



McClelland House
10 Heron Road
Belfast
BT3 9LE

T 028 9045 4094

info@ulsterwildlife.org
www.ulsterwildlife.org

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ULSTER WILDLIFE RESPONSE TO THE DEPARTMENT FOR THE ECONOMY'S ENERGY STRATEGY FOR NORTHERN IRELAND CONSULTATION ON POLICY OPTIONS 2021

Introduction / Cover Note

Ulster Wildlife supports strong action to tackle the climate emergency and welcomes this well thought out collaborative consultation. We consider that there are three key areas that require greater emphasis:

1. A commitment to **NET ENVIRONMENTAL GAIN** for all developments and their ongoing operations: following the definition used by Defra of "*achieving environmental net gain means achieving biodiversity net gain first, and going further to achieve net increases in the capacity of affected natural capital to deliver ecosystem services*" as detailed by the advice to government from the Natural Capital Committee¹. This must be local and specific;
2. **STRATEGIC PLANNING:** Effective coordination to realise the best opportunities for both renewable energy developments (and their associated infrastructure) and the wider environment (both on land and at sea), future-proofed against the latest climate change impact scenarios. This must address efficiencies to: (a) close the gap between predicted demand and renewable supply; (b) protecting nature (and enhancing the role it can play), and (c) to the overall investment profile;
3. **INVESTMENT IN RESEARCH:** the impacts of renewable energy devices on the wider environment as well as specific habitats and species remains in its infancy for marine renewables, and considerable advances in turbine technologies (both for terrestrial and marine renewables, including repowering, and energy storage) and energy saving technologies may minimise wider environmental impacts. These require sustained research and development investment and a commitment to building a robust evidence base.

Ulster Wildlife is Northern Ireland's largest local nature conservation charity with over 14,000 members. Our vision is for a healthy, well-cared for natural environment which contributes to enjoyment, quality

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909269/ncc-advice-net-environmental-gain.pdf

part of
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of life, prosperity, health and well-being. Ulster Wildlife is supportive of targets to significantly increase energy production via renewables and sees this as vital in reducing our greenhouse gas emissions. We also recognise climate change itself has and will have a huge impact upon NI's wildlife, as well as on human health and wellbeing - the twin climate and biodiversity crises are intrinsically linked and both affect human health. We would like to ensure that when finalising the Energy Strategy and the related new and amended infrastructure that flows from the strategy there is appropriate consideration given to Northern Ireland's wildlife- habitats and species- and that core principles above are upheld in order to minimise impact and mitigate impacts on wildlife where necessary. This must also incorporate future-proofing: recognising the role many habitats have in sequestering carbon (an 'ecosystem service' which must play a vital role also in tackling our greenhouse gas emissions - also known as a 'Nature-based Solution' to climate change) and in providing other services such as flood mitigation and management of water, soil and air quality, which will become increasingly important as the climate changes - and also enabling wildlife itself to adapt to the changing climate.

To support delivery of the three core principles outlined above we would like to see a commitment to the following:

1. **Strong and inclusive decision making**, with early dialogue between all stakeholders, supported by cross-cutting government policies;
2. **Evidence and research** to support transparent decision making - understanding the cumulative ecosystem-wide impacts of developments;
3. Good ecological management with appropriate mitigation and safeguarding of species and habitats of importance (e.g. at a local, national and international scale, recognising the importance of connectivity and the UK's target to achieve 30% of land and sea managed and protected for nature by 2030), with a core commitment to the principle of **net environmental gain** (see above and point 6 below) and appropriate use of the precautionary principle;
4. **Cross-border collaboration** (UK and Republic of Ireland), with awareness of the transboundary nature of many potential development impacts, particularly in the marine environment;
5. Establishment of **partnerships** that ensure **integration of terrestrial and marine planning systems** and that these are fully consulted in planning energy infrastructure;
6. That all developments make environmental benefits clear in terms of contribution to renewables targets/reduction in GHG emissions (i.e. **net carbon impact**), and the risk of damage to ecosystems from the development proposed is put in the context of the wider environmental benefits;
7. Collaborations are fostered to maximise environmental mitigation options and minimise environmental impacts, and where possible local/community scale energy schemes are enabled and repowering of existing wind farms undertaken to reduce the need for large scale wind/solar farms whether onshore or offshore.

Consultation Questions

Q1: Do you agree with the overall goal of achieving net zero carbon energy no later than 2050?

Yes, however, Ulster Wildlife believes that the energy sector needs to be decarbonised earlier than 2050 and would encourage the department, along with all other relevant departments, to decarbonise the

energy sector as soon as possible, in recognition of the true nature of our Climate Emergency (as declared by the Northern Ireland Assembly on 3rd February 2020).

Achieving net zero carbon energy is essential to meet our commitment under the UK's Climate Change Act of a Net Zero greenhouse gas emissions target by 2050. The UK's Net Zero target is in response to signing the United Nations Framework Convention on Climate Change's Paris Agreement (2015), which aims to limit average global warming to 1.5°C. There are stark warnings of the impact of global warming exceeding 1.5°C - for people and for wildlife. 105,000 species of insects, plants and vertebrates were studied by the 2018 Intergovernmental Panel on Climate Change Special Report on Global Warming of 1.5°C: at a mean global warming of 1.5°C, 6% of the insects, 8% of the plants and 4% of the vertebrates will see their climatically determined geographic range reduced by more than half.

At 2°C warming, those numbers jump to 18%, 16% and 8%, respectively. The consequences of such range changes could be considerable. The report projects entire ecosystems will transform, with about 13% of land areas projected to see their ecosystems shift from one type of biome to another at 2°C warming — about 50% more area than at 1.5°C global warming.

Experts are now advising that a global Net Zero greenhouse gas emissions target by 2050 only gives a 50-50 chance of limiting warming to 1.5°C, and due to the increased risks from further warming many are now committing to Net Zero by 2045 or sooner (e.g. the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, National Farmers Union 'Net Zero by 2040' across England and Wales). We understand that in the UK Climate Change Committee (CCC)'s Sixth Carbon Budget published in December 2020 (for UK to achieve Net Zero by 2050), there was not a pathway for Northern Ireland to achieve Net Zero across all greenhouse gases by 2050, and its recommendation was an 82% cut in greenhouse gas emissions by 2050 to adequately contribute to the UK's net zero target. However, we would like to see a truly ambitious target, knowing that as often government targets are missed there is a danger in settling for a lower target and falling short of that. We must demonstrate that we are responding appropriately to the Climate Emergency and accelerate local action for climate change mitigation, and all play our part in the necessary transition.

The CCC in the Sixth Carbon Budget makes specific reference to the UK needing to have the “*highest possible ambition*” with regard to pathways to achieving Net Zero, and a report by the Tyndall Centre² indicated an achievable pathway by which Northern Ireland could reach a 98.9% reduction in CO₂ emissions from the energy sector by 2050, but emphasised the rapid efforts required to meet such a target: “*To stay within the recommended carbon budget Northern Ireland will, from 2020 onwards, need to achieve average mitigation rates of CO₂ from energy of around -13.1% per year. This will require that Northern Ireland rapidly transitions away from unabated fossil fuel use.*”

Q2. Do you agree with the proposed outcome of “net zero carbon and affordable energy” for the Energy Strategy?

Yes, the Energy Strategy will play a pivotal role in meeting the UK's commitment under the Paris Agreement (see Q1 above) and as such this should be reflected in the proposed outcome of net zero carbon energy, and the commitment to making this affordable to ensure this transition is made.

Q3. Do the five principles identified provide clear direction around the approach that we want to take with the Energy Strategy?

Yes, we believe that these provide a clear framework and direction. We particularly welcome “Do more with less: We will set clear targets, standards and regulations that drive improvements in energy

² <https://carbonbudget.manchester.ac.uk/reports/NI/print/>

efficiency. Consumers will be supported to invest in buildings and make changes that reduce their energy use.” – the role of personal behaviour and domestic and business energy efficiency is crucial in meeting the ambitious emissions reductions targets.

Q4. Are there any key delivery priorities for the Energy Strategy not captured? If so, please outline what you believe should be included.

Within security of supply and intelligence we would hope to see significant efforts to understand and future-proof energy supply to the risks from climate change, as evidenced by the 2021 Climate Change Risk Assessment (e.g. flood risk, higher summer temperatures, potential increases in storminess³), and for this to be built in from early design stages.

Q5. Do our proposed indicators adequately allow us to measure success at achieving the proposed Energy Strategy outcome? If not, please advise on what alternative metrics should be used.

The measures identified home in on the quantifiable and directly reliable metrics. However, the impact on the local environment of increased renewables and associated new projects has no relatable metric. As the drive to net zero is all about saving the planet, it is important that we do not as a result have unintended consequences on our local environment. It is therefore important to report on net environmental gain for the local NI environment, using a Natural Capital approach⁴.

Q14: Do you agree with the economic growth opportunities identified within renewable energy? What supporting policies do you believe are needed to take advantage of these?

We agree that there should be significant focus on ‘green jobs’ relating to the renewable energy sector, with a focus on upskilling pathways and specialism opportunities as suggested via the Energy Skills Forum. However, we would emphasise that as well as the engineering focus for such a Forum there should be equal focus provided to ensuring skills development and employment opportunities in the supporting ecological and environmental impact assessment sectors that will be necessary to meet the commitment to renewable energy projects to demonstrate environmental net gain (including habitat restoration/creation skills, potential species translocation etc. as part of project mitigation options), undertake cumulative impact assessments, and the ‘soft skills’ of appropriate stakeholder engagement and dialogue.

We agree that in order to accelerate (or ‘kick start’) marine renewables within Northern Ireland there will need to be significant investment made and policies to attract developers, such as the Contracts for Difference. We would however emphasise that a range of associated policies, such as the Marine Plan, will need to be involved at an early stage to ensure the wider uses of the marine environment and essential ecosystem services such as carbon sequestration and storage are fully accounted for in the decision making process. The incoming Environment Strategy and Biodiversity Strategy also need to be fully considered when accelerating offshore (and onshore) renewable energy, to ensure the principle of environmental net gain is adhered to.

Q17: Do you agree that we should develop a green innovation challenge fund? If so, what scale and type of innovative projects should this support.

³ <https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Northern-Ireland-Summary-Final.pdf>

⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/909269/ncc-advice-net-environmental-gain.pdf

Yes, but the opportunity for any innovative projects should also include addressing environmental impacts and incorporate development of methods for assessing, monitoring and upholding the principle of net environmental gain.

Q23: Do you agree that an energy savings target should be set for Northern Ireland?

Yes, we agree that energy savings targets are a vital part of the strategy to decarbonise the energy sector and deliver Net Zero greenhouse gas emissions. Energy savings will also reduce the need for new, costly development and the potential environmental impact of such developments and additional costs of environmental mitigation measures.

Q35: Do you agree with setting a 70% renewable electricity target by 2030, whilst retaining the flexibility to increase this to 80%?

The pathways presented for the Energy sector to help achieve a UK Net Zero greenhouse gas emissions target by 2050 by the UK Climate Change Committee (e.g. Sixth Carbon Budget) identify the need for early action ('front-loading') in reducing emissions and that the Energy sector plays a vital role in this. This is further emphasised by the 2021 Tyndall Centre report "Setting Climate Commitments for Northern Ireland". It is imperative that we have the highest possible ambition in tackling the climate emergency and as such there should be the flexibility to exceed renewable energy targets, as these are a core instrument in attaining net zero.

Q36: Do you agree with the criteria outlined in order to consider any future increases in the renewable electricity target?

- a) Projects can be delivered in a cost-effective manner.
- b) Offshore wind can be delivered by 2030.
- c) Storage technologies can minimise system curtailment of renewables.
- d) Greater clarity on electricity demand for heating and transport.
- e) Consumers' bills are not disproportionately impacted.

If not, what alternative criteria might be used?

From the information provided in the Energy Strategy policy options, it is clear that to meet the 70% renewable energy by 2030 target we are dependent upon development and delivery of offshore fixed platform wind energy. This requires rapid investment, incentives and attracting developers as outlined via various policy instruments such as Contracts for Difference and a change in the current regulatory framework for marine development consents. This appears to be a significant unknown- how rapidly can development take place to deliver by 2030- and it is also of concern given that environmental considerations must be made appropriately for each development to ensure there is no significantly adverse impact to the ecosystem and wider environment (i.e. to ensure that there is robust demonstration of net environmental gain for each project).

We strongly advise that the Department for the Economy considers the approach recently proposed by Natural England regarding offshore wind developments, that each project builds in plans to actively enhance nature and mitigate any negative impacts on the marine environment⁵.

As such, we caution against a policy reliance on the rapid development of the offshore wind sector in NI waters, and suggest that other proposals such as investment in storage technologies, repowering of

⁵ <http://nepubprod.appspot.com/publication/5400620875120640>

existing onshore wind farms/turbines, and community and domestic renewable energy schemes are given appropriate focus to ensure the 70% renewable energy target by 2030 is achievable and potentially exceeded.

We support the development of all schemes that tackle emissions reductions in the Energy sector, but insist that new projects demonstrate net environmental gain and that this element is not overlooked in the haste to deliver new projects.

Q37: Do you agree that we should explore with BEIS the possibility of extending the Contracts for Difference scheme to Northern Ireland? If so, what terms would be needed to ensure generation in the region whilst protecting consumers?

We understand that offshore renewable energy is an essential component of the pathway to achieve Net Zero targets, and accept that such development is necessary in order to tackle the climate emergency. We are aware that there have not been the appropriate financial guarantees to attract offshore marine renewable developers to complete projects in Northern Ireland's waters, and that the Contracts for Difference scheme would provide one route to secure investment by developers. As such, we agree that this should be explored. We are not able to comment on the terms needed for such Contracts, except to refer to our Introduction/Cover Note, and response to Q36 above, that all renewables developments should demonstrate net environmental gain and be sensitive and responsive to the targets under the incoming Environment Strategy and Biodiversity Strategy.

Q38: Do you believe it is possible that an offshore wind project in Northern Ireland could be operational before 2030? If so, please outline what targeted actions could be taken to deliver this.

We urge that appropriate policy safeguards are in place to ensure that marine licensing consents are thorough for offshore wind projects, including cumulative environmental impact assessment, adoption of the ecosystem approach to planning of marine renewables (e.g. as advocated by the Scottish Wildlife Trust⁶), consideration afforded to protected sites and the connectivity of marine populations, and the role of marine habitats in carbon sequestration and storage. We also note that there are considerable evidence and research gaps regarding the impact of marine renewable energy devices on marine species and assessment of risk must incorporate such uncertainty. We support the use of the new Offshore Wind Environmental Evidence Register, compiled by the UK's Joint Nature Conservation Committee⁷, which identifies and prioritises research gaps and should be consulted when completing potential impact assessments for each offshore wind project. We would also like to see investment within NI in research to address the current evidence gaps.

Due to the issues raised above, we have concerns about how realistic delivery of operational offshore wind projects is by 2030, without 'fast-tracking' the in-depth environmental impact assessments and analysis of mitigation options- which should include full project life-cycles such as decommissioning. We refer to the recent Natural England publication urging that all offshore wind projects demonstrate benefits to nature⁸ and would like to see this approach adopted by the Department for the Economy with regard to planned delivery of offshore wind targets.

⁶ https://scottishwildlifetrust.org.uk/wp-content/uploads/2016/09/002_050_publications_Policy_Futures_Series_2_Living_Seas_1292843703.pdf

⁷ <https://beta.marinedataexchange.co.uk/details/3480/2021-jncc-offshore-wind-evidence-and-change-programme-offshore-wind-environmental-evidence-register->

⁸ <http://nepubprod.appspot.com/publication/5400620875120640>

Q39: Do you believe that a fixed platform offshore wind project should be targeted to be part of the renewable generation mix? If so, how would you propose some of the challenges associated could be overcome?

As noted in our response to Q38, we understand that offshore renewables are an essential part of the renewable generation mix, and that fixed platform offshore wind projects are proven technology that can be relied upon to deliver, if the correct incentives are available to attract developers to Northern Ireland. However, as noted above we do have concerns regarding the potential impact of offshore renewables on the marine environment and marine wildlife, and the need for thorough demonstration of net environmental gain for each project, which may take time.

Northern Ireland's marine area is small (6,855km²), but is a very diverse environment and supports a range of local industries – commercial and recreational fisheries, aquaculture, marine recreation and tourism, to name but a few. 2,410km² of our marine area is now designated as Marine Protected Areas (Special Areas of Conservation, Special Protection Areas, Ramsar sites, Marine Conservation Zones, coastal Areas of Special Scientific Interest), with further designations underway⁹. We do not have a marine spatial plan, and currently only a draft marine plan, and we have concerns about how areas will be selected for offshore wind projects and how this will impact on the wider environment and also the local industries. Furthermore, there is not yet a thorough assessment of the role seabed habitats in NI waters have in carbon sequestration and storage ('blue carbon')- such habitats may play a crucial role in meeting Net Zero targets that must be safeguarded - this is essential information to ensure impacts on such areas are minimised by wind projects.

As noted in our response to Q38, we would urge a commitment to the approach outlined by Natural England that all offshore wind projects demonstrate benefits to nature¹⁰, and that due consideration of environmental impact evidence gaps is afforded using the JNCC Evidence Register¹¹.

To overcome the potential challenges, we advocate for early and inclusive cross-sectoral dialogue, an update to the Northern Ireland Marine Plan, the adoption of a marine spatial planning framework, and a commitment to net environmental gain for all offshore wind projects.

Q40: Do you believe that floating platform offshore wind offers the best long-term opportunities for offshore wind in Northern Ireland's waters? If so, what additional steps could be taken to encourage these projects?

We are encouraged by the developments in floating platform technology for offshore wind, in terms of potentially minimising seabed impacts and impacts on the wider marine environment, however we do not have expertise in this technology so cannot comment on whether this offers the best longer-term opportunity for offshore wind. We would encourage investment in research to answer these questions and to address the evidence gap priorities identified by the Joint Nature Conservation Committee¹².

⁹ MCZ areas of search: <https://www.daera-ni.gov.uk/articles/marine-conservation-zones>

¹⁰ <http://nepubprod.appspot.com/publication/5400620875120640>

¹¹ <https://beta.marinedataexchange.co.uk/details/3480/2021-jncc-offshore-wind-evidence-and-change-programme-offshore-wind-environmental-evidence-register->

¹² <https://beta.marinedataexchange.co.uk/details/3480/2021-jncc-offshore-wind-evidence-and-change-programme-offshore-wind-environmental-evidence-register->

Q41: Do you believe that other marine renewables can play a key role in our renewable generation mix? If so, please identify what technologies offer the greatest potential and what steps can be taken to support these.

We believe that a close watching brief should be maintained for new and emerging technologies in the marine renewables sector, as this is an area of rapid development, noting their progress through the Technology Readiness Levels (TRLs). We also urge consideration of a diverse technology mix which may prove more resilient in the longer-term. We note that there has been considerable investment in tidal turbine technology development and given Northern Ireland's immense tidal energy resource (as initially identified by the 2011 Regional Locational Guidance (and SEA) for Offshore Renewable Energy Developments in NI Waters¹³) and previous development interests that progressed to marine licensing (e.g. Torr Head and Fair Head tidal energy development projects), as well as the Strangford Lough Marine Current Turbine pilot project, we believe such technology should be carefully considered. However, we do not have the expertise to comment on which specific technologies offer the greatest potential.

According to the Marine Institute¹⁴ and SEAI¹⁵, Ireland possesses one of the richest wave and tidal energy climates in the world with the wave energy resources potentially available to Ireland of 21TW of accessible electricity, able to meet 75% of the Republic's electricity requirement¹⁶. It is likely that Northern Ireland's wave and tidal climate may also prove a valuable asset in delivering marine renewable energy, and we would encourage the department to revisit the Regional Locational Guidance for Offshore Renewable Energy Developments in NI Waters and update this taking a marine spatial planning approach, guided by DAERA's Marine Plan and the UK's Marine Strategy. Where possible, cross-border analysis and collaboration should be fostered in harnessing marine renewable energy potential.

Again, we urge that wider environmental impacts of technologies is robustly considered and evidence gaps addressed by appropriate research investment.

Q42: Do you agree that a strategic approach to planning the location of renewable projects should be taken? If so, please outline practical steps that could be taken to deliver this.

All renewable projects (onshore and offshore) should have a strategic approach to minimise potential disruption and impact to the environment via cabling/grid infrastructure development. We advocate the use of spatial planning approaches and early dialogue with stakeholders to identify and mitigate potential spatial conflicts, and crucially to ensure efficient development that is future-proofed, understanding future demands on land- and sea areas and the vital role of natural habitats in climate mitigation (e.g. via their carbon sequestration and storage services, but also in terms of flood and erosion mitigation). We emphasise that a strategic approach must also incorporate climate change impacts as identified in the UK's climate change risk assessment (CCRA3¹⁷).

Specific practical steps are outlined below:

Biodiversity / Protection

¹³ <https://www.economy-ni.gov.uk/sites/default/files/publications/deti/RLG%20Final%20Version%20Sept%202011.PDF>

¹⁴ <https://www.marine.ie/Home/site-area/infrastructure-facilities/ocean-energy/marine-renewable-energy-resource>

¹⁵ <https://www.marine.ie/Home/sites/default/files/MIFiles/Docs/General/waveatlas.pdf> (page ix)

¹⁶ <https://www.gov.ie/en/consultation/105804-irelands-draft-national-energy-and-climate-plan-necp-2021-2030/>

¹⁷ <https://www.ukclimaterisk.org/wp-content/uploads/2021/06/CCRA-Evidence-Report-Northern-Ireland-Summary-Final.pdf>

- Nationally and internationally important species and habitats must be given adequate consideration and protection during the planning and deployment of renewables, including allowing for their response to climate change impacts (i.e. need for connectivity and adaptation).
- Protection of habitats that provide carbon sequestration and storage roles must be given special consideration, to ensure projects are net carbon negative.
- Planning bodies and office holders should take particular account of legally protected species, national and local Biodiversity Action Plan priority species and habitats, internationally (Special Protection Areas, Special Areas of Conservation, Ramsar sites) and nationally designated sites (Areas of Special Scientific Interest, Marine Conservation Zones).
- The planning system must ensure that important biodiversity in the wider land- and seascape is afforded the same protection as designated sites as much of our valuable biodiversity is found outside these sites – this must take due note of the incoming Environment Strategy commitment of Nature Recovery Networks.
- **There should be a presumption against development in any area of identified biodiversity interest or where a legally protected species is present**
- There should be investment into research on localised and cumulative impacts of the technologies currently available, including addressing the gaps identified by the new Offshore Wind Environmental Evidence Register.

Planning

- There should be a precautionary and adaptive approach to renewable energy planning and deployment.
- The Ecosystem Approach as set out by the UN Convention on Biological Diversity should be used as a key decision making tool when planning and deploying renewable energy projects.
- Governance processes and structures, including high-level government fora on renewables must include representation from conservation agencies and third sector organisations.
- Conservation and third sector organisations should work collaboratively with the renewables industry, government, the research community, The Crown Estate and other stakeholders to help ensure the environmental sustainability of marine renewables in NI.
- The planning system should be a **strategic and spatially-based process** which identifies and protects biodiversity at multiple scales, encompassing; species, habitats, protected area networks and regional-scale ecosystems.
- The strategic approach should aim to protect rare, threatened and priority species and habitats, **and** ensure that the natural functioning of ecological systems is enhanced.
- Where a development is approved, the planning system should ensure that all opportunities are taken to mitigate against damage to existing biodiversity interest through the retention of key wildlife features and creation of new wildlife habitats.
- The design of new developments should seek to integrate and maximise biodiversity at both building unit and site scales through the application of sustainable design and construction methods and materials.
- The Northern Ireland Marine Plan should be updated to reflect the changing policy landscape and commitments to meet Net Zero targets, taking note of the below:

Effective marine planning systems can be characterised by the following elements:

1. **Ecosystem-based**
2. **Integrated**, across sectors and agencies, and among levels of government
3. **Place-based or area-based**

4. **Adaptive**, capable of learning from experience
5. **Strategic and anticipatory**, focused on the long-term
6. **Participatory**, stakeholders actively involved in the process.