiting for future policy to be implemented to develop projects that are so badly needed will discourage mobile capital; investors will instead look to other jurisdictions and opportunities. Transmission network development has proven to be a lengthy process in Ireland. Policy decisions cannot be delayed any further and Ireland needs to move forward with ambitious targets for interconnection to realise its targets for renewable energy and secure energy independence.

3 Centralised planning

The approach to offshore development in many jurisdictions that has applied up to now has been mainly developer driven, whether for radial windfarm connections, or developer-led interconnectors. That has resulted in important infrastructure being delivered, but as the need for a step change in offshore assets is upon us, it is clear that centralised planning will be needed, to ensure that development is as efficient as possible. This has been well recognised, at EU level[5], and in the UK[6] and Ireland.

We concur with that view, however we have two important caveats. These are as follows:

Firstly, Government's 2021 Policy Statement[7] as regards centralised planning goes a step too far, in our view. Centralised planning does not have to mean centralised (monopoly)

[5] EU Offshore Renewable Energy Strategy November 2020

[6] BEIS Offshore Transmission Network Review June 2020; Ofgem Interconnector Policy Review December 2021.

[7] Policy Statement on framework for Ireland's offshore electricity transmission system December; DECC 2021

development and ownership by the State. There are several fundamental problems with this approach:

- Delivery risk for this crucial enabler of our electricity transition would be placed in the hands of one state enterprise, EirGrid. As Transmission System Owner ("TSO") and joint operator of I-SEM, EirGrid has multiple and growing responsibilities, and is facing challenges on multiple fronts, most recently evidenced by issues with capacity procurement.

  Empowering private entities in the development of interconnector infrastructure may allow these projects to move forward more quickly in a cost-effective manner. For example, the Greenlink Interconnector commenced surveys in 2018, reached financial close in 2022 and is expected to be commissioned by the end of 2024. By comparison, the Celtic Interconnector began work in 2011, seven years earlier than Greenlink and is expected to be completed two years later than Greenlink in 2026.

  European examples also show the benefits of private investment in the development of interconnectors which have added to the overall system capacity, for instance in Italy (Piemont – Savoia interconnector), France (Eleclink) and Germany (Neuconnect interconnector).

- There is a concern that EirGrid, as a single entity, does not have the ability to mobilise sufficient resources and capital, within the challenging timescales required, in addition to all its other responsibilities. These include the significant challenges of developing the onshore grid to facilitate renewables and demand growth, and on the Market Operator side dealing with potentially fundamental changes to the European target model currently being considered at EU level.

- Is it appropriate that EirGrid should be granted a monopoly in an area where the private sector has a proven ability to deliver? The principle of leveraging private sector investment for energy networks in priority corridors was clearly stated by EU Regulation 347/2013, and was recently reiterated in its replacement Regulation 2022/8698.

- Developer projects, under the current regulatory regime, mean excellent value for money. In the case of Greenlink for example, little underpinning by the consumer is projected over the 25 year regime period. The developer builds and owns the asset and takes on the vast bulk of revenue and operational risk. Benefits flow, and the consumer sees little or no downside. In recent years, the increasing move to contestable transmission build has proven the ability of the private sector to deliver infrastructure on time, at lower cost, and leveraging innovation. This approach is supported by EU Regulation 2017/2195.

- Development of interconnector infrastructure provides an opportunity to bring in multiple sources of new capital, expertise and innovation, and to develop these further in coming years. This opportunity will be best capitalised on where as many parties as

[8] EU Regulation 2022/869: Guidelines for trans-European energy infrastructure.

possible can participate. Centralising these opportunities with one State entity reduces the ability of the wider Irish economy to participate in this aspect of the energy transition. Ireland has very significant offshore energy assets; development of that should take every opportunity to grow Irish investor and supply chain involvement, which can then bring significant export benefits as other countries develop their offshore assets.

We propose that EirGrid, as appropriate to its core TSO role, should be focussed on the necessary electricity system planning work to reinforce transmission infrastructure to facilitate the energy transition, including new interconnector capacity, for the post 2030 period. This is urgently required so that procurement of that capacity is not delayed.

Secondly, notwithstanding our view that detailed post-2030 planning should be put in place as soon as possible, that will take some time. It will also, unavoidably, be couched in certain assumptions as to the timing, location and quanta of new RES additions and demand increases, installation of storage capacity, demand side measures, and other technologies. However, it is clear that additional interconnector capacity will be required in the future and initial system planning should focus on a limited set of no-regrets point-to-point capacity additions that can get us on the way, while doing more detailed planning, and working out how hybrid interconnectors and other technologies will be regulated and delivered.

4 Responses to specific questions raised in the consultation

Questions related to Ireland's Increased Energy Ambition

4.1 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?

In our response to question (4.4) we summarise the key benefits of interconnectors for Ireland's energy ambitions. As we discussed in section 3, it is our view that private developers should continue to play a fundamental role in the development of interconnectors. The question therefore is to what extent government commitments on future capacity can help that happen.

Given the leadtime for development and construction of new interconnectors, it is unlikely that any Government commitment would have direct impact on interconnector capacity by 2030. In the post 2030 timeframe however, a Government commitment, for example through legislation and /or future revisions of the Climate Action Plan, would indeed have a very positive effect. For developers, there is significant early stage risk involved in bringing an interconnector project to a sufficient level of maturity for it to be considered by NRAs, TSOs and ENTSO-E. Project development requires commitment of substantial funds for internal resourcing and expert inputs, with no guarantee that a project will proceed. Developers do not tend to be risk averse, but it is one thing to accept early stage risk where there is a defined opportunity. The risk is greatly magnified if the very existence of the opportunity is unclear.

If Government were to establish targets for future interconnection beyond 2030, this would go a long way to unlocking investor confidence, innovation and capital. The commitment to interconnector capacity would also have a knock-on benefit to potential RES developers, who would see critical enabling infrastructure being supported. We elaborate on targets in our response to question (4.2).

Investment will also be encouraged if there is a stable regulatory regime, such as the Cap and Floor regime. This is key to establishing financeable projects, as has been the case with the Greenlink project and other interconnectors with GB. We note that this consultation asks for views on the current Cap and Floor regime and we consider that this mechanism has proven ability to attract private capital to invest in the delivery of this critical infrastructure.

Another catalyst for the development of interconnectors is efficient planning and consenting processes. Interconnectors are notable in that they involve consenting for both the onshore and offshore aspects of the infrastructure in two different jurisdictions. Consenting therefore requires much more effort, and carries greater risk, than for other single jurisdiction infrastructure projects. Government and state support for the cross-border regulatory and consenting aspects of these projects is crucial to their success.

For the marine environment, the recent National Marine Planning Framework 2021, and the related Marine Area Planning Act 2021 will be very helpful, and it is important that the key provisions of the Framework and Act are applied without delay, to enable forthcoming interconnector projects.

Land-based grid infrastructure carries its own consenting challenges, and indeed the Marine Planning Framework states that the associated land-based infrastructure should also be prioritised. Greater co-ordination of overall consenting processes would help to reduce project risk, so encouraging development. This overarching approach is set out in the most recent iteration of the EU TEN-E regulations[9]. Article 7(3) requires that relevant projects be given "status of highest national significance". Article 8 discusses consenting processes, including the designation of a national competent authority by each member state, that authority being tasked with "facilitating and coordinating" permit granting processes. Thus far in Ireland, that role has been fulfilled by An Bord Pleanála (ABP). Ideally however, ABP should more proactively facilitate and coordinate efforts of the various granting agencies and processes.

Clarity is needed on how PMI (projects of mutual interest) status will operate for Ireland-GB interconnectors which sit outside the EU regulatory regime. Ideally these projects would operate in an equivalent manner to PCI (projects of common interest) status, again helping to catalyse investments.

4.2 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?

Unlocking development

To help unlock developer interest, and mobilise innovation and capital, the more clarity that can be given around future interconnection targets, the better. For the avoidance of doubt, general statements of policy that are positive towards future interconnection, but which do not specify the quantum and timing to some extent, do not encourage investment. Early stage development capital will simply migrate to other projects or jurisdictions where future needs are clearer.

Defining targets

We do not see any barrier to identification of future targets and indeed the EU has formulated interconnection targets since 2002. The overwhelming driver of need for new interconnector capacity will be the hugely ambitious RES targets for 2030 and beyond, in turn driven by energy security imperatives and the avoidance of related future economic harm, slippage on decarbonisation actions, and the increased burden now being faced by the electricity sector.

[9] Reg (EU) 2022/869: Guidelines for trans-European energy infrastructure.

Ireland's RES targets are clearly set out, and there has been good work done by EirGrid[10] on the related grid development required. However this has explicitly focussed on needs up to 2030, rather than beyond. The horizon needs to be extended to give a detailed assessment for the 2030-40 period, so that longer term infrastructure requirements, including interconnectors, can be securely planned for. This grid planning work by EirGrid is urgent, given the very long lead time for onshore and offshore grid realisation. This planning work, as for the period to 2030, would also consider demand growth, likely to continue despite energy efficiency measures, given the targeted electrification of transport and heat. Continuing demand growth will also therefore be a driver of increased interconnection.

Ideally future requirements should be defined on a specific grid connection point-to-connection point basis, but even a less specific zone-to-zone identification of needs would be helpful. That should of course cover both RoI-GB interconnection, and RoI-mainland EU. Distinction should be made between the separate requirements for point-to-point interconnectors, and those situations where hybrid interconnectors would be beneficial, assuming the associated wind developer(s) would be supportive.

We have carried out a broad-brush analysis of additional capacity required beyond 2030, which takes as its starting point existing interconnectors, and the delivery of Greenlink, Celtic, MaresConnect and LirIC. This analysis points to approximately 2500MW of *further* additional capacity being required by 2030, rising to well in excess of 4000MW beyond 2030. The additional 2500MW of interconnector capacity required by 2030 is of course impractical, given the timeframe to develop and build an interconnector – but this just emphasises the need to progress as soon as possible with no-regrets investments for the next tranche of interconnector capacity.

We would welcome the opportunity to go over this analysis with DECC, which includes the recent Government announcement on increased RES up to 2030 i.e. solar rising to 5500MW and east coast offshore wind rising to 7000MW; and provision for export via RoI-GB interconnection of an assumed 20% of the proposed 30GW of wind planned for the west coast.

The above analysis has been carried out on an all-island basis; we believe that is the most appropriate approach, given that the physical grid impacts of greater connected RES and demand in practice act on an all-island basis.

The need for anticipatory development

We believe that, even absent the detailed analysis summarised above, there is a prima facie case for developing further interconnector capacity, on an anticipatory "no-regrets" basis, starting that process sooner rather than later. Processes could be started in early 2023 to seek proposals for an initial tranche of additional capacity. This could be point-to-point capacity, avoiding the time that will be required to deal with the additional complexity of hybrid projects, although hybrid optionality could be built into a point-to-point interconnector. There are delay risks with all interconnector projects, so moving early on this

[10] EirGrid: Shaping our electricity future (2021).

initial tranche of capacity would help to derisk the future development of RES targets beyond 2030.

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

We believe that future interconnection will be required with Great Britain, and with the EU IEM. It is therefore not a question of either/or; both will be required, the relative extents being defined by analysis being carried out by the TSOs, in conjunction with the ENTSO-E TYNDP process, and taking account of national and EU RES ambitions.

Where benefits either side of an interconnector are aligned, this can lead to a simple regulatory approach, as in the case of Greenlink, where there is a 50/50% split of the costs and the associated support mechanisms. With future interconnectors this might not be the case, but we do not see this as a barrier. For example, Ireland might obtain greater benefits from an RoI-GB interconnector (particularly enabling export to the UK of west coast RES) than would the UK. This can be dealt with however under existing frameworks, where differing cost/benefit splits have already been used for interconnectors with GB, for example 25/75%.

Regarding Northern Ireland, the GDA Energy analysis on targets we refer to in (4.2) was carried out on an all-island basis. We note however that the recently published energy strategy for Northern Ireland[11] is relatively silent on interconnectors, other than to state that interconnection with other markets will allow access to low carbon electricity produced elsewhere. It is likely this statement has both NI-RoI and NI-GB interconnection in mind.

4.4 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?

Interconnectors have a central role in addressing all three dimensions of the widely recognised energy trilemma – energy security, affordability and sustainability.

The primary benefits to Ireland from increased interconnector capacity are interlinked; the derisking of future renewables development and enhanced security of supply. It is not a question of either/or.

The huge targets for future RES require much more interconnection:

Firstly, to help enable system security given very high levels of system non-synchronous penetration (SNSP). Interconnectors can provide a response and system services that cannot

[11] NI Executive: The Path to Net Zero Electricity (Dec 2021).

be achieved by other technologies such as batteries, compressed air storage, and gas interconnectors. While all these technologies will be required in the long term, so will interconnectors. Not all of the alternative technologies however are fully realisable at the moment, at the scales required. Interconnectors on the other hand are proven technology, already operating for decades at scale, and with link ratings increasing significantly in recent years.

Secondly, more interconnection is required to enable export and avoid curtailment of energy generated from renewables (directly to the EU-IEM, to load centres in GB, and via GB-mainland Europe interconnection). While other technologies can theoretically enable energy transmission off the island, these are again much less proven than electricity interconnection. Regarding the proposed 30GW of west coast wind for example, it is likely that the initial projects – albeit challenging – will be developed ahead of the development of green hydrogen capacity at a viable scale so will the energy produced by these wind projects will require the development of an export route .

Additional electricity interconnection can, with low risk, underwrite the initial RES projects ahead of other transmission technologies developing. Without appropriate development of additional interconnection capacity *ahead of* major additional RES tranches coming on stream, future RES projects would risk significant grid constraints resulting in them being part stranded. That would be a serious disincentive to investment, putting the whole national RES strategy at risk.

Regarding enhanced security of electricity supply, we see two dimensions. Firstly, there is the grid operational aspect of security. As system demand grows, increasing interconnector capacity allows the potential infeeds to increase commensurately. We can expect Irish system demand to keep growing; demand side efficiency improvements are likely to be far surpassed by the electrification of transport and heat, in addition to normal underlying economic growth impact.

The second dimension of course is national energy security. The exposure of the EU energy system to external threats has become all too evident post the invasion of Ukraine. The unprecedented EU response[12] is welcome, but the EU and Ireland must "plan away" such risks for the longer term. Some commentators have suggested in recent weeks that Russia's restriction on gas exports to the EU will not have a significant direct effect on Ireland, arguing we can depend on gas imports from the UK. Continuing availability of such imports is not a given, nor would it be a proper basis for energy security, especially in the post-Brexit world. The predicted exhaustion of the Corrib gas field in 2036 of course exacerbates matters. Apart from capacity, restrictions on Russian gas will, and have already, caused gas prices to rise significantly. Ireland is directly exposed to that, with all the associated knock-on to consumer distress, wider inflation and to economic growth prospects.

Locally generated RES will clearly be a foundation of our future energy security, enabled by greater interconnection and by storage once that becomes available at scale.

[12] EU REPower Plan (May 2022).

Additional benefits

Apart from the primary benefits associated with interconnectors, it is worth remembering the well-recognised range of additional benefits:

- Interconnectors are increasingly being seen as a tool to deliver future system services requirements, for example frequency response and reserve, black start, reactive power reserve, boundary capability and constraint management[13]
- Additional interconnection has long been recognised by the EU[14] as a way of decreasing peripherality, and as an operationalising of EU solidarity. It is fair to say that Ireland remains peripheral within the EU in a number of ways, including energy system integration. That peripherality has not been helped by Brexit. Future EU support for interconnection to Ireland can therefore be expected to look to these principles.
- Reduction of market arbitrage and average wholesale energy prices was seen as a key driver/ benefit in the earlier years of interconnector development. There is still room for these benefits to be realised, but the extent of such benefits has reduced in recent years as interconnector capacity has been added, together with market coupling arrangements.

[13] Costs and benefits of GB interconnection: Pöyry report to the National Infrastructure Commission (2016); Benefits of Interconnectors to GB Transmission system; National Grid (2014)

[14] For example, see Communication from the Commission to the European Parliament and the Council "Achieving the 10% electricity interconnection target: Making Europe's grid fit for 2020"; COM (2015) 82 final.

Questions related to National Legislation

4.5 Is the existing legislative framework contained in the 1999 Act appropriate to secure future development of interconnector capacity? 4.6 What amendments, if any, do you consider necessary to the 1999 Act?

- Sect 2A may require revision to make licencing provision for the new asset class of hybrid interconnectors. This would enable differentiation of licence conditions for hybrid versus point-to-point interconnectors, for example in relation to the portion of capacity available for cross-border trade, and wind project priority access arrangements. However, it is likely that this will need to be defined at EU level to avoid a conceptual mismatch of definitions across the EU which in turn would be an obstacle for the further development of hybrid interconnectors. It may be useful to include a "catch-all" amendment to state that any reference to interconnectors for the purposes of sections 14, 16 and 16A shall include a reference to hybrid interconnectors.
- Sect 16A: refers to the securing of construction of interconnectors, taking into account "...the electricity interconnection targets set out in point (1) of Article 4(d) of Regulation (EU) 2018 (1999)....and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action". This may tie decisions to absolute interconnection targets that may have been superceded, thus acting as a constraint to planning new interconnector capacity that is required. A reference to EU or Irish interconnector targets "as in force from time to time" would be more appropriate, and would avoid additional future legislative change to accommodate changing targets.
- Sect 16A refers to three means of securing the construction of interconnectors i.e. (a) by competitive tender; (b) by authorisation without competitive tender; (c) by the TSO including in its development plan. In relation to (a), the Cap and Floor regime has already been proven, as in the cases of Greenlink and other interconnectors with GB. Consideration should however be given as to the flexibility, or otherwise, of the window approach as currently used by Ofgem. This path should also differentiate between hybrid and point-to-point interconnectors.

Questions related to Brexit and future EU-UK interconnection

4.7 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?

Clarity on access and trading rules is an essential component of the business case for interconnectors. It is not yet clear, in an enduring regime, how this will affect trade across interconnectors between the UK and EU states (including with Ireland / ISEM). This needs clarified as soon as possible, even at an agreed "principles" level, before the detail is put in place.

The European Federation of Energy Traders (EFET) has highlighted that the return to explicit capacity auctions has led to increased costs of electricity trading. EFET states that cross border capacity may not be optimally used because it will be priced too high or too low on either side of the border. This in turn will partially undermine the benefits case for new interconnectors.

The Trade and Co-Operation Agreement (TCA) provides[15] that Multi-Region Loose Volume Coupling (MRLVC) will be established between the UK and the EU to "maximise the benefits of trade". This needs to be established as soon as possible, since in the meantime trading is on the basis of the current no-deal access rules, leading to trading inefficiencies. This would again partially undermine the benefits case for new interconnectors.

Regarding allocation of interconnector capacity, the TCA does not specify a minimum portion of interconnector capacity that should be available to the market (70% under Art 16(8) of the 2019 EU Electricity Regulation). This is a key parameter when considering hybrid interconnectors. Given that hybrid interconnectors are likely to become more prevalent, it is important that this aspect be clarified without delay.

The TCA further provides[16] that neither party is required to permit capacity in the other territory to participate in its capacity mechanisms. This may reduce a potential benefit arising from new interconnectors.

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

The recognised challenges of the energy trilemma – energy security, affordability and sustainability – apply equally to EU Member States and the UK. These challenges are being

[15] Trade and Cooperation Agreement; Annex 29, Part 1 (1).
[16] Trade and Cooperation Agreement: Art 304 (3).

addressed, in broadly similar ways, by existing and developing policy in both the UK and the EU. Therefore, there is no fundamental difference in objectives or direction of travel.

The TCA provides some comfort that there will continue to be mutual cooperation on energy matters, and there is specific reference to the parties co-operating to facilitate the timely development and operation of electricity infrastructure (including interconnectors). However, there are some areas where detailed arrangements need to be put in place. The urgency comes because, in relation to decarbonisation, there is much to do, very little time to do it, and potential investors need as much clarity as possible.

Focusing on development of future interconnection capacity:

- As interconnectors are by definition assets straddling two jurisdictions, the capacity planning and procurement processes should be aligned, both in timescale and, as much as possible, as regards regulatory and legal approach, Otherwise there will be unnecessary uncertainty and risk for investors, possibly putting a brake on investment when it is urgently needed.
- The interaction of TSOs on interconnector matters needs to be formalised, including bilateral relationships between National Grid and EirGrid, and between National Grid and ENTSO-E. Crucially this should help to move forward planning of future interconnector capacity, including hybrid interconnectors.
- The interaction between National Regulatory Authorities (NRAs) needs to be clarified – bilaterally between CRU and Ofgem, and between Ofgem and ACER.
- Apart from agency-to-agency cooperation, there also needs to be an enduring political structure to jointly move ahead on an agreed energy agenda, considering UK-EU and specific UK-RoI dimensions.
- The PCI process has been crucial to catalysing investment in interconnector projects. The PMI provision in the revised TEN-E Regulation holds the prospect of continuing this catalyst for RoI-GB interconnectors, both for development costs and construction costs. However, the detail of how this will work requires detailed EU-UK engagement to clarify eligible projects, priorities, and mechanisms. This needs to be clarified in time for projects seeking entry to the upcoming sixth EU list in 2023. We note that the TCA is silent on the topic of PCI or PMI projects.
- The Specialised Committee on Energy should ideally be activated to address all of these points.

Questions related to the role of the CRU

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

The assessment criteria defined by CRU[17] include purely technical criteria (for example related to link rating, ramp rates, technology choice, system impact etc.), but also a range of other criteria which may or may not be described as "technical". We comment therefore on the totality of the currently defined criteria.

This set of criteria is what we would see as being very comprehensive. It is difficult to see what benefits there might be from additional criteria, except for the case of hybrid interconnectors, where some revision will be required.

There is significant cost and time involved in meeting the overall set of criteria; a balance could perhaps be struck between what needs to be provided at the early development stage, versus what can be provided post a "minded to" decision.

We comment also that the approach should be broadly like that used in the UK and the wider EU.

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

DECC refers in its consultation document to the three possible models of regulatory treatment highlighted in the existing interconnector policy: Merchant, Fully Regulated, and Cap and Floor.

Taking the first of these, we see the Merchant Model as being of little practical benefit to future interconnector projects in Ireland. The model is very risky to developers (who, even if they did decide to proceed with a project and manage to secure funding, would seek to price in such risk, with consequent knock-on to consumers). For that reason, the model has been little used in practice.

The Fully Regulated model (as referred to in the consultation document) will continue to have relevance in the case of TSO-to-TSO interconnector projects. However, as we have stated earlier, we believe that the bulk of future projects should be delivered by private developers rather than state monopolies.

[17] CRU18221: Assessment Criteria for Electricity Interconnector Applications.

The Cap and Floor mechanism has been used extensively, both by our interconnecting neighbours across various projects, and most recently for the Greenlink project. We note that, because the consultation document refers separately to "Fully Regulated" and "Cap and Floor" models, it could be inferred that the latter is in some way not fully regulated. This is not the case. It is also our view that private (i.e. non-TSO /EirGrid sponsored interconnectors) should not be in a worse regulatory position than EirGrid-sponsored interconnectors which come under EirGrid's regulatory framework.

The Cap and Floor mechanism, its building blocks, and the regulatory process to move towards a project with final approval under the mechanism, has been shown to have worked. It works for developers and their finance providers, and it allocates risk fairly between developers and consumers. It is worth noting that in the case of Greenlink, the floor is not projected to come into operation at any point over the 25 year regime[18]. The developer has therefore taken significant development risks without a guarantee that the project would eventually proceed; coupled with taking the lion's share of subsequent revenue/ operational risks with no projected need for consumer support.

The Greenlink project is also an excellent example of NRA-to-NRA co-operation. Interconnectors, by definition, require the co-operation of the NRAs at each end of the link, so that the two regulatory approaches add up to a whole that the developer is prepared to invest in, and that is financeable. In this particular case, there was very close co-operation between CRU and Ofgem, including close alignment of the regimes. This would have greatly enhanced developer and financier confidence in the regimes; the proof of that is the project secured financing, reaching financial close in 2022 and is advancing towards significant construction activity.

Our view therefore is that the Cap and Floor mechanism should be retained for point-to-point interconnectors, noting that there may be learnings from current projects that can be used to tweak the approach for future links. In section 4.12 we separately consider the applicability of the mechanism to hybrid projects.

We note that Ofgem is continuing to use the Cap and Floor mechanism for its current Third Window[19], a decision that was generally supported by stakeholders including the developer / investor community. What is less clear is what will happen after the Third Window. As Ofgem in due course turns its thinking to that, we propose there should again be close interaction between CRU and Ofgem, so that future regulatory models can be aligned, unlocking future developer early stage activity and ultimate investment.

[18] CRU2114: Greenlink Electricity Interconnector Cap and Floor Regulatory Framework; P13.
[19] Ofgem: Interconnector Policy Review Decision December 2021; Section 2.4.

Questions related to hybrid interconnectors

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

From an efficiency perspective, and given the need for more interconnection, and greater amounts of offshore RES being added, it makes sense to have hybrid interconnectors as part of the toolkit. These may be of benefit both in the Irish sea, and potentially off the west coast, were there to be further Ireland-France interconnection beyond the Celtic Interconnector. They are also increasingly being seen as a step towards integrated offshore grids.

While hybrid interconnectors will emerge in due course, this should not preclude point-to-point interconnectors still having a role in the right circumstances. Hybrid interconnectors are "new", both from a technology viewpoint, but also in regards to their legal and regulatory treatment. Much remains to be worked out.

In the meantime, Ireland should move forward with some additional "no regrets" point-to-point capacity, using proven technology and regulatory processes. It may be possible to build in some "optionality" whereby a point-to-point link could at some point in the future become part of a hybrid interconnector. The decarbonisation and energy security agendas are increasingly urgent. It makes no sense therefore to build in an unneccessary dependency related to hybid interconnectors.

In *parallel* with developing further point-to-point capacity, the approach to use of hybrid interconnectors, including technology, legal, regulatory and financial aspects, should be developed, keeping a close watching brief on developments elsewhere, and collaborating with EU and UK agencies as appropriate.

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

The existing policy and regulatory frameworks (in the UK, and in Ireland as informed by EU approaches) are not fully appropriate for hybrid interconnectors. The thinking on hybrid interconnectors, also referred to as Multi-Purpose Interconnectors (MPIs) in the UK, has advanced considerably in the UK in recent months, possibly more than in the EU. In April 2022, Ofgem published its minded-to decision[20] on the approach to MPIs, focussing primarily on implementing an interim MPI framework through changes to existing law and licences. Separately in April 2022, BEIS published a consultation response[21] as part of the MPI workstream of the UK Government Offshore Transmission Network Review (OTNR). The BEIS response is more focussed on an enduring regime.

[20] Ofgem: OTNR Multi-Purpose Interconnectors: Minded-to Decision on Interim Framework; April 2022.
[21] BEIS Offshore Transmission Network Review: Multi-purpose Interconnectors: government response.

We recognise that DECC and CRU may wish to take a bottom-up approach to defining what is needed, but we encourage close engagement with the relevant UK actors, in particular regarding MPIs in the Irish sea. Much work has already been done on this in the UK, and therefore the wheel does not have to be reinvented – understanding of course that some changes may be required for Irish policy needs.

Logically there should be close alignment of approaches on the interconnector aspect of hybrid links (as is currently the case for point-to-point links under the Cap and Floor regimes in RoI and the UK). There may be more room for divergence for the generation related part of the asset i.e. the approach to a generation related portion of a hybrid asset in Irish waters might differ where that asset portion is in UK waters.

Careful consideration is needed on the following aspects of hybrid interconnectors.

- In general, there needs to be legal clarity on the mechanisms for the various aspects of how hybrid interconnectors would operate, and interact, including asset classification, licencing, financing and ownership. This will provide clarity for investors, so helping to unlock innovation and investment. In particular:
- Ofgem proposes that two different MPI models should be available, interconnector-led, or OFTO-led. These models are broadly similar, the difference being how the assets are classified and licensed. A broadly similar approach could also be used in Ireland, particulary for RoI-GB interconnectors.
- Asset classification and licencing: The overall asset has the potential to perform multiple functions – bilateral energy transfers between the two states; and providing an access route for generation into each market. The predominant use of the asset should determine the approach to licencing. For example if that use is primarily for interconnection activities, then an interconnector licence would be appropriate. If on the other hand the primary use is as a route to market for generator oputput, then the appropriate licence would be for offshore transmission.

  There is debate as to how the asset classification would be determined. The Ofgem minded-to position is that licence applicants should provide evidence demonstrating the expected primary use of the asset. This would include calculations using the expected windfarm load factor and cable capacities to demonstrate how often the asset would be available for cross border flows as opposed to windfarm output, over the lifetime of the asset. There should also be consideration of processes to confirm actual split of use, and what happens if the primary use were to change.

- Other licencing provisions that need consideration include granting access to generators including priority access provisions; charging methodologies; operational provisions to allow control of windfarm output going onto the interconnector; co-ordination of outage planning.
- Availability mechanisms: definition is needed on how any availability mechanisms for interconnector availability, and the offshore transmission element would interact.
- Ownership: the unbundling provisions of both EU and (post-Brexit) disallow generators or suppliers from operating transmission networks. This could mean different owners for different components of the overall asset, each with its own licence.

- There needs to be an appropriate charging regime for use of the interconnector.
- There should be a support mechanism that creates the right conditions for investment in the interconnector "portion" – based on the Cap and Floor framework of point-to-point projects. There should also be a mechanism that is appropriate to the windfarm "portion" – for example potentially similar to the approach for Offshore Transmission Owners (OFTOs) in the UK.

4.13 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?

- Given the inherent technical and regulatory differences between point-to-point interconnectors and hybrid interconnectors, it may be useful to classify the latter as infrastructure sui generis and recognise this in the Electricity Act by introducing a new category of hybrid or multi-purpose interconnector with appropriate licensing requirements. Both types of interconnector licences should be able to be held by the same person for unbundling purposes.

4.14 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?

In addition to our earlier responses, we see the following considerations around market arrangements.

- The use of a Home Market (HM) approach, where the windfarm forms part of its "home" bidding zone; versus the Offshore Bidding Zone (OBZ) approach, where there is a bidding zone containing one or more windfarms.
- Satisfaction (or otherwise) of Article 16(8) of the relevant EU Electricity Regulation[22] requiring at least 70% of interconnector capacity to be available for cross-border trade.

- ENDS -

[22] Regulation (EU) 2019/943.

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