



WEI Response to the review of the security of energy supply of Irelands electricity and natural gas systems

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1. Introduction

Wind Energy Ireland (WEI) would like to thank the Department of the Environment, Climate and Communications (DECC) for the opportunity to provide a submission to the Consultation on security of energy supply of Ireland's electricity and natural gas systems.

Wind Energy Ireland is the nation's largest renewable energy organisation with more than 170 members who have come together to plan, build, operate and support the development of Ireland's onshore and offshore wind generation. We work to promote wind energy as an essential, economical, and environmentally friendly part of the country's low-carbon energy future. As a leader in Ireland's fight against climate change, wind energy creates jobs, invests in communities, and reduces CO₂ emissions.

In our response, we have sought to provide evidence-based answers to a number of the topics on which DECC has sought feedback. WEI would welcome the opportunity to engage further with the Department and provide any further information on these and other issues related to the Consultation.

2. Executive Summary

It is clear from the analysis published alongside this Consultation, and in other workstreams, that we are facing an uncertain time in Ireland as regards security of supply. As just one example, the recent public discourse regarding adequacy on the electricity system in the immediate period ahead only serves to remind us of the seriousness of the situation at this stage. It is clear to Wind Energy Ireland (WEI) and our members that without mitigation and remedial policy measures being introduced, the shortfall in capacity forecasted by EirGrid¹ has potential to cause grave distress and disruption for consumers over coming years.

Alongside our own domestic power capacity adequacy concerns, the ongoing war in Ukraine driven by inexplicable Russian aggression, which has persisted in the months since February, has had significant supply impacts far beyond Russian or Ukrainian borders, and has served to highlight the vulnerability of the European Energy system, including that of Ireland too. The European Union's dependence on Russian fossil fuels, in 2021, amounted to 40% of its total gas consumption, 27% of oil imports and 46% of coal imports. In recent months, Europe's dependency on imported gas, and gas-fired generation, has driven a dramatic increase in electricity prices to unprecedented levels across the continent. Russian actions have led to vast concerns regarding cut off of gas supplies to Europe for the upcoming Winter period.

Gas supply risks due to the ongoing war, paired with an increasing electricity demand in Ireland, and an ageing fleet of fossil-fuel power stations, has accelerated our thinking about energy security and what this means in an Irish context. Gas supply risks due to the ongoing war, paired with an increasing electricity demand in Ireland, and an ageing fleet of fossil-fuel power stations, has accelerated our thinking about energy security and what this means in an Irish context.

Society is also facing the urgent and unquestionable need to act urgently in the face of the climate crisis. A report from the Intergovernmental Panel on Climate Change (IPCC)² issued earlier in the year, provided us with yet another stark warning, this time outlining that limiting warming to the 1.5°C Paris Agreement target would require global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 48% by 2030.

Faced with the above set of simultaneous challenges, what is unquestionable is the urgent need to transition away from our current dependence on fossil fuels, towards an electricity system, and indeed a wider energy system, based on clean renewable energy. Until we do this, we will remain vulnerable to fossil-fuel price and supply shocks such as the ones we are witnessing today. As we look forward to realising a power sector and wider economy powered by renewable energy, we need to look at what this means for our electricity and gas systems throughout the transition phase.

Ireland has the energy, the technology, and the investment to build a fully decarbonised electricity system by 2035. To support the needed investments in clean renewable electricity

¹ [All-Island Generation Capacity Statement 2022-2031](#)

² https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf

and key supporting technologies which we will discuss in this document, Wind Energy Ireland calls on Government to commit to a target to deliver a zero-carbon electricity system by 2035.

WEI believes it will be essential to see collaboration between Government, EirGrid, Gas Networks Ireland, the Commission for Regulation of Utilities (CRU), and industry partners to address the urgent and consequential risks that have been flagged regarding energy security. We would welcome the opportunity to engage further with the Department and provide any further information related to the Consultation. In our response, WEI has sought to provide evidence-based answers to a number of the topics on which DECC has sought feedback.

Our key messages in responding to this consultation are as follows:

Risks Modelled by CEPA & Additional Risks Identified by WEI

- The electrification of heat and transport is already well signalled in Government policy, and it must be understood as an inevitability for which we need to be plan accordingly. Electrification is not a risk; it is central to decarbonising Ireland’s energy system and to meeting our legally binding carbon emissions reduction targets.
- In regard to increased demand from large energy users, WEI believes that codifying an appropriate ruleset for direct-line renewables is crucial if Ireland is to cater for LEUs while also addressing climate targets. We would encourage DECC to prioritise holding a consultation on this topic in the short term.
- While there is clearly a need to address capacity deficits in the short term, there is also a need to ensure that any new projects securing capacity contracts under the CRM system complement the low carbon electricity system being created over the coming decade. Investments made now will remain a part of the electricity system for the next decade at least and must align with Ireland’s decarbonisation ambition.
- Wind Energy Ireland wishes to emphasise an additional risk to those modelled by CEPA, that being failure to achieve targets with respect to delivery of renewables and supporting technologies, to realise an overall 80% RES-E target by 2030. Furthermore, staying within cumulative emissions limits³ will mean some very difficult choices when it comes to gas and electricity supply.

It has been WEI’s long held view that the best solution to increasing energy security, while also moving to a cleaner energy future, is to rapidly deploy Ireland’s indigenous resources at scale – onshore and offshore wind, solar, combined with technologies that enable the transition. WEI strongly welcomes the comments of the Minister for Environment Eamon Ryan, speaking at our Offshore Conference, surrounding the need to scale up renewables as a mitigation measure against security of supply:

“The crisis is caused by our reliance on fossil fuels so the solution is to develop our own power supplies, really be efficient in how we use that energy and that will be good for energy security, for bringing the bills down. It will also be good in terms of climate”.⁴

³ <https://www.gov.ie/en/press-release/dab6d-government-announces-sectoral-emissions-ceilings-setting-ireland-on-a-pathway-to-turn-the-tide-on-climate-change/>

⁴ <https://www.irishmirror.ie/news/irish-news/eamon-ryan-says-dealing-energy-28046901>

Mitigation Options to Deliver Security of Supply

- Any solutions brought forward need to be mindful of our decarbonisation ambition. Investments made now will remain a part of the energy system for the next decade at least and policy decisions need to align with our Climate Action Plan.
- First and foremost, owing to the scale of projects involved, WEI believe that delivering Government targets for offshore wind is of paramount importance in the context of energy security and decarbonisation of energy supply. If offshore wind doesn't deliver on time, this could represent a significant challenge for security of supply. This is evident in EirGrid's latest GCS publication, with significant operational offshore wind capacity assumed to be in place before 2030.
- It is important that progress is accelerated to allow the benefits of hybrid connections to be realised. This relies upon actions by the CRU and EirGrid. Facilitating delivery of hybrid connections is essential in terms of 2030 targets but would deliver benefits for security of supply in the near term too.
- WEI believes that Long-Duration Energy Storage (LDES) technology will be an important tool for decarbonising our energy system, providing a range of valuable services, delivering cost benefits, and ensuring security of supply. WEI calls for the publication of a Call for Evidence paper on LDES in order to progress new policy.
- Interconnection of Ireland's electricity system is going to be essential in providing greater security of supply and reduced reliance on volatile imported fossil fuels. We need to see the delivery of current planned projects over the coming 5 years, and it is critical that work starts now to identify new ones to be completed in the early 2030s.
- Technologies such as green hydrogen and green hydrogen derivatives will play a large role in transitioning Ireland away from fossil fuels. While the impact will be phased, the current timelines in the Climate Action Plan are not reflective of the ambition set out by the EU or that of the recent announcement of 2 GW of hydrogen by 2030.
- Wind Energy Ireland calls on DECC to publish Ireland's hydrogen strategy as soon as possible, underpinned by tangible, deliverable targets that will enable green hydrogen and derivatives to make a real impact on our energy system and security of supply.

Tools & Measures Contributing to Security of Supply

- The successful implementation of any of these measures is dependent on a well-functioning planning system. The growing concern surrounding Ireland's energy security and the necessity to decarbonise highlight the need for faster consenting and significant planning reform.
- Without the accelerated and aggressive build out of backbone infrastructure and grid reinforcements, as well as the deployment of alternative technologies and solutions to reduce fossil fuel contributions and minimise congestion and constraint, ambitious targets for the sector cannot be met. The next iteration of EirGrid's Shaping Our Electricity Future publication must be based on an ambition to design an electricity grid for a zero-carbon generation system.
- Finally, WEI strongly encourages a Government information campaign highlighting the critically important role renewable energy can play in our economic strategy and the role it must play in ensuring a secure electricity supply for Irish families and businesses in the years to come.

3. Consultation Questions – Risks

Wind Energy Ireland notes the nine separate risks outlined in the Consultation, spread across the demand and supply side. Whilst some of these can be considered to be external risks i.e., outside the control of DECC and other State actors – low temperatures and low wind speeds as examples, others can be directly influenced and informed by policy choices. Some of these policies have already been signalled, while there are other measures which we believe that policy makers should be introducing now. WEI’s feedback and assessment on three of the risks presented in the consultation are included below. We outline a number of additional risks and mitigation measures in following sections of this document.

Electrification of Heat and Transport

The electrification of heat and transport is already well signalled in Government policy. It is at the heart of any zero-carbon energy system. Rather than characterising it as a risk it must be understood as an inevitability – a welcome one – for which we must plan to ensure an adequate energy supply.

Indeed, policy measures for other sectors in the Climate Action Plan⁵ point to this, the proposed pathway in transport is “focused on accelerating the *electrification* of road transport” and industry measures include “accelerating uptake of carbon-neutral heating in industry, enabling *electrification* of high-temperature heating”, as just two examples.

WEI would very much view electrification as a significant opportunity in the context of delivering a sustainable energy future for all. The fact that Ireland is currently one of the countries at the forefront of decarbonising its electricity system provides an opportunity for Ireland to become a ‘test bed’ and an exemplar for the electrification of broader society. With the existing strong presence of expertise in the energy sector, there is a basis for creating an ecosystem to support significant innovation related to decarbonisation, not just of the electricity sector but of heat and transport too.

The greater electrification of heat means the direct displacement of fossil fuels but also means the greater utilisation of the electricity grid and renewable energy we currently produce. Ireland has one of the highest wind energy penetrations in the world. This achievement is now lowering emissions and enhancing security of supply. But to fully utilise renewable energy progress, and to enhance security of supply yet further, we must see the electrification of heat expand. This move from fossil fuels adds to security of supply and aids further with a flexible electricity demand.

Ireland now has an abundance of renewable electricity to utilise (enough to power all of Galway city is currently lost every year, through constraint and curtailment on the grid). Growth seen in renewable electricity must be mirrored in growth in electric heat to fully utilise the resources we have for the benefit of the wider economy and combining heat pumps with thermal storage can take advantage of low-cost electricity during windy days.

⁵ <https://www.gov.ie/en/publication/6223e-climate-action-plan-2021/>

Significant Increased Demand from LEUs

Whilst it is important to acknowledge a significant increased demand from Large Energy Users in the context of energy security, WEI believes this can risk also demonstrates the need for development of clear policy for private wires. This phenomenon is already prevalent in many other countries but currently blocked by regulatory and legal barriers in Ireland.

Private wires/direct lines provide a direct connection from LEUs to renewable energy sources such as solar farms, wind farms, large-scale batteries, and hydrogen plants. Ireland is required to make legislative provisions for private wire networks under the terms of the EU Renewable Energy Directive. Other EU member states have already made provisions for private wire renewables. WEI welcomes an action in the Climate Action Plan to publish a consultation on policy options on private wires, however we note that the publication of this consultation did not meet its deadline and it is still awaited by industry, as of October 2022.

In the Government Statement on the Role of Data Centres in Ireland's Enterprise Strategy⁶, the Government advises that it aims to enable the twin transitions of decarbonisation and digitalisation of Ireland's society and economy. By the Government's admission, it is important that "Islanded" data centres that are not connected to the electricity grid are not powered by on-site fossil fuel generation. Codifying an appropriate ruleset for direct-line renewables is therefore crucial if Ireland is to simultaneously cater for these LEU's while also addressing climate targets for 2030. This should be a DECC priority in the short term.

Electricity Supply Side Risk – Capacity Deficits

The consultation identifies the forthcoming decommissioning of some existing conventional power plants. EirGrid's Generation Capacity Statement 2022-2031⁷ provides a comprehensive list and timetable of plants/units expected to close/retire in the coming months. With respect to the Capacity Remuneration Mechanism (CRM), some of the challenges associated with delivering capacity have been well documented. As it currently functions the CRM does not seem to be fulfilling its function as can be seen by the alarming capacity situation Ireland faces in the coming winter 2022/23, the necessity of acquiring emergency generation capacity for winter 2023/24, and the predicted generation capacity shortfall highlighted in EirGrid's GCS.

To address the ongoing concerns with regards to security of electricity supply (predating those raised in the latest version of the GCS), in September 2021 the CRU published an information paper CRU21115⁸. Updates to this programme of actions were published in the CRU202264⁹. This programme of actions was designed to mitigate against the risk of a supply-demand deficit. The paper contained actions, most notably a direction for procurement and delivery of 2,000 MW of additional flexible gas-fired plant.

⁶ <https://www.gov.ie/en/publication/5e281-government-statement-on-the-role-of-data-centres-in-irelands-enterprise-strategy/#:~:text=Government%20Statement%20on%20the%20Role%20of%20Data%20Centres%20in%20Ireland's%20Enterprise%20Strategy,-From%20Department%20of&text=Government%20policy%20seeks%20to%20enable,%2D%20and%20must%20be%20%2D%20complementary.>

⁷ https://www.eirgridgroup.com/site-files/library/EirGrid/EirGrid_SONI_Ireland_Capacity_Outlook_2022-2031.pdf

⁸ [CRU Information Paper Security of Electricity Supply – Programme of Actions](#)

⁹ [CRU Information Paper Electricity Security of Supply Programme of Work Update](#)

Wind Energy Ireland strongly believes there is a need to ensure that any new developments securing capacity contracts under the CRM complement the low carbon electricity system being created over the coming decade – a system that will be predominantly powered by renewables (onshore and offshore wind, and solar energy). Investments made now will remain a part of the electricity system for the next decade at least and must align with Ireland’s decarbonisation ambition.

The following principles need to be considered when procuring new dispatchable plant:

1. Investment in zero and low carbon capacity needs to be encouraged and facilitated. New gas thermal plants need to have a pathway to decarbonisation for example by being able to transition to green hydrogen (or electrofuels) in the future.
2. Restrictions on how energy storage projects can engage in the energy markets need to be removed to ensure they have a viable route-to-market.
3. The timelines of the T-4 auctions are challenging to deliver projects within. Especially given the delays projects can face with respect to the planning process and grid connections. Reform and streamlining of these processes would reduce the risk of projects not delivering while also having ancillary benefits for development of the wider electricity system.
4. Appropriate market and pricing signals that apportion risk in a balanced way that incentivises investment are needed. Adopting an overly penal approach will not deliver the capacity required.

WEI would be happy to elaborate on any of the points raised above in future engagement.

Q1 & Q2 Combined: Are there any other security of supply risks that you can identify in addition to those set out in section 6? If there are other risks, could you outline some mitigation options to address the risk(s)?

Failure to Deliver 2030 RES Targets

In addition to the risks modelled by CEPA, WEI would like to emphasise an additional risk - failure of Ireland to achieve targets with respect to delivery of onshore and offshore RES assets and supporting technologies to achieve an overall RES proportion of 80% of electricity generation by 2030, and a power sector that is compliant with carbon budgets.

While not modelled explicitly, the CEPA report acknowledges the impact that failing to meet the CAP21 targets would have on the overall analysis and predict that it would substantially increase the level of unserved electricity demand. This emphasises the importance of Ireland reaching its 2030 targets for deployment of RES-E for both environmental reasons and also as a core part of our future energy security. It is important to view meeting these targets as a critical security of supply mitigation. WEI strongly welcomes the comments of the Minister for Environment Eamonn Ryan, speaking at our Offshore Conference surrounding the need to scale up renewables as a mitigation measure against security of supply:

“The crisis is caused by our reliance on fossil fuels so the solution is to develop our own power supplies, really be efficient in how we use that energy and that will be good for energy security, for bringing the bills down. It will also be good in terms of climate”.¹⁰

Ireland is a world leader in integrating onshore wind, which supplied 36% of our electricity in 2020¹¹. We need to build on this, by increasing our deployment of tried and tested onshore wind and diversifying with offshore wind, solar energy, and other renewable sources. The good news is that WEI’s pipeline analysis consistently shows that there is a large volume of projects that are in development and would be more than enough to deliver on our 2030 targets. Government’s Climate Action Plan (and subsequent policy updates) has set a target of 7 GW of offshore wind, 8 GW of onshore wind, 5.5 GW of solar and an overall target of 80% renewable electricity by 2030. We need policy measures that enable these targets, ensuring a robust grid, streamlined planning process and fast-functioning route to market that delivers change quickly for us to stay within our agreed carbon budgets.

Staying within cumulative emissions limits¹² through to 2030 will mean some very difficult choices when it comes to gas and electricity supply. It has been WEI’s long held view that the best solution to increasing energy security, while also moving to a cleaner energy future, is to deploy Ireland’s indigenous renewable resources at scale – onshore and offshore wind, solar, and with technologies that enable the transition e.g., energy storage, green hydrogen, and electrofuels. The optimum choice of technology for our energy transition should be informed by the following factors:

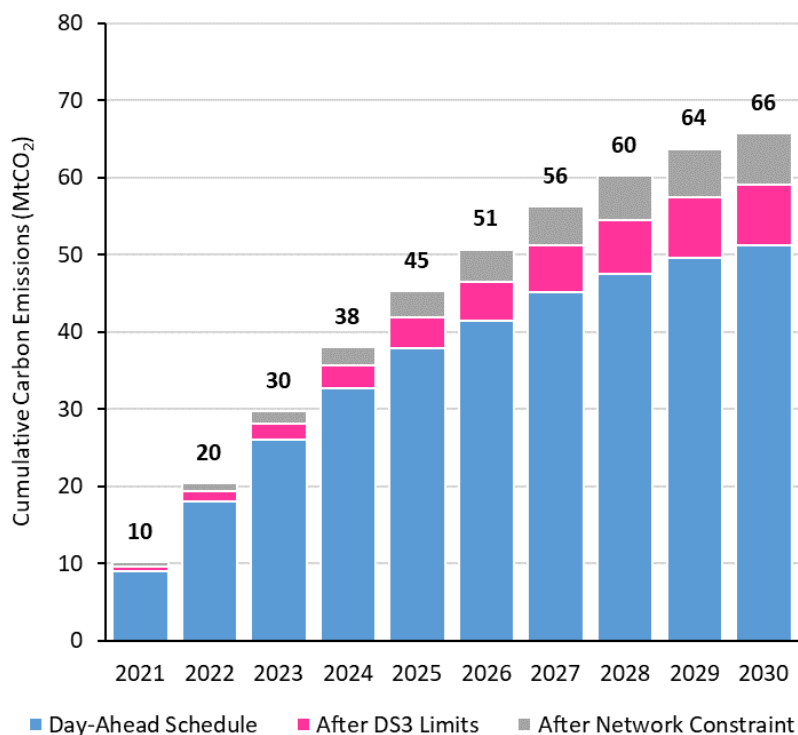
¹⁰ <https://www.irishmirror.ie/news/irish-news/eamon-ryan-says-dealing-energy-28046901>

¹¹ <https://windenergyireland.com/latest-news/5364-annual-report-confirms-wind-energy-leads-fight-against-climate-change>

¹² <https://www.gov.ie/en/press-release/dab6d-government-announces-sectoral-emissions-ceilings-setting-ireland-on-a-pathway-to-turn-the-tide-on-climate-change/>

- How quickly they can be deployed on the system: It is projects that can be deployed sooner and faster that are going to have a greater impact on emissions reductions and energy security than projects arriving later. This emphasises the need to support and accelerate the deployment of onshore wind and solar in the early part of the decade.
- The profile of the generation: Solar power is relatively negatively correlated with wind energy and so a reasonably optimised blend of wind and solar generation has the potential to enable more demand to be met by renewables more often. This will support higher average RES-E levels at lower levels of network constraints and system wide curtailment/oversupply, consequently boosting security of energy supply.
- The scale of the generation: It won't be possible to reach an 80%+ target without a significant contribution from offshore wind in the later part of the decade. Achieving the necessary renewable generation in time to support the targets in the Climate Action Plan means we need to do everything we have been doing but faster. This applies across all elements of the planning/consenting process (explored later), grid connection applications, transmission capacity solutions, and RESS delivery.

WEI's *Bridging the Gap* report¹³ makes clear that without sustained reform of Ireland's current policies we simply cannot achieve our 2030 goals while also delivering a secure, uninterrupted source of energy for Ireland. In fact, even with the fastest deployment of renewable energy under current policy and with the most optimistic and accelerated outcome, Ireland's power sector would still be on course to emit 66 Mt-CO₂ between 2021-2030.



¹³ [Bridging the Gap - Towards a zero-carbon power grid](#)

In terms of mitigating the above risk of achieving targets with respect to delivery of onshore and offshore RES assets and supporting technologies, we draw attention to the following non-exhaustive list of policy actions which should be progressed as quickly as possible.

1. Implement EU Regulation on Clean Energy Package Articles 12 & 13, and address the uncertainty created by recent SEM Committee decisions on this matter.
2. Allocate sufficient resources to ABP and provide a dedicated unit to renewables. WEI also encourage the allocation of additional resources to other Planning Bodies including NPWS, CRU and Forestry Services.
3. Provide clearer signals to investors on the longer-term market developments as we approach a system predominantly based on renewables – discussed in next section.
4. Clarify the final terms and conditions for future auctions (RESS and ORESS), noting that greater certainty provided to bidders leads to lower prices for consumers.
5. Offer certainty for future renewable projects on future ECP batches for connection to the grid – there is currently a policy vacuum beyond 2023.
6. Address the uncertainty around decision timeframes for a new Firm Access policy on the grid. This policy is crucial for minimising additional costs to end consumers ahead of ORESS1 and RESS3 auctions, and if managed correctly can reduce bids.
7. Facilitate hybrid connections. The facilitation of hybrid connections has been a clear policy objective for some time that has been included in the Climate Action, however industry has yet to see any progress on it from policymakers.
8. Develop a coordinated strategy for energy storage to ensure investment is supported through the various pillars of the market and that new energy storage technologies are fully integrated into the electricity system and market to unlock their full potential.
9. Publish hydrogen strategy as soon as possible, underpinned by tangible, deliverable targets that will enable green hydrogen and derivatives to make a real impact on our energy system and security of supply.

As a general point, developers are experiencing mixed responses from statutory bodies involved in the various elements of developing and consenting a wind farm. Feedback from WEI members suggests that various elements are very silo-driven, and often a lack of understanding of how their role and actions fit into the process, particularly on the offshore wind development side.

Resourcing is and will continue to be a crucial deciding factor around whether or not we deliver on our ambition. Additional resources and expertise are urgently needed in An Bord Pleanála to ensure a robust and fair planning system, in the NPWS to ensure projects are developed in a sustainable way and in bodies like EirGrid, ESB Networks and the CRU to ensure the energy system continues to operate safely and securely.

It is clear that the benefits of deploying renewable energy in Ireland as fast as possible are two-fold. Not only will the rapid deployment of renewable energies in Ireland cut our carbon emissions, but this same strategy will increase the security of supply of energy and set us on the path to energy independence. This emphasises the importance of Ireland reaching its 2030 targets for deployment of RES-E for both environmental reasons and also as a core part of our future energy security.

Changes to EU Electricity Market Design

On a separate but related point, the projects needed to deliver on RES targets, and their financial backers require certainty in the market. These are the projects that will enable us to meet national and EU-level renewable energy targets and reduce our reliance on Russian gas.

Notwithstanding the discussions at EU level around revising the electricity market design, it is important to note that fundamental changes to the way electricity markets function, at this point, have the potential to put business models into question, and ultimately damage our ability to deliver on our 2030 ambition and prolong our reliance on imported fossil fuels.

WEI believe that well-functioning electricity markets are crucial to providing secure energy for Ireland. We look forward to engaging with this process and encourage DECC to work with the Commission to ensure a wide range of stakeholders at individual Member State level are given the opportunity to participate and provide their relevant evidence, expertise, and experience. However, and as outlined above, we believe that certainty and predictability in the market will be vital for the achievement of our 2030 ambition, and we urge Government and the European Commission to keep this in mind during the upcoming work.

Furthermore, looking out to 2030, there is a clear consensus that change is coming, but very little consensus on what the market design of the future looks like to send the correct signals for the investments that are required to achieve targets. Therefore, we recommend as an action in the next Climate Action Plan that the market operator, SEMO via EirGrid, the CRU and DECC should put in place a dedicated team to solely focused on what the market design should be to deliver a system with at least 80% of demand being met by renewables.

A Note on Interconnector Market Signals

One major market asset when it comes to energy security is interconnection. Interconnectors currently provide nearly 1 GW of capacity that can both import and export power to and from the Irish power market. This will more than double as the Greenlink, and Celtic interconnectors are added, with further interconnection also being discussed. As such interconnection offers a great opportunity to improve security of supply and even today, the ability to import power from Great Britain has been used under amber alert conditions, maintaining security of supply within the market.

However, with the wrong policy decisions there are also risks. The flow of interconnectors is driven by market pricing in the markets connected by the interconnector and if the pricing mechanisms in these markets are changed erroneously or out of synch with one another there are likely to be sub-optimal interconnector flows which could damage our security of supply. As such, it is important that future changes to European electricity markets are done with extreme care, noting that the current arrangements are working, maintaining security of supply in I-SEM and other European markets. The risk of unintended consequences arising from any abrupt changes to interconnector markets is important to consider in the context of security of supply.

4. Consultation Questions – Mitigation Options

Q4: Do you have any additional mitigation options that you think should be considered?

WEI would recommend that the following additional measures are explored:

1. Delivery of offshore wind at scale
2. Coupling offshore with green hydrogen/electrofuels
3. Battery storage solutions – short & medium term
4. Hybrid connection policy and development

Delivery of Offshore Wind at Scale

It has been Wind Energy Ireland's long held view that the best solution to increasing energy security, while also moving to a cleaner energy future, is to deploy Ireland's indigenous renewable resources at scale – onshore and offshore wind, solar, and with technologies that enable the transition e.g., energy storage, green hydrogen, and other clean fuels. On the offshore wind side, as noted earlier, Government has set out its ambition to deliver 7 GW of offshore wind energy by 2030.

The good news is that WEI's pipeline analysis consistently shows that there is a large volume of projects that are in development and would be more than enough to deliver on our 2030 targets. A recent survey of Wind Energy Ireland members concluded that there is a pipeline of over 28 GW of offshore wind competing for 2030 delivery, with an additional 15GW of projects in development for the post-2030 period. This includes more than 10 floating offshore wind projects. 13 GW of this 2030 capacity is located off the East Coast; 10 GW off the South Coast; and 5,000 off the West Coast, with new projects adding regularly.

The risk of failing to deliver on 2030 targets has already been highlighted earlier in the document. In particular, owing to the scale of projects involved, WEI believe that delivering Government targets for offshore wind is of paramount importance in the context of energy security and decarbonisation of energy supply. If offshore wind doesn't deliver on time, this could represent a significant challenge for security of supply. This is evident in EirGrid's latest GCS publication of October 2022. The risk of non-delivery needs to be mitigated now.

Now to turn to some of the mitigation measures that can be leveraged to increase our chances of success. In September 2021, WEI published *12 Months to Deliver Offshore Wind Energy*¹⁴, setting out the seven urgent actions we had identified that needed to be delivered as a matter of urgency over the following year. In summary, progress has been made over the last 12 months, however, there remain several aspects that must be addressed:

1. Action: Foreshore Licence applications must be processed as quickly as possible. Delays cannot be allowed to continue. We set out that by Q1 2022, enough projects have Foreshore Licences to ensure we can reach 5,000 MW. Assessment: This was not

¹⁴ <https://www.windenergyireland.com/images/files/final-twelve-months-to-deliver-offshore-wind-energy.pdf>

delivered. Projects aiming to deliver for 2030, including those set to compete in an ORESS auction in early 2023 are still experiencing significant delays in the Foreshore Application process.

2. Action: Developing 5,000 MW of offshore wind energy by the end of 2030 will place an enormous burden on the relevant Government departments, An Bord Pleanála, NPWS, EirGrid, ESB Networks and the CRU. The report highlighted that these bodies must be adequately funded in the coming budget. Assessment: We have seen some evidence of additional resources being allocated to these bodies. EirGrid has since established an offshore wind team, while resources have been allocated to the Marine and Climate unit in ABP. However, it is still clear there is a very significant resource gap in An Bord Pleanála and the NPWS particularly.
3. Action: A firm commitment on the date for the first auction needed to be communicated as soon as possible, along with clarity on the timeline for further auctions and how to include a preference category to support floating wind energy. Assessment: A provisional date has been set for the first ORESS auction. This is an important step and gives some much-needed visibility for the Phase 1 projects. However, we still await any direction on Phase 2, and no date has been communicated for auctions beyond 2023.
4. Action: The Maritime Area Planning Bill needed to be passed before the end of 2021 and amended to ensure Phase Two projects could get a Maritime Area Consent (MAC) in 2022. Assessment: The MAP Act was enacted in December 2021. We expect the Phase 1 projects to receive MACs in the coming weeks.
5. Action: An Offshore Grid Steering Committee must be set up to bring together industry, EirGrid, the CRU and DECC to ensure the successful implementation of the new offshore grid model, to develop technical offshore grid standards and to rapidly process grid offers. Assessment: This has not been set up. While engagement has been good in some aspects of offshore grid policy, it is evident that in the areas where engagement has been poor, delivery has been poor. A regular forum, as called for by WEI, would have enabled us to identify problems and timeline slippages before they became problems, and collaborate to find solutions to the admittedly complex task of establishing the new offshore grid model.
6. Action: The grid is not currently strong enough to accommodate the Offshore target. Additionally, that EirGrid's grid development strategy, at the time still yet to be published, must have strong political and public support right across Irish society. Assessment: EirGrid delivered SOEF in November 2021, however it did not account for updated 2030 ambition and fell short in reinforcing the west and south coasts for offshore wind. A new version is now being prepared to account for increased targets and to keep the electricity system within the carbon budgets.
7. Action: Strategic investment must be directed into an east coast port by the end of 2021 while also identifying a south or west coast port must as soon as possible for future projects, including floating wind energy. Assessment: We are still yet to see this level of strategic investment in ports to ensure they are ready to deliver for offshore.

Coupling Offshore with Green Hydrogen/Electrofuels

Increasing indigenous renewable production is the primary mechanism through which external dependency for energy can be reduced. Coupled with the development of offshore wind energy, and with the right policy enablers/risk mitigation measures in place, green

hydrogen and electrofuels can be coupled with renewables to play a role in harnessing our potential, providing secure energy, and driving emission reductions beyond the electricity sector and across Ireland's wider economy. Hydrogen and electrofuels are the vectors through which this improved energy security can be delivered to end use sectors. For this to successfully occur, the production, transportation, storage and consumption of hydrogen and/or electrofuels must work seamlessly as a part of a closely coupled energy system.

A recent report authored by Gavin and Doherty Geosolutions Ltd.¹⁵ on behalf of Wind Energy Ireland sets out that green hydrogen can enable Ireland to meet a greater share of its energy requirements using indigenous renewables. This will reduce imports, increase our energy security, and reduce reliance on complex and often sensitive supply chains. A sustainable and competitive hydrogen industry could create up to 600 jobs by 2030 and a further 1,200 jobs in related employment and could be used provide significant system benefits through flexible, on-demand power, according to the report.

A Note on the Storage Potential of Hydrogen

While renewables give us clean and sustainable electrical energy, there is a risk when intermittency occurs, and it is difficult and expensive to manage. This risk of insufficient buffering or storage capacity can be addressed by green hydrogen. The storage of clean renewable electricity in the form of green hydrogen or electrofuels is particularly beneficial for power grids as it allows for renewable energy to be kept not only in large quantities, but also for long periods of time. This means that hydrogen/e-fuels can help improve the flexibility of energy systems by balancing out supply and demand when there is either too much or not enough power being generated, helping to boost energy efficiency in Ireland and Europe¹⁶.

Hydrogen can also improve Ireland's energy security by displacing fossil fuel consumption in priority end use applications. Any reduction in the need to import fuel is an incremental improvement in Ireland's energy security. This is compounded by the fact hydrogen acts as an integrator of indigenous wind ensuring hard-to-abate sectors can substitute fossil fuels for hydrogen and electrofuels produced by renewables. This self-sufficiency and maximisation of indigenous wind potential is extremely important given the current geopolitical and energy price driven inflationary environment.

Green hydrogen in the form of liquid e-fuels (green ammonia, eSAF, eMethanol etc..) are destined to play a very significant role in the energy security of Ireland. As these e-fuels are relatively easily stored and energy dense they will provide a huge quantity of stored energy. It will also allow us to import these liquid products in the event of a severe supply disruption in Ireland. Green ammonia can be stored and used for green dispatchable power. SAF and eMethanol will play a bigger role in transport. For example, if the current global demand for Ammonia was to be replaced by green ammonia, over 250 GW of offshore wind would be required. There's an enormous existing market for these fuels, and Ireland can harness its incredible wind resource to produce these fuels at scale for the European market while also having a very positive impact to our energy security.

¹⁵ <https://windenergyireland.com/images/files/final-hydrogen-and-wind-energy-report.pdf>

¹⁶ https://energy.ec.europa.eu/topics/energy-systems-integration/hydrogen_en

From an energy system perspective, a shift to a system based on renewables and supported with green hydrogen and other electrofuels will have enormous benefits in terms of energy security, as imported fuels will drop from around 70% of our energy mix today to just 5% in 2050, securing our energy supply¹⁷. This requires a resilient energy system with adequate flexibility, underpinned by a strong grid, flexible loads, sufficient capacity, interconnection and energy storage.

Hydrogen should be viewed as an important solution for energy security in Ireland. To achieve this, support for a hydrogen industry must begin now. Wind Energy Ireland calls on DECC to publish Ireland’s hydrogen strategy as soon as possible, underpinned by tangible, deliverable targets that will enable green hydrogen and derivatives to make a real impact on our energy system and security of supply.

Battery Storage Solutions – Short & Medium Term

It is clear that battery energy storage will play an essential role in facilitating the higher levels of renewable generation on the power system required to achieve national renewable electricity targets, whilst also contributing to a secure energy system. The flexibility of storage systems and their ability to contribute to the energy, capacity and system services markets on the power system allows them to deliver a wide range of benefits to end consumers such as wholesale energy price reductions, reduced CO2 emissions and flexible system support services to help manage the grid. This is detailed in Energy Storage Ireland’s recent report¹⁸.

WEI sees a clear need for significant investment in energy storage technologies to ensure security of electricity supply. In the short term what we need to see is development of sufficient market mechanisms to ensure the multi-layered value energy storage provides is accurately remunerated. A coordinated strategy for energy storage is needed to ensure investment is supported through the various pillars of the market and that new energy storage technologies are fully integrated into the electricity system and market to unlock their full potential. This should bring together the relevant stakeholders such as the System Operators, Regulatory Authorities, Government departments and industry to ensure a coordinated approach to energy storage going forward.

It is surprising that, as things stand, EirGrid is not currently able to dispatch batteries for export via EDIL. Current interim policy is that battery energy storage systems (BESS) will not be dispatched or scheduled (except in limited circumstances at the discretion of EirGrid), instead being held back primarily for reserve.

Recently EirGrid has begun trialling dispatching BESS, but this is expected to be utilised only in limited circumstances (e.g., during period of system alerts) and only at the discretion of the TSO. Current TSO policy in the majority of instances is therefore to dispatch BESS to zero MW regardless of their ex-ante generating (export) position. This prevents storage assets contributing more actively to security of supply and limits market participation to meet Capacity Market obligations. This acts as a disincentive for battery projects to participate in the Capacity Market, for example, and means increased prices for electricity consumers.

¹⁷ <https://windenergyireland.com/images/files/our-climate-neutral-future-0by50-final-report.pdf>

¹⁸ [Game Changer: How Energy Storage is the key to a Secure, Sustainable, Clean Energy Future in Ireland](#)

It is our view, as a first principle, that operational procedures should be adapted whereby, if dispatchable plant is needed for system security reasons, it should be considered whether zero or low carbon plant like battery could fulfil some of the need identified, before automatically dispatching gas generators, thus minimising the amount of gas use, and hence overall carbon emissions from the grid.

There is already significant BESS capability of over 670 MW on the system that could be more actively participating in wholesale energy markets and contributing to security of supply for the coming winter periods. Unfortunately, as mentioned above, all BESS are dispatched to zero MW and units must buy power back in the balancing mechanism. Those without firm access are settled at the market imbalance price only (rather than their balancing market DEC price) and therefore exposed to imbalance price risks. Regardless of firm access quantities, very limited physical dispatch of energy from BESS is currently happening due to TSO policy and system limitations.

Question 4 of the Consultation asks about mitigation options. One of the quickest ways to unlock more electricity security via the existing capability of batteries connected to the grid is for the CRU to grant a deemed firm status to all non-firm BESS units in the market and for EirGrid to update their scheduling and dispatch tools and policies to allow more active dispatching of BESS. This would have a positive contribution to both energy prices and security of electricity supply, particularly during peak demand periods when BESS units are more likely to be active as a useful resource.

Furthermore, there is a large pipeline of energy storage projects in Ireland today with planning permission that could be deployed quickly to help meet our supply needs. To facilitate this, zero-carbon energy storage solutions should be prioritised over fossil fuel gas generation where possible to avoid locking-in polluting fossil fuel generation for many years to come. The major bottleneck for most energy storage projects at present is the ability to obtain a grid connection. As a simple policy measure, WEI believes that changes are needed to the CRU's Enduring Connection Policy (ECP) process to remove the current caps on the number of offers for storage projects per batch, which itself is an annual process.

A Note on Long Duration Energy Storage

Long-Duration Energy Storage (LDES) will be essential to decarbonising our energy system by providing a range of valuable services from congestion management, peaking capacity, alternative network solutions, increasing renewables on the grid, delivering cost benefits to end consumers and ensuring security of supply. However current frameworks and incentives are unlikely to be sufficient to deliver the volumes and capabilities of LDES we will need in future. This will require new frameworks to drive investment similar to how REFiT and RESS have driven investment in renewable technologies with similar high Capex/low Opex characteristics to LDES. The goal of these frameworks should be to meet two key objectives:

- 1. Provide a stable long-term revenue floor under which LDES can build.*
- 2. Ensure optimal operation of LDES assets to maximise their value to the system and to consumers through existing and new services/market incentives.*

The need for, and benefits of, Long-Duration Energy Storage (LDES) have been shown in multiple studies both nationally – Baringa and SEAI – and internationally – McKinsey and AFRY. EirGrid’s Shaping our Electricity Future roadmap also assumes over 2 GW of energy storage in Ireland by 2030 (including capacity of 6 hours duration and above). While these studies vary in the volume and durations of LDES required, they all arrive at a result showing a significant volume of multi-hour storage by 2030 in order to meet targets for the electricity sector. To kick-start the process of developing a procurement framework for LDES, WEI calls for the publication of a Call for Evidence paper by the relevant Government departments. This would seek views from stakeholders on potential options for a future framework.

Hybrid Connection Policy and Development

The facilitation of hybrid connections has been a clear policy objective for several years and progress must now be expedited. The lead for these measures is shared between CRU and EirGrid and a timeline for addressing all the measures was set out to be completed by the start of 2023, according to the Climate Action Plan. However, to date progress has been slow.

It is important that progress is now accelerated to allow the benefits of hybrid connections to be realised and allow these connections to help in delivering the 2030 targets. Facilitating and supporting the delivery of hybrid connections would deliver additional benefits from a security of supply perspective, as follows:

- Allowing and supporting the co-location of complementary technologies (wind, solar, storage) to share a grid connection would maximise the current (and scarce) grid capacity – enabling greater generation diversity, faster connection, and reduced costs.
- Allowing and supporting the co-location of the same technologies at the same site via multiple legal entities who wish to invest / develop new capacity.

There is also an opportunity to enable quick deployment of energy storage units on existing wind and solar sites by removing current barriers to hybrid grid connections. These grid connections have already been constructed and enabling quick-to-deploy solutions such as energy storage on these sites can increase capacity factors for renewable sites and provide additional system support services. The three key policy barriers that need to be facilitated for this hybrid policy to be effective are as follows:

- Enable multiple legal entities to be behind the same connection point.
- Enable sites to over install beyond the current 120% MEC limit.
- Allow multiple technologies to share MEC behind the same connection point.

WEI has developed a number of positions in relation to hybrid policy and have an active working group dedicated to the topic. We would encourage collaboration between EirGrid, the CRU and industry partners on hybrid policy as an important solution in the short term.

Q5: Which gas supply mitigation options, if any, should be considered for implementation?

We note the mitigation options outlined in the paper, presented in two categories of gas supply and electricity supply mitigation options. WEI's primary focus is on electricity supply and hence the majority of our comments refer to this section, however we do also outline some general comments on gas security, and specifically its use as a transition fuel below.

In relation to the gas supply mitigations presented in the consultation, Wind Energy Ireland would once again highlight the importance that any solutions brought forward are mindful of our decarbonisation ambition. Investments made now will remain a part of the energy system for the next decade at least and policy decisions need to align with the Climate Action Plan and the legally-binding carbon reduction goals that have been for 2030.

In any policy measures taken to address security of supply, WEI advocates for solutions that come from flexible and clean technologies. We believe that any new fossil fuel generator being deployed on the grid, for example, must be required to be capable of transitioning from a fossil fuel gas to a sustainable fuel in the future. We have already discussed sustainable options in the form of green hydrogen and electrofuels earlier, in Question 4. We also include some further comments on this aspect in response to Question 6 below.

While we acknowledge that our natural gas infrastructure will continue to play an important role in the coming years, it is essential that if new generation is to be built that it must help and not hinder the deployment of renewable power and sustainable solutions that can ultimately achieve Net-Zero goals. Over the coming decade, there is a need for Ireland to increase our efforts in decarbonising gas supplies by, for example, injecting green hydrogen and biomethane into the gas grid.

The Government has committed to publishing a new Hydrogen Strategy by the end of 2022 and WEI would welcome the clarity that this policy will deliver. The strategy, once finalised, must be underpinned by tangible, deliverable targets that will enable green hydrogen and derivatives to make a real impact on our energy system and security of supply.

WEI believes that technologies such as green hydrogen and green hydrogen derivatives can play a large role in transitioning away from fossil fuels. While its' impact will be phased, the current timelines in CAP21 are not reflective of the ambition set out by the EU or that of the Government announcement of 2 GW of hydrogen by 2030. We would expect to see updated timelines with more refined actions in the next Climate Action Plan.

A Note on the Gas Mitigation Package

Investments should help develop renewable hydrogen infrastructure to best meet the various needs of relevant end-use sectors. While gas blending would indeed provide a means of creating demand at a time when the industry is at a nascent stage, we believe that any policies that incentivise this should be treated cautiously and accompanied by robust studies and assessments to avoid stranded assets and carbon lock-in. Gas blending can be viewed through two lenses: as a method for transporting green hydrogen and as a demand sink of last resort for green hydrogen. Using gas blending to transport green hydrogen is not aligned with the

targeted nature of the strategic approach outlined in the Government's recent consultation paper to inform the development of a Hydrogen Strategy for Ireland, as the green hydrogen injected will be used indiscriminately in the gas network.

However, given the need for hydrogen capability development, the need for robust domestic supply chains and the requirement for significant investment in hydrogen production capacity in preparation for offshore wind, the merits of utilising gas blending as transitional demand sink of last resort for early projects requires further analysis. As a demand sink, the gas network may be able to remove an element of volume risk for early projects as a hedge against hydrogen demand growth.

The decision on gas blending is indicative of the many trade-offs required to navigate the volatile and fast paced energy transition. A decision on gas blending must be cognisant of the costs, benefits and risks, intended and otherwise, which result from utilising green hydrogen in the gas network. The strategic need for industry development in the short term to support future renewable capacities must be weighed against the potential (cost and emissions) risks of hydrogen use in non-targeted areas, the infrastructure investment required to accommodate any blending and the gas quality impacts on end users as a result of such a decision (particularly on gas fired power plants).

It is also important to note that the Irish gas network may be exposed to gas blending decisions in GB and in the EU, which may require the accommodation of hydrogen in the network at some level. Work should continue to ensure this can be facilitated in Ireland.

WEI also notes the ongoing discussions on this topic at European level, particularly the requirement in the recast EU Gas and Hydrogen networks regulation legislative proposal for TSOs to accept a hydrogen content of up to 5% from 1 October 2025¹⁹, and the accompanying Commission documents to the RePowerEU Plan, where the Commission noted its position that blending hydrogen into the natural gas grid requires careful consideration as it diminishes gas quality, increases costs and is less efficient than direct electrification.

The European Hydrogen Backbone (EHB)²⁰ initiative is promising to deliver on the 2030 hydrogen demand targets set by the RePowerEU plan. Five large-scale pipeline corridors are envisaged and are included in the EHB's most recent report Five hydrogen supply corridors for Europe in 2030²¹. The corridors will initially connect local supply and demand in different parts of Europe, before expanding and connecting Europe with neighbouring regions with export potential. The planned hydrogen backbone network will largely be based on repurposing existing natural gas infrastructure.

Therefore, Gas Networks Ireland is a key participant in Corridor C. Corridor C would meet demand from industrial clusters and ports in the UK, the Netherlands, Belgium, and Germany enabling European partnerships that include Ireland. We would encourage relevant stakeholders to explore this potential as an output from the energy security review.

¹⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:804:FIN>

²⁰ <https://ehb.eu/>

²¹ <https://ehb.eu/files/downloads/EHB-Supply-corridors-presentation-ExecSum.pdf>

Q6: Which electricity supply mitigation options, if any, should be considered for implementation?

Increased Interconnection

It is clear that interconnection of Ireland’s electricity system is essential to provide greater security of supply and reduce reliance on volatile fossil fuel imports. The Irish electricity system currently has approximately 1 GW of electricity interconnection supplied by the East West interconnector from Ireland to Wales and Moyle interconnector between NI and Scotland. Increasing interconnection will add to our energy security, meaning we can import electricity in times of high demand or low generation at home.

Ireland is currently progressing plans for two major interconnections in the coming decade, the Celtic interconnector between Ireland and France (2026), and Greenlink interconnector connecting Ireland to the UK (2023). It is crucially important that we see these projects delivered within the coming four years. We also welcome reports that a new interconnector project to the UK, the MaresConnect 750 MW HVDC is being progressed²².



It is critical that work must start now to identify future interconnections to be completed in the early 2030s. Ireland has further opportunity to progress its interconnection through the North Sea Energy Cooperation for which Ireland holds the presidency in 2022. One of the aims within NSEC is to look to joint and hybrid cross-border projects and increased levels of interconnection among the members. We would encourage DECC and other State actors to progress any mitigation options that can increase Ireland’s interconnection to the EU.

When considering the potential benefits of new interconnection, it is important to consider the impact this interconnection will have on renewable generation on the island of Ireland.

²² <https://irishtechnews.ie/750mw-maresconnect-links-uk-and-irish-power-grids/>

While interconnection can benefit renewable generation, it can also result in challenges for both indigenous renewables and the transmission system. Interconnection with high wind penetration areas has the potential to deliver imports onto the island of Ireland at times of high wind which can result in the dispatch down of indigenous renewable generation. Therefore, the local areas of interconnection should be carefully examined. The presence of increased interconnection also creates the potential for the island of Ireland to be utilised as a power corridor between the electricity markets of other countries. Power may be scheduled to flow from one country, through Ireland to a third country which would stress the transmission network in Ireland. This again should be considered in any interconnection decisions if/when they are made.

Looking further into the future there is an opportunity for Ireland to be a leading contributor to the development of a European SuperGrid. The concept of a European SuperGrid is a transmission network spanning the continent which can help to connect resource-rich areas with high renewable energy potential – such as Ireland (offshore wind) or Spain (solar) – to Europe’s main demand centres, with less renewable energy potential relative to their demands²³. Ireland’s Programme for Government outlined an ambition to make Ireland a major contributor to a pan-European renewable energy generation and transmission system, taking advantage of at least 30 GW of offshore floating wind power. A SuperGrid can become a large element in achieving these goals and can bring a host of other benefits to Ireland and Europe as we aim to decarbonise our economy by 2050, in our view.

Additional Electricity Storage – pumped hydro

The consultation document refers to increasing pumped hydro capacity by another 360 MW by 2030. This in addition to the Turlough hill which already exists and boasts capacity of 292 MW. While it is WEI’s view that this type of solution should be explored further, we do not believe that it will be sufficient to address the scale of the mitigation/actions needed to combat the security of supply issues which Ireland is facing.

Additional Generational Capacity – Dispatchable Low Carbon

Firstly, in relation to the option, it would appear that CEPA is proposing the conversion of two of the Moneypoint units to biomass as the "450 MW". It is difficult to envisage how the proposed delivery date of 2025 could be achieved for a brand-new biomass plant. More generally, it is important to note that, for a variety of reasons, the sustainability of biomass in large power plants is coming under increasing scrutiny. There is no guarantee that biomass will retain its status as a sustainable fuel over the next decade. The Sustainability Criteria on Forest Biomass for Energy (Implementing Act) currently progressing through the EU comitology process indicate that higher standards for sustainable biomass are coming. These higher standards are welcome to ensure biomass as a contributor to Ireland’s decarbonisation transition truly has a positive environmental impact but would increase the difficulty of delivering this mitigation option. There are also significant additional practical issues with operating a biomass plant of this scale within the Irish electricity system and regulatory

²³ <https://windenergyireland.com/images/files/supergrid-report-march2022-final.pdf>

framework. Sourcing sustainable biomass requires committing to long-term contracts with fuel suppliers and by its nature biomass is subject to degradation over time meaning long-term storage is difficult. These two issues create a large risk for the plant operator when the plants running regime and dispatch profile is uncertain.

Increased Secondary Fuel Storage at Gas Fired Power Stations

We note from the consultation one of the mitigation options relates to increased secondary fuel storage at existing power plants. In responding to this, WEI is conscious of the following:

1. The modelling undertaken by CEPA concludes that unmet electricity demand only occurs when there is a prolonged outage (>30 days) to both gas interconnectors (IC1 and IC2) during a winter month in 2025 (scenario 5).
2. The likelihood of secondary fuel stocks being exhausted in even this most extreme scenario decreases markedly by winter 2030.
3. A number of CCGTs are likely to be limited in the quantity of secondary fuel they are capable of storing onsite and developing additional capacity will be challenging in time for 2025 due to planning, environmental and health & safety constraints.

As such, taking all these factors into account, WEI does not believe the cost of pursuing such an option can be justified, given the likelihood of scenario 5 coming to pass. This is especially the case if existing stations, located away from NORA storage assets, are obliged to invest in additional storage capacity on site. WEI notes also that CEPA do not seem to consider the efficiency losses for CCGTs operating on secondary fuel in their analysis and therefore the cost estimates provided represent at best the minimum cost of pursuing such an option.

Conversion of a Gas Fired Power Plant to Hydrogen

WEI believes that technologies such as green hydrogen and derivatives can play a large role in transitioning away from fossil fuels. Green Hydrogen or green hydrogen derivatives can be used to decarbonise the gas-fired dispatchable thermal generation required by the system to back-up intermittent generation like wind and solar. These technologies need to work in parallel to support the security of our energy system in totality.

In terms of concrete action in the near term, consideration should be given to requiring any new fossil generation capacity to be highly flexible (very low minimum generation and commercially able to accommodate regular on/off cycling) and to be hydrogen ready. This could be achieved through appropriate amendments to capacity auction terms and conditions. We have already included a number of principles that should be included in the planned reform of the CRM, in section 3. We will repeat them here for emphasis.

1. Investment in zero and low carbon capacity needs to be encouraged and facilitated. New gas thermal plants need to have a pathway to decarbonisation for example by being able to transition to green hydrogen in the future.
2. Restrictions on how energy storage projects can engage in the energy markets need to be removed to ensure they have a viable route-to-market.
3. The timelines of the T-4 auctions are challenging within which to deliver projects. This is particularly so given the delays projects can face with respect to the planning process and grid connections. Reform and streamlining of these processes would

reduce the risk of projects not delivering while also having ancillary benefits for development of the wider electricity system.

4. Appropriate market and pricing signals that apportion risk in a balanced way that incentivises investment are needed. Adopting an overly penal approach will not deliver the capacity required.

In summary, there is a need to ensure that any new developments securing capacity contracts complement the low carbon electricity system being created over the coming decade. Investments made now will remain a part of the electricity system for the next decade at least and must align with Ireland's decarbonisation ambition. WEI would be supportive of the conversion of an existing CCGT unit to hydrogen, supporting the delivery of 2030 RES targets.

Electricity Mitigation Package (DSR and Batteries)

WEI see a clear need for significant investment in energy storage technologies to ensure security of electricity supply. In the short term what we need to see is development of sufficient market mechanisms to ensure the multi-layered value energy storage provides is accurately remunerated. A coordinated strategy for energy storage is needed to ensure investment is supported through the various pillars of the market and that new energy storage technologies are fully integrated into the electricity system and market to unlock their full potential. This should bring together the relevant stakeholders such as the System Operators, Regulatory Authorities, Government departments and industry to ensure a coordinated approach to energy storage going forward. We address a number of short-term issues and policy solutions to deliver more batteries on the system under Question 4.

Furthermore, there is a large pipeline of energy storage projects in Ireland today with planning permission that could be deployed quickly to help meet our supply needs. To facilitate this, zero-carbon energy storage solutions should be prioritised over fossil fuel gas generation where possible to avoid locking-in polluting fossil fuel generation for many years to come. The major bottleneck for the majority of energy storage projects at present is the ability to obtain a grid connection. As a simple policy measure, WEI believes that changes are needed to the CRU's Enduring Connection Policy (ECP) process to remove the current caps on the number of offers for storage projects per batch, which itself is an annual process.

Finally, in relation to battery storage, WEI recognises the potential for Long-Duration Energy Storage (LDES) in decarbonising our energy system by providing a range of valuable services from congestion management, peaking capacity, alternative network solutions, increasing renewables on the grid, delivering cost benefits to end consumers, and ensuring security of supply. To kick-start the process of developing a procurement framework for LDES, WEI calls for the publication of a Call for Evidence paper by government. This would seek views from a wide spectrum of stakeholders on potential options for a future LDES framework.

On a related point, Wind Energy Ireland recognises the benefits that demand side response measures can deliver for capacity adequacy and congestion management in the short term. Utilising demand side, whether through the use of Demand Side Units (DSUs) or by shifting household demand, can provide system operators with increased flexibility and an additional tool for operating a secure system at peak periods. As such, policy can be designed to reduce peak demand on the system by shifting demand to lower demand periods and effectively

smooth the demand curve. A further benefit of DSR is congestion management. In congested areas of the network, such as the Dublin region, demand side response can be used to alleviate congestion when required. Demand side response also has some potential to alleviate wind and solar constraint and curtailment by shifting demand to periods with high levels of renewable generation. We would encourage policy development in this space.

The Climate Action Plan sets a target that “20-30% of system demand is flexible by 2030”. As outlined by the Demand Response Association of Ireland, in their submission to an Oireachtas meeting in March 2022²⁴, “demand response is key to providing services to grid operators to rapidly adjust output, balance the system, maintain a secure power supply, and quickly respond to events. Commercial and industrial electricity customers continue to be the richest source of demand response in Ireland, but greater incentives are required to stimulate increased participation by this evermore ESG focused sector, including energy payments and carbon credits to recognise the positive impact their local actions have on our national decarbonisation objectives.”

DRAI’s statement goes on to outline a number of measures and policy levers required in the area of Demand Side Response:

1. Remove barriers that exist in current markets and system operation.
2. Develop robust markets for energy, capacity, system services and flexibility that are technology inclusive.
3. Incentivise and empower customers – provide carbon credits, correct levels of remuneration and prioritise grid access for committed demand response participants to reward service provision.
4. Deliver at speed – Ireland’s Climate Action Plan contains excellent initiatives to achieve this ambition, we need to put the resource and co-ordination in place to deliver.

Q7: What measures should be considered on the demand side to support security of supply of electricity and gas?

Another avenue for improving security of supply is by reducing total energy demand (gas and electricity) through the introduction of energy efficiency measures, including:

1. Improved insulation measures.
2. Deployment of heat pumps.
3. Demand side efficiency.

Buildings with improved insulation will require less heat in the form of gas or electricity and therefore supply needs could be reduced, mitigating the security of supply risks. Grants are available from SEAI to homeowners and landlords to part fund a variety of insulation measures (fully funded for qualifying homeowners in receipt of certain benefits). Increased promotion of these options for consumers would be immediately beneficial.

²⁴ <https://files.basekit.com/77/bd/77bdc4e2-9005-4bd2-b800-eb23120b8001.pdf>

WEI hold the view that any technology that aids Ireland in decarbonising its economy should be given the full support of all policy makers. In March of 2021, the MaREI Institute, in collaboration with Wind Energy Ireland, published *Our Climate Neutral Future: Zero by 50*²⁵ which puts forward a pathway to deliver a zero-carbon economy for Ireland.

It explains how the substantial electrification of heat and ultimately the build out of more renewables will be required over the coming decades and shows that Ireland's electricity demand could grow by 3-4 times from 29 TWh today to 84-122 TWh by 2050. This increase will be mainly due to industrial needs more so than residential. For us to reach the goal of Net-Zero by 2050 it is imperative that difficult to decarbonise sectors such as heat are seen as a priority and are tackled immediately with the roll out of new technologies and the support of policy makers.

As we alluded to in Section 3, WEI endorses the electrification of heat through heat pumps which can provide heat with amazing efficiency to its users and shift away from using fossil fuels. The roll out of heat pumps in the industrial sector is where the biggest opportunity lies currently for Ireland to make quick wins. This technology not only displaces imported fossil fuels but by moving to industrial electric heating it can provide much greater flexibility for System Operators.

A Note on Combining Heat Pumps with Thermal Storage

Combining heat pumps with thermal storage can take advantage of low-cost electricity during windy days when this electricity is wasted. An 80% utilisation of 3 TWh surplus renewable electricity delivers benefits to both society and to the electricity grid as it becomes more resilient.

Heat demand in Ireland for industry accounts for 17.5 TWh or 38% of the demand²⁶. The latest data from SEAI indicated that approximately 6.9 TWh of heat demands are up to 150°C²⁷. The Heat Roadmap Europe project included a division at 200°C for industrial heat and found that 57% of the heat demand in Ireland was <200°C, which equates to almost 10 TWh. Much of this demand can be met by the electrification of heat. Generally low or medium grade heat dominates the heat demand, commonly supplied through steam from boilers/CHP which has a direct replacement through low carbon electric heat.

Typical industrial heat pump applications are used across a broad spectrum of industries including food and beverage, agriculture and fishing, plastics, chemicals, and electronics. There is huge potential (>50%) for renewable heat in industry with existing technologies and heat pumps are the most widespread technology for industrial electrification. In addition, electrical heating (such as heat pumps) lends itself more easily to participating in demand side reduction schemes which could also help improve security of supply.

²⁵ <https://windenergyireland.com/images/files/our-climate-neutral-future-0by50-final-report.pdf>

²⁶ <https://www.seai.ie/publications/National-Heat-Study-Summary-Report.pdf>

²⁷ <https://www.seai.ie/publications/Heating-and-Cooling-in-Ireland-Today.pdf>

Finally, and in relation to broader demand side efficiency, WEI notes the EU [Energy Efficiency Directive](#)²⁸ has led to the current energy efficiency policy capturing the cost-effective energy saving opportunities available to citizens and the importance of such measures. This was amended in December 2018 as part of the 'Clean Energy for All Europeans package' to include a new headline 2030 EU efficiency target of at least 32.5% (compared to projected energy use in 2030), and to extend and strengthen the energy savings obligation beyond 2020.

However, this 2030 vision is of little solace to people who are facing skyrocketing energy bills as we move into the winter season. Financial support has been rolled out in Ireland in the form of energy credits and these can make a difference in the short term, but support mechanisms need to be underpinned by demand reduction and efficiency measures for lasting effects. Better managing the demand side by using energy in a more conscious and 'smart' way also contributes to reducing our energy consumption and bills.

Coordinated efforts at local, national and EU level and the active participation of citizens are necessary to ensure a quick and effective deployment of energy efficiency measures, which are often coupled with energy saving actions to maximise their beneficial impact.

Q8: Do you have any views on how the mitigation options should be implemented?

Wind Energy Ireland has outlined a number of positions and measures to be undertaken in previous questions above. In broader terms, the implementation of any of the proposed solutions we believe that planning and stream-lined consenting is crucial, we have laid out several key points in the below paragraphs that highlight the need for this to be carried out.

The successful implementation of any the proposed measures will be dependent on a well-functioning planning system. The growing concern surrounding Ireland's energy security and the continuing urgent need to decarbonise our energy system has highlighted the need for faster development timelines. We cannot decarbonise our electricity system and make Ireland energy independent without renewable energy projects, and supporting technologies, and cannot build them without a fit-for-purpose planning system.

The timelines associated with the permitting process have long been identified in Ireland, and across the EU generally, as a key barrier to the development and delivery of infrastructure projects. Thus, Ireland's planning consent and appeals system needs to be reformed if we are to fulfil the goals of the energy transition.

At a time when Ireland is facing both a climate and energy security crisis, renewable energy applications need to move through the planning process as efficiently and expeditiously as possible. Sufficient expertise and resources are required for planning bodies if we are to meet our obligations under the Aarhus Convention, the Habitats Directive and EU law and emission reduction targets.

²⁸https://eur-lex.europa.eu/resource.html?uri=cellar:a214c850-e574-11eb-a1a5-01aa75ed71a1.0001.02/DOC_1&format=PDF

Currently, WEI members report evidence of significant additional delays in the consenting of onshore wind energy projects which has resulted in the planning process for wind farms taking several years. The planning and permitting phase alone can typically take between 2-3 years at present (excluding grid connection planning). Developers expect that every project will be appealed and that every project will be the target of an application to take a Judicial Review resulting in lengthy and expensive legal proceedings.

Therefore, taking account of the above, it can take between 8-10 years for the full development phase of an onshore wind farm to complete. i.e., from commencement of environmental monitoring to lodging a planning application/securing planning permission, securing a grid connection, obtaining a route to market before finally entering construction. Depending on the size of a project, construction can then typically take between 18 months to 2.5 years upwards to complete.

Streamlining and speeding up the permitting process represents an opportunity to introduce meaningful change and improvements to the planning process in Ireland and will help reduce permitting timelines. There may also be opportunities to remove duplication and speed up or run certain permit applications in parallel. Ultimately an increase in allocation of resources to planning bodies (NPWS etc.) and ABP will help in clearing the backlog of appeal and SID applications that are currently with ABP for decision. In summary the following is required:

- Sufficient resources and a unit dedicated to renewables must be provided within ABP.
- Allocation of additional resources to other Planning Bodies including NPWS, CRU and Forestry Services.
- Improved processing times at Inspector and Board Level.
- Shorter administrative processing timelines.

We have an ambitious target of 80% renewable electricity by 2030 as Government policy. If Ireland has any chance of meeting that target, we must undertake an extensive reform of the current planning system. We welcome the ongoing review. WEI has developed several key recommendations for the systemic reform of the planning process in Ireland, and we would be happy to engage with the relevant Government departments on this.

Q9: Do you support the policy measures proposed in section 8 of the consultation paper?

Wind Energy Ireland are largely supportive of the proposals in this section of the consultation. However, with regards to the proposals for Regular Energy Security Reviews (Section 8.2), we do wish to highlight some concerns with the suggested approach (technical analysis on energy security of supply being undertaken every two years and setting out an energy security review every four years).

WEI recommend that proposed metrics for the technical analysis for energy security would be produced and maintained on a rolling basis – in particular the assessment of Ireland's

security of supply KPIs and reporting of the implementation of policies and measures designed to address/support security of supply. Furthermore, WEI suggests that the energy security review should (at least in the short to medium term) be on a far more frequent basis, particularly given the fast pace of change required domestically and the potential for significant and unexpected impacts from international developments.

As an additional point, it would be important to understand how each of these measures would feed into the annual Climate Action Plan and how they align with carbon reduction targets and the need for policy certainty. There must be clarity on how and when the required resources (including financial, legislative/regulatory changes) will be confirmed and implemented – with timelines and milestones published to ensure Security of Supply is appropriately considered rather than as urgent mitigation to current circumstances.

Finally, it is our view that the next Climate Action Plan must instil a level of urgency into the need to replace our fossil-fuel based back-up generation, while ensuring security of supply. Ireland currently uses gas and coal generators to back-up the electricity system and ensure it remains secure. We must start work now to replace these with low and zero-carbon technologies as we have outlined in this response.

Q10: What further tools and measures do you think would contribute the most to Ireland's energy security of supply?

In addition to the policy measures presented in the consultation, Wind Energy Ireland would advocate for the following additional measures in the short-term:

- A “no regrets” expansion of Ireland’s electricity grid.
- Speed and policy certainty vital in supply chain.
- General information initiative to the public and energy users.

A “No Regrets” Expansion of Ireland’s Electricity Grid

A focus on isolated solutions is not enough. Without the accelerated and aggressive build out of backbone infrastructure and grid reinforcements, as well as the deployment of alternative technologies and solutions to reduce fossil fuel contributions and minimise congestion and constraint, ambitious targets for the sector cannot be met.

The current grid development strategy is focused on delivery by 2030, and does not consider beyond, *towards a Net-Zero future*. Although we wait for the updated Shaping Our Electricity Future development plan from EirGrid, expected in early 2023, it is evident that the existing Roadmap will not deliver significant strategic capacity or headroom beyond the current renewable electricity targets. Significant network capability to allow for additional renewable capacities beyond 2030 will be needed for further decarbonisation and to account for electrification and green hydrogen generation as well as other increasing demand.

The power system should be planned, designed, and developed beyond 2030, with an ambition to design a grid fit for a zero-carbon electricity system in 2035 and a zero-carbon energy system by 2050 if not before. 2030 is merely a steppingstone on the journey to Net-

Zero. This ties in with EirGrid completing a Net-Zero study, which is due to be completed by Q4 2023 under Action 127 of the Climate Action Plan.

The matter of system resiliency and reliability is also a consideration. The climate emergency will mean more erratic weather systems including more storms, and of greater intensity, more flooding and higher temperatures.

These factors also pose a greater risk to the resiliency and reliability of our power system. Stations are at risk due to increased flooding. Overhead power lines are at risk due to more electrical storms and lower ratings of circuits, therefore reducing capacity and increasing congestion. Ensuring the necessary mitigations, policy and standards are identified and implemented in a timely manner is essential to ensure the safe and secure development and operation of our power system.

Speed and Policy Certainty vital in Supply Chain

Policy certainty and urgency will be particularly vital to give Irish projects a chance to overcome the supply chain bottlenecks, expected in the latter half of this decade.

This is particularly the case from an offshore perspective, as concluded by a recent report on offshore wind vessel availability until 2030²⁹, “to ensure in time installation of set targets, it is key that both the EU and local governments facilitate offshore wind development by creating the right conditions in terms of legislation, funding, supply chain and infrastructure as well as by creating proper conditions for the investment in installation vessels”.

While the report focused on availability for Baltic Sea projects, it shows how the global offshore wind market will accelerate significantly towards the end of the decade, with the 2021 globally installed capacity of 57 GW set to increase over 5 times to 316 GW by 2030. This growth will be led by Europe, which, in 2030, will account for almost 50% of the global offshore wind market. This will mean significant shortages of vessels to meet demand over the course of the decade. Policy certainty around offshore is critical. The European Union has an Offshore Wind target of 300 GW by 2050. Recently, at its Dublin meeting, the NSEC countries set out a target for the Northern Seas of 260 GW of offshore wind by 2050. Offshore wind development across European countries and around the world is competing for a limited supply chain and there will be competition for contractors, OEMs, vessels, etc. If Ireland is to deliver, certainty must be provided to the international supply chain as a matter of urgency.

General Information Initiative to the Public and Energy Users

WEI believe that public support is critical to the development of any major infrastructure. This is no different when it comes to renewable projects in Ireland. Major infrastructural development in this case refers to the building of a new wind farm and/or building out the electricity grid to name two of the more high-profile examples. As highlighted numerous times above, building out the electricity grid and deploying further wind projects is what is required if we are to meet any of the Climate Action Plan targets which are set for 2030 and

²⁹ <https://windeurope.org/wp-content/uploads/files/policy/topics/offshore/Offshore-wind-vessel-availability-until-2030-report-june-2022.pdf>

beyond. More importantly however these projects will ensure we have security of energy supply in the coming years as we move away from imported fossil fuels.

Ireland's path to a secure energy future is through renewable projects and whilst good work is being done to inform the public of this, we feel more can be done to secure greater, and more active, public support. By increasing the knowledge of renewable energy and the benefits which it can provide to audiences across Ireland, we believe community engagement levels will increase and there will be a more welcoming approach for renewable projects. The benefits for the community not only show themselves in cleaner energy and aiding Ireland reach energy independence but stretch to include significant local economic benefits in the form of local jobs, community benefit funds and rates payments to local authorities. Together, these can be transformative economic benefits for Irish rural and coastal communities.

Whilst many are seeing the benefits of shifting to a fully renewable electricity system, others may not know how this can be achieved. One of the major gaps in the public's knowledge is surrounding grid infrastructure and the need for us as a country to build out of the grid to accommodate more renewables on the system.

Developing and strengthening Ireland's electricity grid needs to be understood as a national mission for the people of Ireland. We cannot have a secure electricity supply without a strong grid. We cannot decarbonise our energy supply without a strong grid. We cannot achieve energy independence without a strong grid. Unless this is explained, communicated and, for the audience, understood we will struggle to achieve any of the objectives referred to in this consultation. Failure to communicate is planning to fail.

WEI would strongly encourage a government information campaign surrounding renewable energy and the important role it can play in our economic strategy and the role it must play in ensuring security of supply for the coming years.

WEI believe that for energy users to reduce their demand a prominent public information campaign is required. We acknowledge and support the launch of the Government campaign 'Reduce your use'³⁰ in the summer of 2022 but we do not feel it was adequately resourced nor was this message made a key priority message across every Government department and State agency in every single public communication as a campaign like this would require.

We would encourage the Government to keep pushing this narrative to a point where 'Reduce your use' is as impossible a message to miss as 'Wear a mask' and 'Keep your distance' were during the COVID-19 crisis.

By creating a public conversation on such issues, we believe that security of supply can be enhanced in the short term and ultimately that Ireland's demand for electricity can be reduced in the longer term as people become more energy efficient.

³⁰ <https://www.gov.ie/en/campaigns/6ca43-reduce-your-use/>

5. Conclusion

In conclusion we would like to thank the Department of the Environment, Climate and Communications for the opportunity to respond to the review of the security of energy supply of Ireland's electricity and natural gas systems.

It is clear from the analysis published alongside this consultation, and in other workstreams, that we are facing an uncertain time in Ireland as regards security of supply. Gas supply risks due to the ongoing war, paired with an increasing electricity demand in Ireland, and an ageing fleet of fossil-fuel power stations, has accelerated our thinking about energy security and what this means in an Irish context.

Society is also facing the urgent and unquestionable need to act urgently in the face of the climate crisis. A report from the Intergovernmental Panel on Climate Change (IPCC)³¹ issued earlier in the year, provided us with yet another stark warning, this time outlining that limiting warming to the 1.5°C Paris Agreement target would require global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 48% by 2030.

Faced with the above set of simultaneous challenges, what is unquestionable is the urgent need to transition away from our current dependence on fossil fuels, towards an electricity system, and indeed a wider energy system, based on clean renewable energy. Until we do this, we will remain vulnerable to fossil-fuel price and supply shocks such as the ones we are witnessing today. As we look forward to this exciting future, we need to look at what this means for our electricity and gas systems throughout the transition phase.

WEI believes it will be essential to see collaboration between Government, EirGrid, Gas Networks Ireland, the Commission for Regulation of Utilities (CRU), and industry partners to address the urgent and consequential risks that have been flagged regarding energy security. We would welcome the opportunity to engage further with the department and provide any further information related to the consultation. In our response, WEI has sought to provide evidence-based answers to a number of the topics on which DECC has sought feedback.

Our key messages in responding to this consultation are as follows:

Risks Modelled by CEPA & Additional Risks Identified by WEI

- The electrification of heat and transport is already well signalled in Government policy, and it must be understood as an inevitability for which we need to be plan accordingly. Electrification is not a risk; it is central to decarbonising Ireland's energy system and to meeting our legally binding carbon emissions reduction targets.
- In regard to increased demand from large energy users, WEI believes that codifying an appropriate ruleset for direct-line renewables is crucial if Ireland is to cater for LEUs while also addressing climate targets. We would encourage DECC to prioritise holding a consultation on this topic in the short term.

³¹ https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf

- While there is clearly a need to address capacity deficits in the short term, there is also a need to ensure that any new projects securing capacity contracts under the CRM system complement the low carbon electricity system being created over the coming decade. Investments made now will remain a part of the electricity system for the next decade at least and must align with Ireland’s decarbonisation ambition.
- Wind Energy Ireland wishes to emphasise an additional risk to those modelled by CEPA, that being failure to achieve targets with respect to delivery of renewables and supporting technologies, to realise an overall 80% RES-E target by 2030. Furthermore, staying within cumulative emissions limits³² will mean some very difficult choices when it comes to gas and electricity supply.

It has been WEI’s long held view that the best solution to increasing energy security, while also moving to a cleaner energy future, is to rapidly deploy Ireland’s indigenous resources at scale – onshore and offshore wind, solar, combined with technologies that enable the transition. WEI strongly welcomes the comments of the Minister for Environment Eamon Ryan, speaking at our Offshore Conference, surrounding the need to scale up renewables as a mitigation measure against security of supply:

*“The crisis is caused by our reliance on fossil fuels so the solution is to develop our own power supplies, really be efficient in how we use that energy and that will be good for energy security, for bringing the bills down. It will also be good in terms of climate”.*³³

Mitigation Options to Deliver Security of Supply

- Any solutions brought forward need to be mindful of our decarbonisation ambition. Investments made now will remain a part of the energy system for the next decade at least and policy decisions need to align with our Climate Action Plan.
- First and foremost, owing to the scale of projects involved, WEI believe that delivering Government targets for offshore wind is of paramount importance in the context of energy security and decarbonisation of energy supply. If offshore wind doesn’t deliver on time, this could represent a significant challenge for security of supply. This is evident in EirGrid’s latest GCS publication, with significant operational offshore wind capacity assumed to be in place before 2030.
- It important that progress is accelerated to allow the benefits of hybrid connections to be realised. This relies upon actions by the CRU and EirGrid. Facilitating delivery of hybrid connections is essential in terms of 2030 targets but would deliver benefits for security of supply in the near term too.
- WEI believes that Long-Duration Energy Storage (LDES) technology will be an important tool for decarbonising our energy system, providing a range of valuable services, delivering cost benefits, and ensuring security of supply. WEI calls for the publication of a Call for Evidence paper on LDES in order to progress new policy.
- Interconnection of Ireland’s electricity system is going to be essential in providing greater security of supply and reduced reliance on volatile imported fossil fuels. We

³² <https://www.gov.ie/en/press-release/dab6d-government-announces-sectoral-emissions-ceilings-setting-ireland-on-a-pathway-to-turn-the-tide-on-climate-change/>

³³ <https://www.irishmirror.ie/news/irish-news/eamon-ryan-says-dealing-energy-28046901>

need to see the delivery of current planned projects over the coming 5 years, and it is critical that work starts now to identify new ones to be completed in the early 2030s.

- Technologies such as green hydrogen and green hydrogen derivatives will play a large role in transitioning Ireland away from fossil fuels. While the impact will be phased, the current timelines in the Climate Action Plan are not reflective of the ambition set out by the EU or that of the recent announcement of 2 GW of hydrogen by 2030.
- Wind Energy Ireland calls on DECC to publish Ireland's hydrogen strategy as soon as possible, underpinned by tangible, deliverable targets that will enable green hydrogen and derivatives to make a real impact on our energy system and security of supply.

Tools & Measures Contributing to Security of Supply

- The successful implementation of any of these measures is dependent on a well-functioning planning system. The growing concern surrounding Ireland's energy security and the necessity to decarbonise highlight the need for faster consenting and significant planning reform.
- Without the accelerated and aggressive build out of backbone infrastructure and grid reinforcements, as well as the deployment of alternative technologies and solutions to reduce fossil fuel contributions and minimise congestion and constraint, ambitious targets for the sector cannot be met. The next iteration of EirGrid's Shaping Our Electricity Future publication must be based on an ambition to design an electricity grid for a zero-carbon generation system.

Finally, WEI strongly encourages a Government information campaign highlighting the critically important role renewable energy can play in our economic strategy and the role it must play in ensuring a secure electricity supply for Irish families and businesses in the years to come.