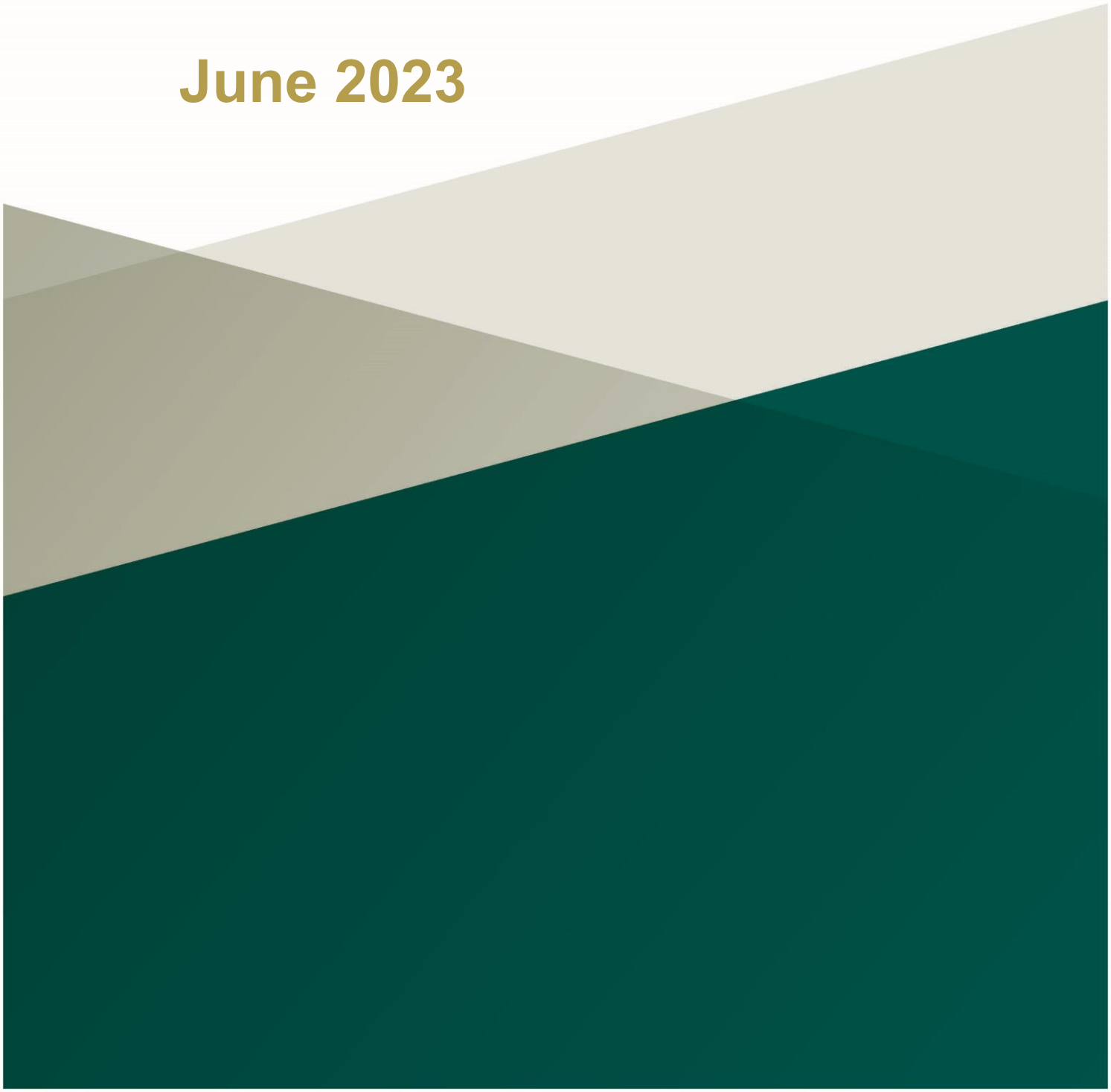
An Roinn Fiontar,
Trádála agus Fostaíochta
Department of Enterprise,
Trade and Employment

The Net-Zero Industry Act

Public Consultation Report

June 2023



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Introduction

On 16 March 2023, the European Commission published the Proposal for a Regulation on establishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem, otherwise known as the Net-Zero Industry Act (NZIA). In order to provide an opportunity for all interested parties to make their views on this matter known, the Department of Enterprise, Trade and Employment sought the views of stakeholders by means of a public consultation. The public consultation opened on 04th May and closed on 23rd May 2023. Stakeholders' views have been assessed by DETE and will help inform the work to be undertaken by the Department in this area. The Department received thirteen responses from the following stakeholders:

- Amber Research
- American Chamber of Commerce
- Cement Manufacturers Ireland
- ClonBio Group Ltd
- Cork Chamber of Commerce
- DHL
- Eyrefield Energy Ltd
- Hydrogen Ireland
- IBEC
- Irish Bioenergy Association (IrBEA)
- Mercury Renewables
- RWE Renewables Ireland Ltd
- Research Lecturer UCC

We thank respondents for their views and the time taken to prepare a submission. Submissions received in response to the public consultation are reproduced in full below.

Original Public Consultation Paper

The Department of Enterprise, Trade and Employment (DETE) is seeking the views of stakeholders on the Proposal for a Regulation on establishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem, otherwise known as the Net-Zero Industry Act (NZIA), proposed by the European Commission on 16 March 2023.

Stakeholders are asked to submit written contributions on the proposal by 23 May 2023. DETE will represent Ireland at negotiations on the Commission's proposals over coming months and responses to the consultation will help inform the work to be undertaken by the Department in this area.

Background

The proposed draft Net-Zero Industry Act (NZIA)[1] aims to create a regulatory environment that will provide a framework for net-zero technologies and forms part of Pillar 1 of the Green Deal Industrial Plan for the Net-Zero Age.[2] The NZIA is designed to support the scaling up of the EU's net-zero manufacturing capacities and products, helping to meet Europe's climate neutrality goals, create green jobs and maintain the EU's competitiveness, especially in light of the *US Inflation Reduction Act*. The NZIA presents economic opportunities for Europe, where the global market for net-zero industry technologies is expected to reach an annual worth of around €600 billion a year by 2030.[3] The increase in uptake of clean energy and net-zero technologies is essential in helping the EU achieve its Fit for 55 commitments. The NZIA will also complement ongoing efforts to transform industry under initiatives including the European Green Deal,[4] the EU Industrial Strategy,[5] and the Circular Economy Action Plan.[6]

The proposed draft NZIA supports, eight strategic net-zero technologies that are commercially available or soon to enter the market and have significant potential for rapid scale-up to contribute to the EU's decarbonisation targets:

1. Solar photovoltaic and solar thermal technologies
2. Onshore wind and offshore renewable technologies
3. Batteries / storage technologies
4. Heat pumps and geothermal energy technologies
5. Electrolysers and fuel cells
6. Sustainable biogas/biomethane technologies
7. Carbon capture and storage (CCS) technologies

[1] Net Zero Industry Act A framework of measures for strengthening Europe's net-zero transition
[2] A Green Deal Industrial Plan for the Net Zero Age
[3] IEA Energy Technology Perspectives 2023
[4] European Green Deal
[5] European industrial strategy
[6] New circular economy action plan (CEAP)

8. Grid technologies

The Department of Enterprise, Trade and Employment recommends readers to visit the European Commission website which provides further information on the proposal. The Commission's Proposal and accompanying texts are available on the Commission's website:

- Proposal for a regulation of the European Parliament and of the Council on establishing a framework of measures for strengthening Europe's net-zero technology products manufacturing ecosystem (Net-Zero Industry Act)
  https://single-market-economy.ec.europa.eu/document/download/9446a7b1-0220-4b7b-91d2-11b7e27b9278_en
- Annex to Net-Zero Industry Act
  https://single-market-economy.ec.europa.eu/document/download/7c275bb7-6c8b-41c2-8965-46bf60439651_en
- Commission Staff Working Document on Investment needs assessment and funding availabilities to strengthen EU's Net-Zero technology manufacturing capacity
  https://single-market-economy.ec.europa.eu/document/download/680f052a-fa6c-4f63-a1ec-c4866fa25a27_en?filename=SWD_2023_68_F1_STAFF_WORKING_PAPER_EN_V4_P1_2629849.PDF
- European Commission announcement on NZIA
  https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1665
- Questions and Answers: The Net-Zero Industry Act
  https://ec.europa.eu/commission/presscorner/detail/en/QANDA_23_1666
- Factsheet: Net Zero Industry Act
  https://ec.europa.eu/commission/presscorner/detail/en/FS_23_1667
- A Green Deal Industrial Plan for the Net-Zero Age
  https://commission.europa.eu/document/41514677-9598-4d89-a572-abe21cb037f4_en

The European Commission has also launched a targeted stakeholder consultation available at Net Zero Industry Act (europa.eu). The Commission's consultation will be open until 19 May 2023.

The NZIA Objectives

The objective of the NZIA is to approach or reach, in aggregate, at least 40% of the annual deployment needs for strategic net-zero technologies manufactured in the EU by 2030. The NZIA aims to achieve this by:

- Establishing the conditions for scaling up the manufacturing capacity.
- Supporting the 2030 decarbonisation targets and ensuring the security of supply.
- Setting harmonised rules for the installation of manufacturing capacity.
- Creating a regulatory environment that simplifies and fast-tracks permitting for new net-zero technology products production sites.
- Increasing resilience, ensuring the security of the energy supply, promoting energy efficiency, and developing new and renewable forms of energy.

The NZIA Structure

The NZIA is built around seven pillars and we **invite respondents to submit their views under each of these headings based on the content of each pillar**.

Pillar 1 - Setting enabling conditions
The NZIA proposes to improve conditions for investment in net-zero technologies by enhancing information, **reducing the administrative burden** of setting up projects and **simplifying permit-granting processes, including establishing a single point of contact in Member States for permitting**.[7]

The NZIA proposes prioritising **Net-Zero Strategic projects** deemed essential for reinforcing the resilience and competitiveness of EU industry. Such projects can be proposed by stakeholders and will be selected by the Member States concerned based on their contribution to increasing the manufacturing capacity of (components of) net-zero technologies, where the EU depends heavily on imports from a single third country or based on their contribution to the competitiveness of the EU's net-zero industry supply chain. The NZIA suggests that these Net-Zero Strategic Projects should be given 'priority status,' at a national level to ensure rapid administrative treatment and should benefit from the fastest possible permitting processes, in line with national and EU laws. Net-Zero Strategic Projects may also be of overriding public interest. Promoters of net-zero strategic projects will also be able to benefit from financing advice stemming from the Net-Zero Europe Platform. In addition, these projects should also be given, if necessary, urgent treatment in all judicial and dispute resolution procedures.

Pillar 2 - Accelerating CO2 capture
The NZIA proposes an **EU objective to reach an annual 50 million tonnes injection capacity in strategic CO_2 storage sites in the EU by 2030**, with proportional contributions from EU oil and gas producers. This would remove a significant barrier to developing

[7] The NZIA introduces time limits on the permit-granting processes for net-zero manufacturing projects related to their size and status. These are set out in Annex 3.

CO_2 capture and storage as an economically viable climate solution, particularly for hard-to-abate energy-intensive sectors.

Pillar 3 - Facilitating access to markets
To boost supply diversification for net-zero technologies, the NZIA would require public authorities to **consider sustainability and resilience criteria for net-zero technologies in public procurement or auctions**, as well as **actions to support private demand**.

Pillar 4 - Enhancing skills
The NZIA aims to ensure the availability of skilled workforce for the clean energy transition by supporting the establishment of **Net-Zero Industry Academies**, each focusing on a net-zero technology to provide upskilling and reskilling programmes with the support and oversight by the Net-Zero Europe Platform (see point 6 below).

Pillar 5 - Fostering innovation
The NZIA would make it possible for Member States to set up **regulatory sandboxes** to test innovative net-zero technologies and stimulate innovation under flexible regulatory conditions for limited period of time.

Pillar 6 - A Net-Zero Europe Platform
This Platform would assist the Commission and Member States in **coordinating action and exchanging information**, including around Net-Zero Industrial Partnerships. The Commission and Member States will also work together to ensure the availability of data to monitor progress towards the objectives of the NZIA. The Net-Zero Europe Platform will **support investment by identifying financial needs, bottlenecks, and best practices for projects** across the EU. It will also foster contacts across Europe's net-zero sectors, making particular use of existing Industrial Alliances. The Platform will also play an important role in enhancing skills through monitoring the Net-Zero Academies and assessing the demand and supply of a workforce with the skill sets needed.

Pillar 7 - Building Industrial Partnerships
To pave the way for the adoption of net-zero technologies globally, the NZIA foresees that the **EU may collaborate with like-minded countries** and engage in Net-Zero Industrial Partnerships that will help to diversify trade and investments in net-zero technologies.

Consultation Responses

Stakeholder views are welcomed from interested parties, including manufacturing industry, the research community and beyond to end users. We ask that respondents structure their responses according to the seven pillars outlined above, responding to one or more of the pillars as appropriate.

Views from stakeholders and interested parties on the proposed regulation are requested no later than noon on Tuesday 23 May 2023. Submissions should be marked “Net-Zero

Industry Act Consultation" and should be emailed to industrial.policy@enterprise.gov.ie. Further queries can also be made to industrial.policy@enterprise.gov.ie.

Freedom of Information and Data Protection

Freedom of Information Act 2014 and Publication of Submissions

The Department will publish on its website all submissions received under this consultation. Your attention is also drawn to the fact that information provided by you in submissions is subject to release by the Department under the Freedom of Information Act 2014. In responding to this public consultation, all individuals and organisations should clearly indicate where their submission contains personal information, commercially sensitive information or confidential information which they would not wish to be made publicly available by being published on the Department's website or released by the Department pursuant to the receipt of an FOI Request under the Freedom of Information Act 2014. It is also important to note that your name and address and other details such as your representative organisation or any other information that you provide in your submission will be published on the Department's website unless you specifically request that such details are redacted or removed.

General Data Protection Regulation (GDPR) and Data Protection Acts 1988 to 2018

The General Data Protection Regulation (GDPR) entered into force in Ireland on 25th May 2018 and provided individuals with additional rights and protections in relation to their personal data. Although the GDPR is directly applicable as a law in all EU Member States, it allows for certain issues to be given further effect in national law. In Ireland, the national law, which, amongst other things, gave further effect to the GDPR, was introduced on 24th May 2018 and is known as the Data Protection Act 2018.

The Department of Enterprise, Trade and Employment is subject to the provisions of the GDPR and Data Protection Acts 1988 to 2018. In this context, the Department will treat all personal information which you provide in submissions as part of this public consultation process with the highest standards of security in line with our data protection compliance requirements. Finally, we would like to draw your attention to the Department's Data Protection Privacy Notice which is available on our website and explains how and when we collect personal data, why we do so and how we treat this information. It also explains your rights in relation to the collection of your personal information and how you can exercise your rights under data protection laws.

Responses Received

Amber Research

AMBER
Advancing Materials for Impact

Submission to Department of Enterprise, Trade and Employment Public Consultation on the EU proposal for the Net-Zero Industry Act

May 2023

Background

Established in 2013, AMBER is the Science Foundation Ireland (SFI) Research Centre for Advanced Materials and BioEngineering Research hosted by Trinity College, University of Dublin, with researchers in 8 additional partner institution around Ireland: RCSI, UCC, Tyndall, DCU, University of Galway, University of Limerick, TUS and UCD.

The AMBER mission is 'to partner with our member companies to deliver world-class materials innovations and translate these into impacts for economic, environmental, health and societal impacts, providing solutions through collaborative research.'

The Centre's strategy reflects the three main pillars:

I. World-class materials innovation resulting from the excellence of our research which underpins everything we do,
II. Partnership and engagement with industry not only on collaborative research, but also to contribute to the ethos of the centre in terms of governance & strategy, emerging research challenges and researcher development, and
III. Impact with a focus on ensuring efficient translation of our research for economic, environmental, health and societal impacts.

We are at the forefront of driving advances in materials science and bioengineering and translating research excellence into new discoveries and devices. Our research develops technology to address industrial and global challenges from novel data processing and memory applications, energy storage and energy-efficient devices, regenerative medicine, and drug delivery systems through to plastics sustainability and supporting key national targets such as our zero-carbon 2050 target.

AMBER delivers a unique, integrated capability for materials research to accelerate innovation:

- Brings together Irelands leading researchers across nine higher education institutions
- Provides access to advanced facilities
- Provides a gateway to significant European funding
- Has a team of professional supports to scope, build, and ensure completion of projects to the highest standards, with IP and knowledge transfer capability.

Summary

This Act is welcome and timely and provides a sound basis for developing a sustainable energy industry and manufacturing sector in Europe. It is critical that Ireland supports this Act. However, there are distinct weaknesses that need to be addressed.

- Whilst it is a welcome ambition for Europe to span the entire manufacturing sector, is this possible? Europe has ceded production in many aspects to Asian and other markets and how we may become cost competitive is not detailed well enough.
- Whilst carbon capture is an important technology that is emerging, the stated goals are very ambitious. It is not part of the sector that the Act focusses on. It should be provided for elsewhere.
- The technologies identified are comprehensive, but they should be prioritised, i.e. where can investment provide the quickest and most extensive contribution to emission reduction?
- It is important to recognise that the ramp up in capacity for net zero technologies will be accompanied by a global increase in supply chain demand in particular for raw materials such as Lithium and the Lanthanides which need to be imported from Asia and Latin America. While the supply chain issue is addressed separately via the Critical Raw Materials Act, we recommend that the links and dependencies between these two policies are explicitly defined, and shared objectives are articulated so as to avoid divergent or competing activities. There should include a commitment to critical assessment of the circularity of supply chains (e.g. waste solar panels and wind turbine blades) as a key enabler of both Acts. This sector cannot be scaled without considering these aspects.
- The involvement of the European materials ecosystem via organisations such as AMI2030 and EMIRI can provide the expertise to help drive the implementation of these policies in particular how they can be reduced to practice within the member states.
- The challenges of rolling out enabling legislation such as planning permission in member states and in short time periods is a challenge underestimated in the proposed Act.
- Net-zero Academies for training and educating a workforce may be impractical to develop in time to meet demand. Greater clarity of their relationship to the education ecosystem requires deep consideration.
- The governance and mandate as well as membership of a Net-zero Platform needs much more detail.

Detailed consideration and commentary is provided below.

Overview

This is a welcome initiative by the EU aimed to:

- Ensure the resilience of the EU supply chain in the manufacturing of products to meet demands of the sustainable energy sector. The EU recognises that the 2030 climate goals can be largely met by a change from fossil fuel based energy supplies to sustainable energy supplies for both commercial and domestic markets.

- Exploit the opportunity that EU must be the leading manufacturer of products in this space which will generate sustainable, high-quality employment and sustainable businesses.
- Provide an environment to allow a rapid change in energy production.
- Define critical changes needed in technology development and breakthrough research focussing on the EU grid.

The proposed changes are largely well thought out. Without this enabling legislation, the disruptive change needed in electricity supply is unlikely to occur and the opportunity to meet our climate targets will be lost.

Technology base

The Act focusses on several technology areas. These are largely appropriate but are in varying state of development with large scale deployment already begun and some further from market. There are also areas (solar and battery storage to a lesser extent) where manufacturing has been allowed to move Asian and low-cost countries outside Ireland. Additionally the manufacturing organisations along with the MNC's, whilst they can look into introducing new technology within many fields of use, so far, they have been unable to fully address the overarching issue of recycling of the current products in circulation. Along with this, the market has not yet been able to address the sustainability or re-use of future materials under development. This weakness and lack of investment at both ends of the Circular Economy will only hinder our ability to reduce the carbon footprint targets by 2030 and 2050. This is a particular issue in areas, 1, 2, 3 and 4 (from an upgrade and replacement perspective.) *How the EU may become manufacturing and cost competitive in these areas is uncertain. Issues and how these might be addressed are not addressed in detail.*

We should also stress that although the Act focuses on a resilient EU industry in this area, the impacts of material supply across the supply chain is barely considered. It is not only the manufacturing and supply of products that needs to be addressed, it is also the raw material inputs. Many of these technologies are reliant or expected to be reliant on critical raw materials. This includes graphite (for graphene in e.g. batteries), lanthanides (rare earths) for motors, lithium for batteries, other mineral resources across these sectors. This coupled to the lack of focus on end-of-life of products and how the materials, products and components can be recovered or re-used is concerning.

The technological areas focussed on and listed below are being looked at individually but rarely in combination to create a more efficient energy process that addresses the circularity of these solutions.:

1. Solar photovoltaic and solar thermal technologies

Well-developed and rolling out

2. Onshore wind and offshore renewable technologies

Well-developed and rolling out. While close to shore wind is now established, deep water offshore wind needs extensive work to allow extensive deployment.

3. Batteries / storage technologies

The electrical and other forms of storage for large amounts of energy are far from full development. Hydrogen remains a focus (electrically generated from water), but hydrogen transport, infrastructure, storage, and the public awareness concerns still require intensive investment and time. Hydrogen is light, storable, energy-dense, and produces no direct emissions of pollutants or greenhouse gases. But for hydrogen to make a significant contribution to clean energy transitions, it needs to be adopted in sectors where it is almost completely absent, such as transport, buildings, and power generation.

4. Heat pumps and geothermal energy technologies

Well proven and rapidly improving technology and of growing importance for domestic supplies in rural communities. Whilst this technology can be efficient on New Builds, the existing dwellings and older buildings will be challenged to reap the cost benefits due to the very high cost of investment required to make building more thermally efficient prior to heat pump installations.

5. Electrolysers and fuel cells

Potentially important technology but thus far unproven on large scale use.

6. Sustainable biogas/biomethane technologies

This includes the use of technologies such as anaerobic digestion where commercial units are available. There remains questions whether this will make a significant contribution to climate change. Other problems include within the operations and processing, the inefficient segregation of waste streams, the capability to collect and store and the poor uptake by consumers to recycle.

7. Carbon capture and storage (CCS) technologies

Recent reviews question the use of CCS technologies on a large scale, and this is far from meaningful implementation. Current methods for sequestering carbon in the atmosphere primarily involve the "solvent method" where the CO2 is exposed to a liquid medium that absorbs the CO2 by either a physical or chemical mechanism. Chemical absorption solvents are the most mature method of capturing CO2, with most carbon capture facilities currently relying on them. Beyond solvents, solid sorbents, and passive membranes, companies and governments need to invest in research in novel methods of capturing CO2 that can overcome the limitations of the more established technologies. The view emerging is that this should be expected to contribute only 5 – 10% reduction of emissions towards 2050 goals. Longer term and extensive research required. Whilst clearly an important area to the EU, it is somewhat difficult to rationalise its contribution in this Act as it is an energy user rather than supply. This may contribute to climate goals and be important for employment but has little relevance to the energy supply sector unless it will be mandated to supply companies. *However in a sustainable energy sector, off-setting technologies are less relevant. This should be considered outside of this Act.*

8. Grid technologies

These are probably the most urgent requirement to enable best use of renewable technologies. The need for an EU grid is accepted and investment in new technology and roll out is urgent. The combination of technologies can work concurrently to achieve the “future grid paradigm,” capable of integrating more solar, geothermal and wind generation for electric vehicles and distributed energy resources.

For example, dynamic line rating and topology optimisation face barriers such as data inaccuracies, adverse impact on infrastructure, market readiness and the economics of implementation.

Key R&D areas to solve these problems include enhancing models and data, evaluating the system impacts of implementation and developing the workforce for the deployment and use of these technologies.

For power electronics technologies, including power flow controllers and solid-state power substations, R&D areas include the three main applications of power electronics, i.e. components including controllers, semiconductor devices, breakers, etc, protection equipment and grid integration with whole grid impact evaluation.

These are all wise areas of investment. *However, it would have been useful to see a summary of each technology in terms of stage of development, its estimated importance as a contribution to energy demands and the research which is needed.* Independent assessment of the technologies should be seen as an important parallel activity.

Main pillars of the act

These pillars are well thought out and described in the Act. These are:

Pillar 1 - Setting enabling conditions: Largely focussed on delivering projects quickly through reduced bureaucracy such as planning permissions etc. *This is extremely welcome but how this might translate quickly to national parliaments and projects by 2030 is unclear.* A focus is sited designated for CO2 storage. The focus on CO2 seems somewhat strange given that it is not explicitly related to energy production.

Pillar 2 - Accelerating CO2 capture: *This is out of place with the sectorial focus and requires a dedicated act rather than inclusion here.* It is overly ambitious in the 2030 framework. 50 Mt is around 2% of EU emissions. The current largest EU CO2 capture plan is in Iceland and absorbs/stores 5000 tpa. The 50 Mt goal would require 10,000 such facilities. Scaling remains a challenge in the next 10 years or so and much more extensive research is required.

Pillar 3 - Facilitating access to markets: An important step the Act will require public authorities to consider sustainability and resilience criteria for net-zero technologies in public procurement or auctions.

Pillar 4 - Enhancing skills: Properly identified need as a skilled workforce will be required that is currently not available. *However, the practicality of this is questionable.* The formation of Net-Zero Academies is proposed under a Net-Zero Platform that will oversee this Act's roll out. How they interact with the current education system is unclear. How these might be chosen, and the funding needed is uncertain. Given uncertainty, it is hard to see an impact in less than 10 years. Current training and education systems should be considered.

Pillar 5 - Fostering innovation: the Act will make it possible for Member States to set up regulatory sandboxes to test innovative net-zero technologies and stimulate innovation, under flexible regulatory conditions. This is a pre-requisite in the roll out of these technologies. Many of the aims require research at low to medium TRLs and how this might be funded or coordinated is not provided in detail.

Pillar 6 - A Net-Zero Europe Platform: *This is a necessity however how member states and industry might contribute is far from certain and strict governance and operational basis is required.* This Platform committee will assist the Commission and Member States to coordinate actions, monitor progress, set standards, and provide a data repository of information. A focus will be around helping develop Net-Zero Industrial Partnerships. The Net-Zero Europe Platform will support investment by identifying financial needs, challenges, and best practice. It will help enable the development and support for current industrial alliances.

Pillar 7 - Building Industrial Partnerships: The focus is towards public private partnerships. This is a necessity as the finances needed are of the order of a Trillion Euro. The role of the platform in delivering partnerships and the Commission and member states providing co-funding is far from certain.

Submission by Prof. Michael Morris AMBER Director, MORRISM2@tcd.ie and Dr Lorraine Byrne AMBER Executive Director Lorraine.Byrne@tcd.ie

American Chamber of Commerce

Public Consultation on the Net-Zero Industry Act

Response from the American Chamber of Commerce Ireland (AmCham) to the Department of Enterprise, Trade, and Employment's public consultation.

May 2023

The American Chamber of Commerce Ireland
The Voice of US-Ireland Business

The American Chamber of Commerce Ireland (AmCham) is the collective voice of US companies in Ireland and the leading international business organisation supporting the Transatlantic business relationship. Our members are the Irish operations of all the major US companies in every sector present here, Irish companies with operations in the United States and organisations with close linkages to US-Ireland trade and investment.

Pillar 1 - Setting enabling conditions

AmCham welcomes the Commission's recognition of the importance of having optimum conditions as a prerequisite to investment in net-zero technologies. In particular, the need for reducing the administrative burden is key to ensuring that projects can be completed within a reasonable timeframe and without adding too much additional work for companies. One of the biggest hurdles to accelerating Ireland's net zero journey has been the logjams created by the planning system, in this regard AmCham will engage on the further development of the Draft Planning Reform Bill, and planning reform, domestically.

Likewise, AmCham acknowledges the Commission's focus on simplifying permit-granting processes, including establishing a single point of contact in Member States for permitting, the introduction of limits on the permit-granting processes for net-zero manufacturing projects, and the establishment of a fully online permitting procedure. The implementation of these measures must be focused on streamlining the process, and accelerating Ireland and Europe's net-zero journey.

AmCham further acknowledges the suggestion that certain Net-Zero Strategic projects should be prioritised, based on their centrality to building the EU's resilience and competitiveness. AmCham suggests that greater clarity regarding the criteria against which projects will be measured would be beneficial. In this regard, what constitutes a project of 'overriding public interest' needs to be clearly defined to avoid confusion in any decision-making process related to the prioritisation of projects.

Pillar 4 - Enhancing skills

As is the case in many industries at present, a significant skills gap has arisen in relation to sustainability. AmCham members have consistently identified talent attraction and skills shortages within the top three greatest challenges for Ireland to overcome to maintain its attractiveness as a location for inward investment.

Given the scale of mobilisation required to achieve net zero, efforts must be made to lessen the skills gap within the sustainability space. The European Net Zero Academies is therefore a welcome addition to the Net-Zero Industry Act. AmCham particularly appreciates the idea that the European Net Zero Industry Academies will aim to be as inclusive as possible and pay particular attention to the need to activate more women and young people, who are not in education, employment or training for the labour market. AmCham notes the importance of measures which empower those entering the workforce to realise their potential through an alternative educational pathway, whilst supplementing existing tertiary educational options. Detail on how this will be achieved will be essential in terms of providing clarity for business. Further, details in relation to

how a European Net Zero Academy would function in Ireland, in addition to clarity as to where functional responsibility for such an academy would lie is required.

Pillar 5 - Fostering innovation

Fostering innovation will be key to achieving net-zero. In the past AmCham has stressed that Ireland's ambitions should not be curtailed by the limitations of the technology of today, but rather innovation to deliver new greener technologies must be supported. There is need for greater collaboration between industry, research, and policymakers in order to make best use of the knowledge and opportunities that exist in this area. AmCham notes the possibility of introducing net-zero regulatory sandboxes, as detailed in the act. Ireland should examine this in the context of strengthening its position as a hub for research and innovation in the net-zero space.

Pillar 6 - A Net-Zero Europe Platform

AmCham welcomes the introduction of a Net-Zero Europe Platform, as information sharing between member states serves to benefit all those involved. AmCham further supports the idea of the Commission and Member States working together to ensure the availability of data to monitor progress.

In its Sustainable Energy White Paper[1], AmCham notes how the provision of such metrics in a timelier manner would be greatly beneficial, given the need to examine past outcomes and the importance of that data in informing forthcoming actions. Urgency on receiving this data is essential: it will provide momentum to do more and will provide best practice models for fellow Member States to learn from.

AmCham similarly supports the notion of paving the way for the adoption of net-zero technologies globally. Whilst a resilient and competitive EU is essential, it is important not to lose sight of the shared net-zero aims of likeminded countries. It is important to have continued cooperation between the EU and the US, through avenues such as the Trade and Technology Council, to ensure that the shared aim of decarbonisation is accelerated.

[1] White Paper on Sustainable Energy: Powering Ireland into the Future, https://www.amcham.ie/posts/white-paper-on-sustainable-energy-powering-ireland-into-the-future/

Cement Manufactures Ireland

Proposal for a regulation
Article 16

Text proposed by the Commission	*Amendment*
An annual injection capacity of at least 50 million tonnes of CO2 shall be achieved by 2030, in storage sites located in the territory of the European Union, its exclusive economic zones or on its continental shelf within the meaning of the United Nations Convention on the Law of the Sea (UNCLOS) and which are not combined with Enhanced Hydrocarbon Recovery (EHR).	***1.*** An annual injection capacity of at least 50 million tonnes of CO2 shall be achieved by 2030, in storage sites located in the territory of the European Union, its exclusive economic zones or on its continental shelf within the meaning of the United Nations Convention on the Law of the Sea (UNCLOS) and which are not combined with Enhanced Hydrocarbon Recovery (EHR). ***2. Every two year after the entry into force of the Regulation, the European Commission should report on the progress achieved towards the EU annual injection capacity target. The report should look in particular at the geographical balance of storage sites across the EU.*** ***3. By the 1st January 2026, and as part of its 2040 climate change target plan, the European Commission should propose a 2040 annual injection capacity target.***

Justification

European industrial sectors will require significant CO2 storage capacities as they decarbonise. As explained in the proposal's explanatory memorandum, in the EU CCUS Forum, stakeholders have estimated a demand for annual storage services in the European Economic Area (EEA) to grow from a very low base to 80 million tonnes of CO2 in 2030 and to reach at least 300 million tonnes of CO2 in 2040.It is therefore crucial that the European Commission regularly report on the state of CO2 storage sites in the EU, whilst starting to

plan storage needs at a 2040 horizon. It is equally essential that the target results in a geographical balance of CO2 storage sites, to avoid a situation where industrial sectors in some EU regions would be left without any CO2 storage option.

Proposal for a directive
Article 3

Text proposed by the Commission	*Amendment*
(q) 'CO2 injection capacity' means the annual amount of CO2 that can be injected in an operational geological storage site, permitted under Directive 2009/31/EC, with the purpose to reduce emissions or increase carbon removals, in particular from large scale industrial installations and which is measured in tonnes per annum;	(q) 'CO2 injection capacity' means the annual amount of CO2 that can be injected in an operational geological storage site, ***including saline aquifers,*** permitted under Directive 2009/31/EC, with the purpose to reduce emissions or increase carbon removals, in particular from large scale industrial installations and which is measured in tonnes per annum;

Justification

Alongside depleted oil and gas fields, saline aquifers offer a significant opportunity for CO2 storage. It is important to clarify that they can contribute to reaching the CO2 injection capacity target.

Article 17

Text proposed by the Commission	*Amendment*
Article 17	
Transparency of CO2 storage capacity data	Transparency of CO2 storage capacity data
1. By 3 months from the entry into force of this Regulation, Member States shall:	1. By 3 months from the entry into force of this Regulation, Member States shall:
(a) make publicly available data on areas where CO2 storage sites can be permitted on their territory.	(a) make publicly available data on areas where CO2 storage sites can be permitted on their territory.

(b) oblige entities holding an authorisation as defined in Article 1, point 3, of Directive 94/22/EC of the European Parliament and of the Council71 on their territory to make publicly available all geological data relating to production sites that have been decommissioned or whose decommissioning has been notified to the competent authority.

(c) For the purposes of point (a), the data shall include at least the information requested in the Commission Notice on the Guidance to Member States for the update of the 2021-2030 National Energy and Climate Plans.

2. By six months from the entry into force of this Regulation and each year thereafter, each Member State shall submit to the Commission a report describing:

(a) CO2 capture projects in progress and an estimation of the corresponding needs for injection and storage capacities;

(b) CO2 storage projects in progress on its territory, including the status of permitting under Directive 2009/31/EC, expected dates for Final Investment Decision (FID) and entry into operation;

(c) the national support measures that ***could*** be adopted to prompt projects referred to in points (a) and (b).

(b) oblige entities holding an authorisation as defined in Article 1, point 3, of Directive 94/22/EC of the European Parliament and of the Council71 on their territory to make publicly available all geological data relating to production sites that have been decommissioned or whose decommissioning has been notified to the competent authority.

(c) For the purposes of point (a), the data shall include at least the information requested in the Commission Notice on the Guidance to Member States for the update of the 2021-2030 National Energy and Climate Plans.

2. By six months from the entry into force of this Regulation and each year thereafter, each Member State shall submit to the Commission a report describing:

(a) CO2 capture projects in progress and an estimation of the corresponding needs for injection and storage capacities ***and CO2 transport***;

(b) CO2 storage ***and transport*** projects in progress on its territory, including the status of permitting under Directive 2009/31/EC, expected dates for Final Investment Decision (FID) and entry into operation;

(c) the national support measures that ***have and will*** be adopted to prompt projects referred to in points (a) and (b);

(d) the national support measures to ensure that the CO2 storage and transport projects respect the principles of third-party access, ownership unbundling, non-discriminatory tariffs

	and transparency, as defined in Directive 2009/73/EC;
	(f) bilateral agreements made to facilitate cross-border transportation of CO2.
	3. Should the report referred to in paragraph 2 show that no CO2 storage projects are in progress on their territory, Member States shall report on plans to facilitate the decarbonisation of industrial sectors faced with unavoidable CO2 emissions. This should include cross-border transport of CO2 to storage sites located in other Member States, as well as CO2 utilisation projects.

Justification

Some key EU industrial sectors are faced with unavoidable CO2 emissions as part of their production processes, making carbon capture an indispensable technology for their decarbonisation. Where Member States are unable to develop CO2 storage capacity, they should plan for ways to transport CO2 in storage facilities in neighbouring Member States or Carbon Capture and Utilisation projects. In addition, It is critical that the CO2 storage infrastructure (both storage and transport) respects the principles of the third energy package, to offer to customers fair market access conditions.

Article 18

Text proposed by the Commission	*Amendment*
[…]	[…]
5. To meet their targeted volumes of available injection capacity, entities referred to in paragraph 1 can do any of the following:	5. To meet their targeted volumes of available injection capacity, entities referred to in paragraph 1 can do any of the following:
(a) develop CO2 storage projects alone or in co-operation;	(a) develop CO2 storage projects alone or in co-operation;

(b) enter into agreements with other entities referred to in paragraph 1;	(b) enter into agreements with other entities referred to in paragraph ***1, thereby considering the overall aim of increasing regional storage capacity across the EU***;
(c) enter into agreements with third party storage project developers or investors to fulfil their contribution.	(c) enter into agreements with third party storage project developers or investors to fulfil their contribution.
[…]	***The CO2 infrastructure projects should respect the principles of third-party access, ownership unbundling, non-discriminatory tariffs and transparency, as defined in Directive 2009/73/EC.***
	[…]

Justification

It is critical that the CO2 storage infrastructure (both storage and transport) respects the principles of the third energy package, to offer to customers fair market access conditions.

Article 10

Text proposed by the Commission	*Amendment*
[…]	[…]
2. Member States shall recognise as net-	2. Member States shall recognise as net-

zero strategic projects CO2 storage projects that meet the following cumulative criteria:	zero strategic projects ***CO2 capture projects, CO2 transportation projects, and*** CO2 storage projects that meet the following criteria:
(a) the CO2 storage site is located in the territory of the Union, its exclusive economic zones or on its continental shelf within the meaning of the United Nations Convention on the Law of the Sea (UNCLOS);	(a) ***for CO2 storage projects*****,** the CO2 storage site is located in the territory of the Union, its exclusive economic zones or on its continental shelf within the meaning of the United Nations Convention on the Law of the Sea (UNCLOS);
(b) the CO2 storage project contributes to reaching the objective set out in Article 18;	(b) ***for CO2 storage projects,*** the CO2 storage project contributes to reaching the objective set out in Article 18;
(c) the CO2 storage project has applied for a permit for the safe and permanent geological storage of CO2 in accordance with Directive 2009/31/EC.	(c) ***for CO2 storage projects,*** the CO2 storage project has applied for a permit for the safe and permanent geological storage of CO2 in accordance with Directive 2009/31/EC.
	(d) for CO2 carbon capture and transport projects, the projects aims to capture, transport and store the CO2 in a CO2 storage project identified in points (a), (b) and (c).

Justification

It is critical that the short permitting deadlines for carbon capture projects apply throughout the value chain, covering both the transport and the capture of CO2, in addition to storage. This is in particular relevant for industries dealing with unavoidable process emissions.

Article 3

Text proposed by the Commission	*Amendment*
[…]	[…]
(f) 'permit granting process' means a process covering all relevant administrative permits to plan, build, expand and operate net-zero technology manufacturing projects, including building, chemical and grid connection permits and environmental assessments and authorisations where these are required, and encompassing all administrative applications and procedures from the ***acknowledgment of the validity of the application to*** the notification of the comprehensive decision on the outcome of the procedure by the responsible national competent authority;	(f) 'permit granting process' means a process covering all relevant administrative permits to plan, build, expand and operate net-zero technology manufacturing projects, including building, chemical and grid connection permits and environmental assessments and authorisations where these are required, and encompassing all administrative applications and procedures from the ***receipt of the project application to the national competent authority until*** the notification of the comprehensive decision on the outcome of the procedure by the responsible national competent authority;

Justification

It is critical that the short permitting deadlines apply throughout the entire application process. Before the "acknowledgement of the (final) application", competent authorities request a lot of additional document and discussions, delaying the process for several months and years. Projects require an overall deadline starting from the initial submission of the project application including potential requests for further documentation.

Article 4

Text proposed by the Commission	*Amendment*
	(new)
	X. The national competent authority shall specify and make available the detailed requirements and extent of information requested of a project developer before the permit-granting process commences. It shall also specify the maximum time

required to come to a final decision.

Justification

The Commission seeks to ensure that the permit-granting process is facilitated, but it is also necessary to ensure that project developers are not obstructed by delay or burdensome procedures from commencing the process.

Article 6

Text proposed by the Commission	*Amendment*
[…]	[…]
No later than one month following the receipt of the permit-granting application, competent authorities shall validate the application or, if the project promoter has not sent all the information required to process an application, request the project promoter to submit a complete application within fourteen days from that request. The date of the acknowledgement of the ***validity*** of the application by the national competent authority referred to in Article 4(1) shall serve as the start of the permit granting process.	No later than one month following the receipt of the permit-granting application, competent authorities shall validate the application or, if the project promoter has not sent all the information required to process an application, request the project promoter to submit a complete application within fourteen days from that request. The date of the acknowledgement of the ***initial receipt*** of the application by the national competent authority referred to in Article 4(1) shall serve as the start of the permit granting process.

Justification

It is critical that the short permitting deadlines apply throughout the entire application process. Before the "acknowledgement of the (final) application", competent authorities request a lot of additional document and discussions, delaying the process for several months and years. Projects require an overall deadline starting from the initial submission of the project application including potential requests for further documentation.

Article 7

Text proposed by the Commission	*Amendment*
[…]	[…]
Where an environmental impact assessment must be carried out in accordance with Articles 5 to 9 of Directive 2011/92/EU, the project promoter concerned shall request an opinion to the competent authority referred to in Article 4 on the scope and level of detail of the information to be included in the environmental impact assessment report pursuant to Article 5(1) of that Directive. The national competent authority shall ensure that the opinion referred to in the first subparagraph is issued as soon as possible and within a period of time not exceeding ***30*** days from the date on which the project promoter submitted its request.	Where an environmental impact assessment must be carried out in accordance with Articles 5 to 9 of Directive 2011/92/EU, the project promoter concerned shall request an opinion to the competent authority referred to in Article 4 on the scope and level of detail of the information to be included in the environmental impact assessment report pursuant to Article 5(1) of that Directive. The national competent authority shall ensure that the opinion referred to in the first subparagraph is issued as soon as possible and within a period of time not exceeding ***14*** days from the date on which the project promoter submitted its request.

Justification

In line with Article 4, national competent authority shall specify and make available the detailed requirements and extent of information requested of a project developer before the permit-granting process commences. Therefore, project-specific changes should be made available within a period of 2 weeks.

coordinate EU and national funding and ensure their better and more targeted use for the fast-track deployment of net zero strategic technology projects including CCUS. A particular focus should be put on the use of national ETS revenues.

Article 15

Text proposed by the Commission	*Amendment*
Coordination of financing	Coordination of financing
1. The Net-Zero Europe Platform as established in Article 28 shall discuss financial needs and bottlenecks of net-zero strategic projects, potential best practices, in particular to develop EU cross-border supply chains, notably based on regular exchanges with the relevant industrial alliances.	1. The Net-Zero Europe Platform as established in Article 28 shall discuss financial needs and bottlenecks of net-zero strategic projects, ***the use of national ETS revenues to advance strategic net zero technology projects,*** potential best practices, in particular to develop EU cross-border supply chains, notably based on regular exchanges with the relevant industrial alliances.
2. The Net-Zero Europe Platform shall, at the request of the net-zero strategic project promoter, discuss and advise on how the financing of its project can be completed, taking into account the funding already secured and considering at least the following elements:	2. The Net-Zero Europe Platform shall, at the request of the net-zero strategic project promoter, discuss and advise on how the financing of its project can be completed, taking into account the funding already secured and considering at least the following elements:
(a) additional private sources of financing;	(a) additional private sources of financing;
(b) support through resources from the European Investment Bank Group or other international financial institutions including the European Bank for Reconstruction and Development;	(b) support through resources from the European Investment Bank Group or other international financial institutions including the European Bank for Reconstruction and Development;
(c) existing Member State instruments and programmes, including from national promotional banks and institutions;	(c) existing Member State instruments and programmes, including from national promotional banks and institutions;
(d) relevant Union funding and financing programmes.	(d) relevant Union funding and financing programmes.
	3. The Commission shall propose to the Council and Parliament no later than 31 December 2024 means of coordinating the various sources of public funding for net-zero strategic projects from the EU

and Member States with the object of accelerating their deployment.

Justification

At the moment, EU and national funding is distributed via multiple instruments with different scope and conditions. The often cited U.S. IRA makes use of a single programme distributing support via tax breaks. While the same system cannot be mirrored in the EU, it would be an advantage to streamline the current systems and apply more harmonised criteria.

Annex 1

Text proposed by the Commission		*Amendment*	
STRATEGIC NET-ZERO TECHNOLOGIES		**STRATEGIC NET-ZERO TECHNOLOGIES**	
1	Solar photovoltaic and solar thermal technologies	1	Solar photovoltaic and solar thermal technologies
2	Onshore wind and offshore renewable technologies	2	Onshore wind and offshore renewable technologies
3	Battery/storage technologies	3	Battery/storage technologies
4	Heat pumps and geothermal energy technologies	4	Heat pumps and geothermal energy technologies
5	Electrolysers and fuel cells	5	Electrolysers and fuel cells
6	Sustainable biogas/biomethane technologies	6	Sustainable biogas/biomethane technologies
7	Carbon Capture and storage (CCS) technologies	7	Carbon Capture and storage (CCS) technologies
8	Grid technologies	*8*	***Carbon Capture and Utilisation (CCU) technologies***

9	Grid technologies

Justification

Carbon Capture and Utilisation (CCU) is a critical technology, both to decarbonise hard-to-abate industries and also support climate mitigation in critical sectors such as transport or chemicals. It should be recognised as a Strategic Net Zero technology.

Clonbio Group Ltd

For the kind attention of the Department of Enterprise
By email to industrialpolicy@enterprise.gov.ie

James Cogan
Director of Policy
Clonbio Group Ltd
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t. 085 8044110

23 May 2023

Submission to Public Consultation on the Net-Zero Industry Act

Dear Minister Coveney,

Thank you for this opportunity to share our perspectives, overleaf, on the draft EU Net-Zero Industry Act.

Clonbio is a family-owned Irish company with extensive biorefinery assets in Ireland, mainland Europe, Canada and the USA. It produces plant protein products, advanced and conventional liquid biofuels, biomethane, and solar and wind electricity. It has a large-scale carbon removals (CCS) project in the analysis stage, with economic viability being the only barrier remaining.

Officials from Enterprise Ireland, NTMA and the departments of agriculture, transport and energy have visited the main Clonbio operations (Pannonia Bio) in Hungary this year. Clonbio is Ireland's most active biomethane investor. Officials from the Department of Enterprise are very welcome to visit.

Sincerely,

James Cogan

ClonBio Group Ltd.
6 Fitzwilliam Place | Dublin 2 | D02 XE61

www.clonbio.com

ClonBio GROUP LTD

We wish to bring to your attention the following points, which concern the areas of biofuels and carbon capture and storage (CCS),

- The exclusion of liquid biofuels - the single biggest contributor to climate action in the transport sector – from NZIA is yet another signal to investors that EU policy is driven by arbitrary sentiment and not by climate science and agri-industrial logic. Clonbio is among a substantial cohort of European companies which are relocating their development activities to the USA where measures such as the Inflation Reduction Act have signaled an era of progressive innovation and investment over there.

- Clonbio has repeatedly invited the European Commission to engage, to visit its biorefinery operations and to exchange insights. The Commission ignores all the invitations. The NZIA, which actually contains the word "industry", does nothing to reverse the decline in constructive partnership between industry and the EU legislature. At a time when climate and environment legislation should be spurring immediate large-scale investment in transitional technologies NZIA contains no bankable provisions.

- Carbon capture and storage, whether for reducing fossil emissions or for removing CO_2 from the atmosphere, is among the top handful of measures needed for successful climate action. According to European Commission estimates[1] the EU will need around 500 million tonnes of CCS activity to meet its climate neutrality goal. Ireland's share would conceivably be 5 to 10 million tonnes. While in the USA the 45Q tax credit has sparked a surge of CCS investment, in Europe's NZIA, and in Ireland, there is nothing.

- The Clonbio biorefinery operations employ fermentation on a large scale – both for producing ethanol (i.e. alcohol, similar to Ireland's brewing and spirits sectors) and plant protein, and for producing biomethane, and this involves the release of biogenic CO2 into the atmosphere. This is natural atmospheric CO2 that has been cycled through biomass by the processes of photosynthesis and fermentation. Roughly speaking, a kilo of CO2 is produced for every cubic metre of biomethane and, coincidentally, for every kilo of ethanol. Both in Ireland and in the EU generally, this fermentation CO2 is cheap and easy to capture, and represents an ideal way of kick-starting carbon removals on a large scale. Clonbio has a project ready in Hungary to capture and store 0.5 million tonnes of CO2 annually. As investors in Ireland's biomethane capacity Clonbio is willing and able to build carbon removals infrastructure to integrate with both the Irish biomethane and the drinks industries' infrastructures. But there needs to be an orchestrated programme involving private and public actors for this to be feasible. Ireland's biomethane strategy – which incidentally has no credibility among investors – would need to include CCS support. We have brought this to the attention of the European Commission and the Irish government (letters to Minister Ryan and the Oireachtas Committee for Climate Change). No responses were received. We invited both the government and ERVIA to attend a CCS stakeholder meeting in Dublin on April 25 but neither attended. Subsequently we spoke with a government official about CCS,

[1] https://www.euractiv.com/section/energy-environment/news/eu-energy-chief-announces-strategic-vision-for-ccus-in-2023/

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leading us to conclude that currently there is no person with responsibility for CCS in Ireland.

- See further explanation of the fermentation carbon removals opportunity here (full text under): www.euractiv.com/section/agriculture-food/opinion/the-eu-needs-a-business-case-for-carbon-removals/.

- In light of Ireland's stretched government resources in the area of climate action the government could encourage the EU to introduce an EU-wide non-ETS CCS support measure which would foster action from industry without the need for dedicated national policy or funding. We propose that the government urges the European Commission to implement an EU-wide Contract for Difference of €150 per tonne of carbon dioxide captured and stored in non-ETS sectors. This will be enough to assure that operators in fermentation sectors (drinks and biomethane in the case of Ireland) will capture and store all the carbon dioxide that arises from their facilities. Biomethane with carbon capture results in energy that is not just zero-emissions but strongly negative emissions. The total carbon storage opportunity in Ireland's fermentation industry is about a quarter of a million tonnes per year, rising to a million tonnes or so as biomethane develops. In Europe it is 20-40 million tonnes. Think of the Contract for Difference as a bounty to be collected by successful operators. It can be amply funded by ETS auction revenues.

- The draft NZIA includes a provision for member states to make available certain volumes of CCS storage capacity by 2030. We would like to inform you that in our view this provision has no credibility among investors as it is assumed the already watery measure will be watered down further in practice, and that most Member States, Ireland among them, will simply ignore it. One perception among CCS stakeholders in Ireland is that the government has no intention of supporting storage actvities within the State and indeed, that the State has an obstructionist position in regards to storage. There are numerous storage possibilities across Europe, which will emerge by the efforts of industry once there is a business case for CCS. Should Ireland and the EU genuinely wish to foster investment in CCS more will be needed than the current NZIA proposal.

- As ever, we are keen to engage with the government and we invite the Department of Enterprise to visit the Clonbio facilities and explore in more detail the opportunities for industrial development in Ireland, in bioenergy, carbon removals and plant protein (Clonbio video history here https://youtu.be/JHv4WXlH1O4).

--- ends ---

See article on fermentation carbon removals overleaf.

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www.euractiv.com/section/agriculture-food/opinion/the-eu-needs-a-business-case-for-carbon-removals/

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The EU needs a business case for carbon removals

DISCLAIMER: All opinions in this column reflect the views of the author(s), not of EURACTIV Media network.

By James Cogan | Ethanol Europe 13:57

Creating an EU business case for carbon removals – starting from fermentation – should be the quickest and simplest piece of EU climate policy ever, writes James Cogan. [T photography / Shutterstock.com]

EURACTIV is part of the Trust Project >>>

If Europe achieves its 2030 biomethane target it will have unwittingly created the conditions to cheaply mitigate the carbon emissions equivalent of an entire member state, writes James Cogan.

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James Cogan is a policy advisor to Ethanol Europe (Clonbio Group Ltd).

Making biomethane is all about separating carbon dioxide from biogas, at a rate of nearly a kilo of CO2 per cubic metre of biomethane.

Europe's 35 billion cubic metre biomethane target for the end of the decade will involve separation of 30 million tonnes of CO2.

Add in the easily separated carbon dioxide from ethanol production and the figure jumps to around 40 million tonnes. European wine and beer production could add another two million.

The total of this atmospheric carbon, captured first by photosynthesis then separated by fermentation, is huge. It's as big as the emissions of countries the size of Hungary, Sweden or Ireland.

It's not fossil carbon, but it's carbon just the same. Removing fermentation carbon brings the same positive impact as capturing CO2 directly from the air but at a fraction of the cost of direct air capture.

Forty million tonnes of CO2 is way less than the 300 million the European Commission believes will need to be captured and stored every year by 2050 if Europe is to meet its climate neutrality goal, but it's way more than the current target of 5 million tonnes by 2030 and infinitely more than what will be achieved based on current policy support, which is essentially zero.

If even a modest portion of Europe's biomethane target is reached by 2030 the opportunity is still fantastic.

Of course separation of carbon dioxide at source is only the start. The gas then needs to be transported to geological storage sites, pumped into them and kept there forever.

The availability of suitable sites in Europe is not an issue. The Danish government estimates that there are sufficient geological sites – from depleted oil and gas fields to deep underground saline aquifers – to hold the equivalent of 300 years of the carbon dioxide output of Europe's main single source producers of the gas. Only a small fraction of this would be needed.

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Department of Enterprise, Trade and Employment
23 Kildare St
Dublin 2
D02 TD30

23rd May 2023

RE: Public consultation on the EU proposal for the Net-Zero Industry Act

To whom it concerns,

Cork Chamber represents 1,200 members employing over 100,000 people throughout the city, metropolitan area and county. Our vision is to be a world-leading Chamber of Commerce, delivering on a progressive economic, social and sustainability agenda at the heart of a vibrant business community. Our direction is guided by our formal pledge to uphold the United Nations Sustainable Development Goals.

On behalf of our membership, Cork Chamber welcomes this opportunity to contribute to the Public consultation on the EU proposal for the Net-Zero Industry Act (NZIA). The Act signifies Europe's dedication and commitment to fulfilling its climate ambitions and represents a step forward on building a zero carbon economy in Europe. As Cork strives to meet its own climate targets, having been selected as one of 100 cities that will lead the way on climate action and smart cities across Europe, this Act is more important than ever before for our region.

Cork has the potential to become a major hub for renewable energy generation and should emerge as a frontrunner in Europe in offshore wind energy. This would not only help support economic growth in the region but it would also help in achieving our ambitious climate targets. It is therefore very positive to see onshore wind and offshore renewable technologies among the eight strategic net-zero technologies that are being supported by this draft NZIA.

Although Cork has a lot to gain from reaching its decarbonisation ambitions, the benefits of achieving the aims of this draft NZIA Act will be felt right across the country and throughout Europe especially in terms of increasing resilience, ensuring the security of the energy supply, promoting energy efficiency, and developing new and renewable forms of energy.

On this basis, we have a made a number of observations under the seven pillars which underpin this Act, and we hope you will give them your consideration.

Yours sincerely,

Conor Healy
CEO

Pillar 1 -Setting enabling conditions

Cork Chamber welcomes the proposal under this pillar, as it is vital that conditions are favourable to attract investment in net zero technologies. In order to drive innovation, scale up deployment, reduce costs, create jobs and stimulate economic growth it is essential that the permit-granting process is streamlined and simplified. Barriers to this have proven only to stifle development.

One of the main aspects of this pillar is to introduce time limits on the permit granting process as well as requiring Member States to establish a single point of contact for permitting net-zero projects. This will be of vital importance here in Ireland and in Cork where the region has the potential to become a major offshore renewable energy hub. The particular proposals for net-zero strategic projects deemed essential for reinforcing the resilience and competitiveness of EU industry are also supported by Cork Chamber. Rapid administrative treatment and financing advice stemming from the Net-Zero Europe Platform would be beneficial to such net-zero strategic projects here in Ireland as well as the proposal to award urgent treatment in all judicial and dispute resolution procedures.

Pillar 2 -Accelerating CO2 capture

Ireland has ambitious climate action targets, with Cork being designated as one of 100 European cities who will lead the way on climate action and smart cities across Europe. Carbon Capture and Storage has potentially an important role to play as we transition to net zero and in Cork a strategic site exists that could play a crucial role in the capture of CO2. The Kinsale Head Gas Field has been identified as one such suitable storage site[1] and can also be potentially used for hydrogen storage. However, we need to ensure that CCS is targeted at energy intensive and hard to abate industries and used a transition technology to put us on a pathway to net zero. C02 storage should not take away from the more immediate need to decarbonise industrial processes and drive efficiencies.

Pillar 3 -Facilitating access to markets

The Act requires public authorities to consider sustainability and resilience criteria for net-zero technologies in public procurement or auctions. This type of intervention is an important tool to boost diversification of supply for net zero technologies. Under this pillar proposed schemes would also support private demand by consumers, which is essential for SMEs and entrepreneurs to generate revenue and make net-zero technologies more cost-competitive. It will also provide confidence for investors which will in turn lead to the scaling of net-zero technologies. Without doubt these proposals will have a very positive impact and will give weight to sustainability in decision making.

Pillar 4&5 – Enhancing Skills and Fostering innovation

Cork Chamber has been a strong advocate of attracting and retaining high quality and diverse talent as well as skills building, which will be needed to ensure a successful climate transition. In developing the skills of the future, Cork's internationally recognised universities and research institutes, and reputation as a learning city with strong ties between the business community and academia place our city region at an advantage. It is therefore positive to see proposals for the establishment of Net-Zero Industry Academies. However it is crucial that the creation of these academies are delivered in each Member State in partnership with existing universities and research institutes to be effective.

[1] https://www.ervia.ie/who-we-are/carbon-capture-storage/carbon-storage/

Net Zero regulatory sandboxes offer a range of benefits and will promote collaboration and learning as well as providing regulatory flexibility and fostering innovation. However, it's important that there are few limitations on these sandboxes (such as limitations around commercially available technologies) to allow for the real benefits of innovation to be experienced.[2]

Pillar 6 -A Net-Zero Europe Platform

The exchange of information will be a key asset to Europe in fulfilling its commitment to climate change and decarbonisation. Under this pillar proposals will see the Commission and Member States working together to ensure the availability of data to monitor progress toward the objectives of the Net-Zero Industry Act which will be vital to its success. The Net-Zero Europe Platform will also address financing tools by identifying financial needs, bottlenecks and best practices for projects across the EU. As a region poised to become a renewables hub, support from this platform could allow Cork to position itself as a leader in offshore wind energy.

Pillar 7 -Building Industrial Partnerships

Net-zero industrial partnerships with other EU countries offer opportunities in many areas such as knowledge sharing, access to funding and resources and innovation. As Cork and Dublin endeavour to become climate-neutral cities by 2030 net-zero industrial partnerships could help foster collaboration among industry stakeholders as well as research institutions and policymakers which would allow us to make that transition in time. It would also be of great benefit from a market integration perspective as it will promote coordination among those countries who are involved in these partnerships.

[2] https://www.oceanenergy-europe.eu/innovation-is-the-core-driver-of-european-competitiveness-why-is-it-missing-from-the-net-zero-industry-act/

DHL

DHL submission to public consultation on the EU proposal for the Net-Zero Industry Act

www.dhl.com | May 2023

Introduction

DHL is pleased to have the opportunity to respond to the **Department of Enterprise, Trade and Employment's public consultation on the European Union's proposal for the Net-Zero Industry Act.** Please note that the company's submission pertains to *sustainable biogas/biomethane technologies*, and the response is being made under *Pillar 1 – Setting enabling conditions.*

As one of the leading logistics and delivery companies in Ireland, we have committed ourselves to a sustainable future and we want to empower our network of partners to do the same. Globally, **DHL will invest €7 billion** in order to reduce our carbon emissions below 29 million tonnes by the end of this decade, and we have the ambition to be net-zero by 2050. Renewable transport fuels, with a specific emphasis on biomethane, are a central component of our sustainability objectives.

DHL notes that biomethane and biomethane technologies have a dual purpose. Firstly, to **decarbonise the transport sector**, with a focus on hard-to-abate sub-segments, such as HGVs. Secondly, DHL contends that developing an indigenous biomethane sector will lead to the creation of secure, highly skilled jobs that will **boost economic growth.** This is a core objective of the proposal for the Net-Zero Industry Act.

An additional component of the European Union's proposal for the Net-Zero Industry Act is to simplify the regulatory framework, with a view to enhancing the investment environment for technologies that support decarbonisation and climate neutrality goals. Across EU Member States, well-established policy and regulatory frameworks, coupled with Government support, have allowed for the growth of domestic biomethane industries, which have supported the economic development of other sectors of the economy - agriculture, for example. It is vital that Ireland follows suit, and establishes **defined regulations around biomethane production and consumption,** thus providing price certainty for consumers and enabling the growth of the market.

Should you wish to discuss any aspect of the attached submission, please do not hesitate to contact us.

Yours sincerely,

Ciaran Foley
Managing Director

www.dhl.com | May 2023

DHL in Ireland - Background

DHL **employs over 1,200 people in Ireland** and supports the very essence of regional development, with staff members based across a number of locations including Dublin, Shannon and Cork. As one of the world's leading logistics companies, DHL makes every effort to set an example in sustainability leadership in the transport and logistics industry - which is representative of the company's global goal. Procuring and developing renewable fuels for transport is a core ambition of the company; and in the short to medium term, we believe that **biomethane poses the most viable, practical solution.**

In Ireland, DHL's sustainability efforts have already begun. Eco-vehicles were deployed across multiple operations in 2018, and, as part of the sustainability strategy of the wider DHL Group, the company will increase its share of sustainable fuels (30%) and e-vehicles (60%) used in pick-ups and deliveries by 2030. In addition, the company has reaffirmed its commitment to decarbonisation by investing in a number of renewable energy projects throughout Ireland.

The most noted example of this is **DHL's investment in the construction of a biomethane production site at Cork**, which, once fully operational, will process 90,000 tonnes of consumer and commercial waste per annum, resulting in an annual **carbon emissions abatement of approximately 15,000 tonnes.**

DHL

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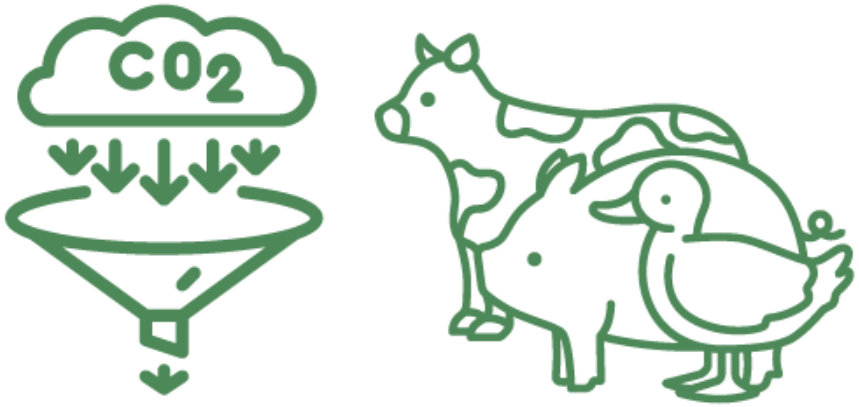
Biomethane as a tool for decarbonisation

Here in Ireland, transport remains the second largest source of greenhouse gas emissions at 18%. In the context of demand, transport is the most carbon intensive sector, with fuels produced from oil accounting for more than 95% of total energy demand. DHL recognises the Government's proactivity in setting an ambitious target of a 50% reduction in carbon emissions from transport by 2030 – it is clear however, that in order to meet this target, **a range of renewable fuels will be required.** While the use of battery electric vehicles is a viable option for particular types of transportation – such as passenger vehicles or short-range urban logistics, it is clear that electrification alone cannot, and will not, enable Ireland to meet its legally binding target as outlined in the Climate Action Plan 2023.

This is particularly true for hard-to-abate sub sectors of the industry, such as HGVs. These vehicles require more significant storage capabilities and typically service longer-range routes. Thus, an alternative fuel, such as biomethane, is a more viable solution. **Biomethane is readily available**, and unlike other sources of energy, such as hydrogen, it does not necessitate for significant upgrades to be made to the existing gas grid. Biomethane as domestically produced or imported, **can be directly injected into the national gas grid,** without delay. Further to this, depending on the feedstocks and food waste used, the biomethane production process has the potential to be carbon negative. DHL contends that biomethane is therefore the preferred method to decarbonise transport, as it is distinctively advantageous compared to other fuels.



DHL

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Economic benefits of biomethane

Biomethane has clearly defined characteristics which can contribute positively to Ireland's economic development. Producing biomethane at scale domestically, has the potential to **create an extensive network of secure, clean-energy jobs.** As biomethane is produced via organic waste, production-oriented jobs will generally be located in regional or rural areas, where this waste is more readily available. This allows for the **growth of local enterprise**, and once the biomethane sector has sufficiently developed, it can subsequently facilitate **regional competitiveness**. As a fuel for transportation, biomethane has the ability to create new revenue streams for businesses, while allowing long-term cost savings in cases where biomethane is replacing diesel, or other fuels which are subject to price volatility. This is particularly true in situations where supply can be secured indefinitely, thus allowing producer and consumer parties to enter into agreements where **fixed refuelling costs can be guaranteed.**

As an example, DHL's aforementioned biomethane project, located in Cork, will facilitate a key retail partner in using biomethane across their operations, thus negating the need to rely on other fuels. Further to this, the project will create 30 jobs once operational and will support 100 jobs during the construction phase. The waste used to produce biomethane at the plant, will be sourced locally, **providing an effective waste management solution for both businesses and consumers.** Ordinarily, this waste would likely be sent to landfill, where it would emit methane, thus causing air and land pollution in the local area. As Ireland fosters economic advancement across a number of key sectors, integrating effective waste management solutions is key to ensuring that this growth is sustainable. Waste management through biomethane production **can additionally offer revenue generation** to producers of materials such as agricultural residue, sewage, sludge or food waste.

In addition, DHL contends that the implementation of favourable regulatory frameworks which enable the growth of an indigenous biomethane sector in Ireland, will allow the country to **prepare for export.** While the primary objective of indigenous biomethane production is national decarbonisation, coupled with sustained economic growth, an ancillary outcome is the ability for Ireland to export – both biomethane itself, but also **services, skills and intellectual property associated with same**. Allowing Irish biomethane producers to access the EU market would support the growth of a competitive biomethane sector across Member States, making biomethane a financially viable option for end consumers. This will further allow the EU to reduce its current dependence on fossil fuel imports – a central objective of the Net-Zero Industry Act and **a key element in mitigating supply-side risk.**

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Policies needed to enable biomethane

As has been noted prior, biomethane and biomethane/biogas technologies present tangible opportunity in the context of both decarbonisation and sustainable economic growth. DHL acknowledges the EU's proposal for the Net-Zero Industry Act which reaffirms its commitment to meeting targets under Fit-for-55; but equally notes its ambition to scale manufacturing and production capabilities, while creating green jobs. **Localising our global sustainability efforts**, DHL is actively working to scale production capacity through the construction of the biomethane production plant in Cork. On that basis, it is imperative that company-level investment be matched by national and EU-level policies which enable the growth of the sector.

Biomethane's potential to decarbonise transport and other industries, while creating economic opportunity **depends largely on state-level support.** Both the Irish Government and the EU must act promptly and decisively **to invest in the comprehensive rollout of re-fuelling stations and introduce adequate support schemes which will drive investment** in biomethane projects. Laying this groundwork will stimulate the growth of the biomethane market, by financially de-risking such projects, thus allowing the sector to scale rapidly.

On a practical level, this necessitates the introduction of defined biofuels policies which **offer transparency and provide reassurances to potential investors**. Any policy frameworks must include clear provisions to facilitate planning processes – as it outlined in the EU's proposal for the Net-Zero Industry Act – with a particular focus on Anaerobic Digestion developers, both farm-based and food-based.

The Net-Zero Industry Act proposes prioritising investment in Net-Zero strategic projects which are deemed essential for reinforcing the resilience and competitiveness of EU industry. As part of our €7 billion global investment in sustainability, DHL is actively funding a host of local strategic projects, including our biomethane production site here in Ireland. In order to stimulate investment in further strategic projects, it is vital that **viable support measures build the confidence required to prompt these investment decisions.**

www.dhl.com | May 2023

Eyrefield Energy Ltd

A Chara,

We write to you today to discuss an issue of critical national and global importance: the energy transition necessary to address climate change, sea level rise, and the urgent need to reach net zero emissions. Achieving these targets requires maintaining political support and demonstrating to our citizens that these changes will create jobs and economic prosperity for our nation.

Recent geopolitical events, including the conflict in Ukraine, have exposed our energy vulnerabilities and highlighted the strategic importance of energy security. As a nation on the periphery of Europe with substantial wind resources, Ireland is uniquely positioned to contribute to the European power market where current models are faltering.

Transitioning to carbon neutrality will make carbon dioxide a critical commodity, affecting the prices of livestock, gasoline, transportation, and electricity. In addition, this new economic landscape will give nations and corporations a competitive edge depending on their carbon dioxide pricing and disposal policies.

Given these considerations, we urge the government to critically examine its regulatory support for industries that generate carbon offsets. This includes support for Carbon Capture Storage, Direct Air Capture, and Carbon Neutral Fuels. These technologies, while energy-intensive, hold the potential for innovation and cost reduction with sufficient support and investment.

Our concern lies in the scenario where our main trading partners, the USA, Norway, and the UK, become the leaders in carbon removal technology, new carbon industries, and employment creation in the coming 5-10 years. Should this happen, will Ireland have to reduce its agricultural output to meet climate targets or depend on carbon credits and e-fuels from these countries?

We strongly encourage the government to consider the following points to address these concerns and seize the opportunity to lead in a carbon-neutral future:

1. Implement a comprehensive certification process that recognises and supports lifecycle analysis and permanent removal of CO2 technologies. This will ensure that the only viable compensation for fossil fuel use is the permanent disposal of CO2.
2. Establish policies to support first-of-a-kind facilities and technologies. For example, measures like government carbon price subsidies, similar to the 45Q in the US, could incentivise the development of these technologies and attract investment.
3. Integrate carbon removal technologies into compliance markets. Currently, these technologies struggle to operate competitively within Europe's regulatory and voluntary carbon markets. For instance, EU Emissions Trading Schemes may not incentivise greenhouse gas removals.

4. Put systems and frameworks in place to facilitate CO2 transportation and storage. This will require significant infrastructure development and updated regulations.
5. Implement national policies to ensure that excess energy from renewables is used by local industries at competitive tariff rates, benefiting Irish businesses and the local economy.

We posit that countries with carbon-efficient economies will gain competitive advantages in the export of goods, food, and materials, by not keeping pace with countries like the USA and the UK, Europe and Ireland risk becoming dependent on foreign technology and carbon credits, leading to economic disadvantages and energy security issues.

In conclusion, we urge the government to prioritise and implement strategies that ensure our citizens' better standard of living and lifestyle. The long-term success and acceptance of decarbonisation measures hinge upon the promise of prosperity that accompanies the protection of our planet.

Your attention to this important matter is greatly appreciated.

Yours sincerely,

Colm Lynch on behalf of Eyrefield Energy Ltd

Hydrogen Ireland

The Association for Energy, Mobility, Industry & Community

Hydrogen Ireland response to Department of Enterprise, Trade and Employment's Public Consultation on the Net-Zero Industry Act

Hydrogen Ireland firmly supports the proposals in the Net Zero Industry Act (NZIA) to assist in the timely delivery of hydrogen technologies. Its relevance in the national context is linked to the national target of at least 5 GW of grid connected offshore wind to be delivered by 2030 plus the addition 2 GW offshore wind for hydrogen to be in development by the end of this decade. A framework to inform the expedient delivery of renewable energy or hydrogen hubs will be an important enabler for offshore wind. According to the draft delegated act for the production of RFNBOs, existing renewables will have a role in the production of renewable hydrogen, if electrolysers are connected before the end of the transitional phase in 2028.

The proposal to develop Hydrogen Valleys and renewable energy hubs, through accelerated permitting, the use of regulatory sandboxes and prioritized access to funding have the potential to provide material momentum to their delivery.

The proposed NZIA foresees the innovative technologies embedded within renewable hubs as an important enabler of meeting the EU's climate neutrality objective, ensuring security of energy supply and resilience of the Union's energy system. Therefore, the regulatory sandbox will model will provide an important pathway for innovative technologies to enter the scope of strategic net-zero technologies.

Hydrogen Ireland recommendations

- Timely adoption of NZIA no later than Q1 2024.
- Timely publication of guidelines for regulatory sandboxes.
- Early engagement between the national competent authorities and industry on the scope of regulatory sandboxes for hydrogen hubs.
- Mapping of the existing regulatory framework to identify any existing regulatory or legal gaps.
- Meaningful support mechanisms for hydrogen technologies.
- Enduring dedicated budget to supporting the deployment of key hydrogen technologies.
- Creation of a national forum to support Ireland's participation in the Net-Zero Europe Platform

1. Types of technologies defined as 'net-zero technologies'

The definition of 'net-zero technologies' covers a broad range of innovative technologies and fuels. These will contribute to range of important objectives such as Ireland's climate targets and security of energy supply.

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They include:

> *"renewable energy technologies[1]; electricity and heat storage technologies; heat pumps; grid technologies; renewable fuels of non-biological origin technologies; sustainable alternative fuels (SAF) technologies[2]; electrolysers and fuel cells; advanced technologies to produce energy from nuclear processes with minimal waste from the fuel cycle, small modular reactors, and related best-in-class fuels; carbon capture, utilisation, and storage technologies; and energy-system related energy efficiency technologies. They refer to the final products, specific components and specific machinery primarily used for the production of those products. They shall have reached a technology readiness level of at least."*

As Ireland is in the very early stages of developing a hydrogen sector, the inclusion of renewable hydrogen technologies (RNFBOs, electrolysers), the manufacturing of fuel cells for different mobility and stationary uses, and the production of SAF is clearly relevant in in the Irish context. (Article 3.1) Asides from RFNBOs, fuels that meet the sustainability criteria of the Renewable Energy Directive and the delegated regulation for a minimum threshold for GHG savings of recycled carbon fuels, should be considered.[3]

2. Measures to enable the development of renewable energy clusters

The proposed NZIA recognizes how Hydrogen Valleys with industrial end-use applications play an important role in decarbonising the energy-intensive industries, referencing REPowerEU's aim of doubling the number of Hydrogen Valleys in the Union. Renewable energy hubs integrate large energy customers with green energy production, long duration energy storage and infrastructure solutions. Net-zero regulatory sandboxes will be vital to promote innovation and the timely development of hydrogen hubs. Hydrogen or renewable energy hubs will, in the absence of an existing legal and regulatory framework, benefit from a regulatory environment that enables them to scale at a pace and create conducive conditions for sectors to switch from fossil fuels.

- The proposal to introduce regulatory sandboxes to test innovative net-zero technologies in a controlled environment for a limited amount of time could be important in working towards 2030 EU targets such as

[1] renewable energy' means 'renewable energy' as defined in Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources
[2] 'sustainable alternative fuels' means fuels covered by the Proposal for a Regulation of the European Parliament and of the Council on ensuring a level playing field for sustainable air transport, COM/2021/561 final and by the Proposal for a Regulation of the European Parliament and Council on the use of renewable and low-carbon fuels in maritime transport COM/2021/562
[3] https://energy.ec.europa.eu/document/download/5e2c1909-702d-4266-bd2e-a1923b263ce8_en?filename=C_2023_1086_1_EN_ACT_part1_v5.pdf

those introduced under the revised Renewable Energy Directive, the Alternative Fuels Infrastructure Regulation, FuelEU Maritime, Refuel Aviation.

- The approach outlined in the NZIA is to be welcomed as proportionate in its objectives in striking a balance between legal certainty for participants in the Net-Zero regulatory sandboxes and the achievement of the objectives of Union law.
- Early engagement between the relevant government departments and competent authorities.
- Given that participants who must in any case comply with the essential requirements on Net-Zero technology laid out in Union and national law, it is appropriate to provide that participants who comply with the eligibility requirements for Net-Zero regulatory sandboxes and who follow, in good faith, the guidance provided by the competent authorities and the terms and conditions of the plan agreed with those authorities, are not subject to any administrative fines or penalties.

Recommendations

- Early engagement between the relevant government departments, competent authorities, industry groups and prospective members of renewable energy/hydrogen hubs on the scope of regulatory sandboxes.
- Mapping of the existing regulatory framework to identify any existing regulatory or legal gaps.

3. EU-wide minimum set of permitting requirements & the Net Zero Energy Platform

Hydrogen Ireland welcomes the introduction of mandatory accelerated permitting processes for Net Zero technologies projects (with an additional fast track for strategic technologies) and the designation of a national authority in all Member States to coordinate the submission of all the documents for the permit granting process (including environmental impacts assessments). Ensuring effective implementation of these provisions should be clearly in the remit of the Net Zero Energy Platform. The Net Zero Energy Platform, chaired by the European Commission, will coordinate and facilitate the exchange of information between Member States. Hydrogen Ireland suggests a national forum, comprised of a range of stakeholders including industry representatives, academia etc, be established as a mechanism to share information and to inform Ireland's contribution.

Hydrogen Ireland welcomes the proposed scope of Net Zero Energy Platform, which includes: permitting, including one-stop shops, Net-Zero Strategic Projects, coordination of financing, access to markets and skills as well as innovative net-zero technologies regulatory sandboxes.

Recommendation:

- National forum, comprised of a range of stakeholders including industry representatives, academia etc, be established as a mechanism to share information and to inform Ireland's contribution.

The Association for Energy, Mobility, Industry & Community

Hydrogen Ireland

4. **Permitting timelines & requirements**
   - The timelines associated with hydrogen deployment projects should be aligned with the permitting timelines associated with net zero technologies.
   - In addition, the permitting and licensing requirements that apply across hydrogen value chain should be examined and mapped. The purpose of mapping the permitting and licensing framework is to ensure there are no permitting or licensing gaps that could delay the deployment of hydrogen production and distribution technologies.
   - Furthermore, a proportionate approach to permitting should be adopted. An example is the current revision of the Industrial Emissions Directive where the European Council has proposed to exclude electrolysis-based hydrogen production technologies below 60 tonnes per day from the scope of the Directive.
   - NZIA is an opportunity to align different regulations and administrative permitting practices by defining a minimum set of requirements to be adhered to by Member States. The proposal to introduce permitting timelines of 9-12 months for electrolysers and fuel cells manufacturing, depending on the size of the project, is welcomed.
   - Explore the possibility of granting public interest status to strategic projects in order to fast track permitting procedures. This would complement the accelerated permitting procedures provided under the Renewable Energy Directive and the designation of renewables acceleration areas. This enables simplified and fast permit-granting procedures. Furthermore, these projects are presumed to be of 'overriding public interest', which would limit the grounds of legal objections to new installations. EU guidelines on the recommended criteria for granting public interest status would assist in informing the national framework.

Recommendations

- Define a minimum set of permitting requirements to be adhered to by Member States (new Article 6b).
- Put into place a single online information platform, developed by the NZ Energy Platform, to provide access to Members states requirements.
- Provide guidance at EU level on the public interest status for more transparency and certainty in Member States (review Article 12).
- Ensure the effective implementation of permitting timelines, by putting into place an enhanced NZIA monitoring system within the Net Zero Industry Platform.

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26 May 2023

Re: Public Consultation on the Net-Zero Industry Act

Dear Sir/Madam,

Ibec, the group that represents Irish business, welcomes the opportunity to present its views on the Net-Zero Industry Act. We speak for businesses across a range of industrial, commercial, and non-profit sectors. The organisation and its sector associations strive for business conditions that enable sustainable economic growth.

Overview: Ireland's net zero opportunity

Through the Climate Action and Low Carbon Development (Amendment) Act 2021, Ireland has set world leading targets to reduce GHG emissions and establish a net zero economy by 2050. The introduction of carbon budgets, sectoral emissions ceilings, and economy-wide decarbonisation efforts through Climate Action Plan 2023, all put Ireland on a pathway to achieving these targets.

Ibec is a strong supporter of this ambition. The transition to net zero is not only an environmental objective but an economic imperative. In a world where investment, talent, and consumers increasingly follow environmental sustainability, the transition is now a question of business value and industrial competitiveness. And if Ireland's climate ambition can be delivered in a coordinated, timely, and cost-effective way, Ireland has an opportunity to enhance its competitive offering and establish itself as leader in sustainable enterprise.

Ireland also has significant opportunities to develop a new "green" or "net-zero" enterprise sector supporting the transition domestically and globally. The potential to build this new enterprise base is highlighted in the *White Paper on Enterprise 2022 – 2030*. Given that this market is estimated to be worth approximately €600 billion a year by 2030, regional and global competition in this arena will be significant as demonstrated by the publication of the US Inflation Reduction Act and

the NZIA. However, Ireland has many advantages and assets it can leverage to become a significant player in this space, including

1. A young and highly educated talent pool
2. A rapidly growing net zero engineering and services industry
3. World leading domestic renewable energy resources
4. A dynamic and experienced energy sector
5. Access to key markets in Europe and beyond
6. A strong research, technology, and innovation ecosystem
7. A global sustainable finance industry
8. An enterprise base committed to the net zero transition

Ibec's general views on the NZIA

For the reasons set out above, Ibec is very supportive of the NZIA. The NZIA provides significant opportunities for Ireland like the rest of Europe to tap into this global market and compete with industry in China and US. The NZIA will also complement ongoing efforts to transform industry under initiatives including the European Green Deal, the EU Industrial Strategy, and the Circular Economy Action Plan.

Ibec welcomes the headline ambition - to reach in aggregate 40% of the annual deployment needs for strategic net-zero technologies manufactured in the EU by 2030. This appears to be a strong statement of intent. However, Ibec cannot comment on the feasibility of this ambition in the absence of firm benchmarking and impact analysis. Ibec would like to see more scenario modelling and data on the current state of play in this respect.

Ibec also supports the underlying goals set out below. We believe these cover all critical areas.

- Establishing the conditions for scaling up the manufacturing capacity.
- Supporting the 2030 decarbonisation targets and ensuring the security of supply.
- Setting harmonised rules for the installation of manufacturing capacity.
- Creating a regulatory environment that simplifies and fast-tracks permitting for new net-zero technology products production sites.
- Increasing resilience, ensuring the security of the energy supply, promoting energy efficiency, and developing new and renewable forms of energy

Ibec however is concerned that an overfocus on the eight listed technologies could lead to missed opportunities or a de-prioritisation of other technologies and climate solutions also fundamental to the transition.

For example, there is only limited mention of circular economy related activities for the smart re-use, repurposing, and recycling of waste. There is no mention of district heating which has the potential in Ireland to exploit waste heat and supply over 50% of building heat demand in Ireland- although perhaps this is covered in the "grid technologies" category. There is also no mention of land-based and farm-level decarbonisation beyond biomethane production. For a country like Ireland where significant emissions reductions and sequestration will be required in the LULUCF sector. There is also no mention of digital or demand response technologies to support greater grid efficiencies. Flexible demand will be of particular importance in Ireland as we will be looking to match very high levels of variable generation to demand and the less flexible the demand is, the greater the system costs.

A technology neutral or more flexible approach would allow member states and end users find and support their own least cost solutions.

Ibec supports the 7 pillars concept. Detailed comments on each can be found below.

Pillar 1 - Setting enabling conditions

This is an industry against the clock. Countries and businesses are targeting major transformations this decade as the window for meaningful action on climate closes and 2030 targets deadlines draw close. The NZIA has the potential to address this challenge and give EU member states the flexibility, financial resources, and policies to speed-up, scale-up, and roll-out new and innovative technologies, products, and services. The proposals designed to simplify and speed up permit-granting processes, help enhance access to finance, and encourage member states to prioritise net zero projects are all welcome. Irish and European businesses have faced major challenges at these early stages. Processes can be slow and bureaucratic. These procedures, including environmental impact assessments, must proceed faster. Ibec is also supportive of the one stop shop model and believes this has potential to drive uptake, investment and innovation in net zero technologies and climate solutions.

Ibec does have some concerns regarding the language in Article 12 (Priority status of net-zero strategic projects). While there is a clear need to prioritise net zero investment, it is important that this does not create any delays to Ireland's response to the national housing crisis.

It is important that, next to the Net-Zero Industry Act, existing financing programmes at EU and national level are fully mobilised to support investments in line with the EU's climate targets.

Pillar 2 - Accelerating CO2 capture

Ibec is very supportive of the proposals in Pillar 2. Ibec foresees carbon capture as being of vital strategic importance for Ireland's energy future. In our assessment, industrial and energy system gas use equipped with carbon capture and storage technology presents a viable solution in some hard to abate high energy use sectors. This involves the capture of CO2 from a plant's flue gases and its transportation to a geologically stable underground or undersea storage facility in Ireland or abroad. While the form CCS takes in Ireland remains to be decided and further work on this is required. It may involve the development of CCS clusters in areas with high concentrations of heavy industry and conventional natural gas power generation. It is critical that Government begin making preparation for CCS deployment in Ireland.

Pillar 3 - Facilitating access to markets

Keeping markets open is critical to the decarbonisation agenda. Access to new markets, complex and specialist supply chains, and critical raw materials will be key to the success of the NZIA initiative. This means keeping markets open, respecting international commitments, and promoting close cooperation with our major suppliers and partner countries.

It is important that the proposals on **public procurement procedures** are fully compliant with the EU's international commitments both bilaterally through our trade agreements and multilaterally in the context of the WTO. Some of the proposed requirements (e.g., weighting of sustainability and resilience contribution) would also require further clarifications and guidance to avoid uncoordinated national approaches by Member States.

Pillar 4 - Enhancing skills

The transformations inherent in the transition to net zero will lead to changes in sectors and occupations, the phasing out of established roles, and the creation of new professions. While some of the new skills and competencies are well understood. Others will only become apparent in the course of the transition. Ireland is not alone in facing this challenge and like all countries, the lack of an established

green skills pipeline threatens to slow progress on climate action. However, with investment and leadership, Ireland's training, education, upskilling, and reskilling system can be marshalled to deliver the necessary skills on time. Ireland's Expert Group on Future Skills Needs has already done important work assessing the critical skills that Ireland needs in renewable electricity generation, the retrofit of the built environment, and the electrification of road transport. However additional assessments will be need in other aspects of the transition.

The NZIA's proposal to build recognition of professional qualifications in net-zero industries is welcomed. It is the shared responsibility of all players in the labour market to promote uptake of these new skills/roles. However, it is important that the establishment of European Net Zero Industry Academies and a corresponding platform do not undermine work already underway at national levels on updating training curricula. It is important to shape these initiatives in the right way to appropriately support and complement the main responsibility of Member States to improve the performance of their existing training systems.

Pillar 5 - Fostering innovation

Ibec is very supportive of the proposals to enable regulatory sandboxes in Member States. Regulatory sandboxes have provided effective in other markets where they create a means for real-world environment testing of new and emerging technologies in planned and unimagined and innovative ways. These could be used to great advantage by industry and the various research and technology centres across the country. As identified in 'Impact 2030 Ireland's Research and Innovation Strategy, "Ireland has significant advantages as a small and highly networked island that can be a real-world testbed for tackling global sustainability challenges".

Pillar 6 - A Net-Zero Europe Platform & Pillar 7 - Building Industrial Partnerships

Ibec welcomes the creation of a new **Net-Zero Europe Platform to** "promote the adoption of net-zero technologies globally and to support the role of Union industrial capabilities in paving the way for the global clean energy transition".

Ibec requires some clarification on the platform's role in supporting Net-Zero Industrial Partnerships.it is important that the framework supports fair competition and a level playing field across Europe.

Also, given the need for strong public-private partnerships in the delivery of the NZIA goals, it is important to have a structured public-private dialogue at EU level. This could be achieved by involving private sector representatives and social partners in the Net-Zero Europe Platform directly.

A note on European competitiveness

If the objective of this proposal is to accelerate decarbonisation and strengthen Europe's net zero industries, Europe's overall industrial competitiveness must be addressed. Rising input, compliance, and labour costs together with the "new normal" in energy prices are threatening the overall competitiveness of European industry. If Europe is to deliver significant volumes of net zero manufacturing with the Union, this issue of European competitiveness needs to be addressed in parallel.

Further engagement with Ibec

We remain at the Department's disposal for further engagement on these issues as needed.

Yours sincerely,

Conor Minogue

Senior Executive, Energy and Climate Policy, Ibec

Irish Bioenergy Association (IrBEA)

Net-Zero Industry Act Consultation
Department of Enterprise, Trade and Employment

By email
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To: industrialpolicy@enterprise.gov.ie industrial.policy@enterprise.gov.ie

23rd May 2023

IrBEA Response to the Consultation on Net-Zero Industry Act

Dear Sir / Madam,

Thank you for the opportunity to contribute to this consultation on behalf of our members in the Irish Bioenergy Association (IrBEA). IrBEA as the representative organisation for the bioenergy sector on the island of Ireland, including biomass, biogas/biomethane, biofuels, biochar, woodfuels and energy crops, would like to highlight some observation regarding the net-zero industry act which is the subject of this consultation.

- IrBEA suggests that the eight strategic net-zero technologies are missing specific reference to the largest source of renewable energy globally being bioenergy.
- Two additional technologies should be added title "Sustainable bioenergy / solid biomass" and "Sustainable biofuels" to make ten technology options overall. Both above technologies are mainstream across Europe and globally.
- Solid biomass and sustainable biofuels in the form of biodiesel and ethanol currently making a large and significant contribution to decarbonisation in Ireland and across Europe and should be recognised in this act.
- We agree with the other technologies options and in particular the inclusion of biogas / biomethane and carbon capture and storage (CCS) technologies.

Pillar 1 - Setting enabling conditions

We agree with addressing the enabling conditions for the deployment of the technologies outlined. This should include streamlines planning permission, regulatory and permitting. It should also include reducing the administrative burden associated with state grants and incentives which encourage project development.

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irbea | irish bioenergy association

Pillar 2 – Accelerating CO_2 capture

Bioenergy is a key carbon capture and storage (CCS) technology. To make CCS technology a reality, IrBEA calls on the Minister and Irish Government to strongly encourage the European Commission to implement an EU-wide Contract for Difference of carbon dioxide captured and stored in non-ETS sectors. This CCS measure would be enough to assure that operators in the biomethane sector capture and store all the carbon dioxide that arises from their biomethane facilities. Biomethane with carbon capture results in energy that is not just zero-emissions but strongly negative in terms of emissions. It would also stimulate carbon capture in Ireland's other fermentation sectors (distilleries, breweries, pharmaceutical fermentation). The total carbon storage opportunity in Ireland's fermentation industry is about a quarter of a million tonnes per year, rising to well over a half a million as biomethane develops. In Europe it is 20-40 million tonnes. The EU is slowly developing some carbon removal supporting legislation but there is absolutely nothing being done to make carbon capture economically viable in non-ETS sectors such as fermentation.

Pillar 3 – Facilitating access to markets

The public sector and authorities should lead by example on net-zero technology deployment. We have seen in recent years numerous examples of public tenders publish which replace fossil fuel appliances with another fossil fuel appliance. The public sector and authorities should lead the transition away from fossil fuels to net zero technologies. Policy certainty is also a key consideration to give market certainty. An example of this is the requirement for the Government biomethane strategy to be completed and implemented as quickly as possible and the necessary supports and incentives be introduced to give market certainty and encourage investment.

Pillar 4 – Enhanced skills

Skills are crucial for the roll out of new technologies. This includes encouraging new skills into the workforce and upskilling the existing workforce regarding the deployment of new technology

Pillar 5 – Fostering innovation

A flexible approach regarding regulatory conditions for a limited period is an option to foster innovation however some controls would have to be implemented during this time.

Pillar 6 – A net-zero Europe Platform

Some of the net-zero technologies are already mainstream and being rolled out across Europe. Ireland can learn from the experiences of rollout of these technologies in other EU countries and the platform could be used as a mechanism for sharing this information and knowledge.

Pillar 7 – Building industry partnerships

These partnerships would be beneficials once they involve a broad range of stakeholders who can share their learnings and experiences.

We look forward to a continued engagement with the Department of Enterprise, Trade and Employment on the items raised in our response. Thank you.

Yours sincerely,

Seán Finan

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Chief Executive Officer
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Mercury Renewables

Mercury Renewables' Consultation on the Net-Zero Industry Act Response

Introduction

Mercury Renewables ("Mercury") welcomes the opportunity to contribute to the Department of Enterprise, Trade and Employment's (the "Department") public consultation on the Net-Zero Industry Act ("NZIA").

Mercury has been developing an onshore wind farm in Co. Mayo for over a decade. In December 2021, we launched our intention to produce green hydrogen in the West of Ireland to advance the local economy and contribute to Ireland's net-zero carbon emission targets.

Mercury notes Ireland's legally binding net-zero targets, as set out under the *Climate Action and Low Carbon Development (Amendments) Act 2021*.[1] This landmark legislation provides for the annual publication of a national Climate Action Plan, setting out a clear framework and roadmap of the actions required to achieve these climate targets. We know that a substantial increase in the State's green hydrogen production capacity can play a meaningful role in meeting our obligations.

The European Commission recognised the importance of a cohesive net-zero manufacturing strategy in its *Proposal for a Regulation* document.[2] Therefore, to assist member states in reaching their climate obligations, the EU's proposal has put forth a common framework of measures to strengthen the bloc's capacity to produce and manage its net-zero technology requirements.

The Commission's proposal has not occurred in a vacuum. Rather, the NZIA was developed in a geopolitical environment that markedly different from December 2019, when the EU first announced its Green Deal. Several factors have prompted the bloc to adopt a net-zero industrial policy, which sets the EU's economic development priorities for the next decade. Vulnerabilities in EU supply chains were dramatically exposed early in the Covid-19 pandemic, and the Russian invasion of Ukraine exposed a similar reliance, but this time on imported energy from Russia. The continent has faced surging fuel prices and a closely linked cost-of-living crisis which convinced European lawmakers that prioritising energy independence must be a strategic priority in an increasingly unstable global economy.

[1] https://www.irishstatutebook.ie/eli/2021/act/32/enacted/en/
[2] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52023PC0161

Cognisant of this new and more urgent context, Mercury recommends that the Department takes full advantage of the EU's novel emphasis on increasing energy independence. Not only do Ireland's natural assets leave it remarkably well-placed to punch above its weight and lead the EU's transition to a more secure energy market, but we can do so with the resources of the world's wealthiest bloc fully behind us. This unique opportunity makes Ireland's renewable energy potential the envy of the world.

Priorities for Mercury Renewables:

Enhancing skills

Building industrial partnerships

1. Enhancing skills

Central to Mercury's mission and a constant feature of our engagement with the community in the West of Ireland has been a commitment to supporting the local population's skill development. To create a workforce capable of cementing Ireland's future status as a global leader in renewable energy production, the NZIA must be rolled out in a manner that meaningfully supports the cultivation of skilled labour within the regions hosting Irish renewable energy projects.

Green skill development will not only align Ireland with EU climate and skills policies, but will also contribute to meeting our own national climate commitments. Currently, Ireland is faced with an urgent green skills deficit that could hamper our ability to meet our climate targets. This renewable energy skills gap was evident in the Department's *Skills for Zero Carbon* report,[3] which was produced by its expert group on future skills. The report assessed precisely how many people, and what types of jobs, would be required to meet our renewable energy, retrofitting and electric vehicle commitments by 2030. It was estimated that by the end of 2030, an additional 552 wind-turbine technicians and over 1,300 crewmen and officers will be required for ships serving off-shore wind farms alone. The report also estimates that more than 1,700 electrical engineers, over 100 ecologists, and various other green-skilled workers will be needed if the State hopes to meet its 2021 commitments. Many of these labour

[3] https://enterprise.gov.ie/en/publications/publication-files/skills-for-zero-carbon.pdf

gaps will be filled through apprenticeships that train a new generation capable of supporting Ireland's future renewable energy needs.

Mercury therefore welcomes schemes like Wind Energy Ireland's Greentech Skillnet training programme, which puts jobseekers with suitable backgrounds through an intensive one-month training programme and industry work placement. While 30 turbine technicians were put through the programme in 2022, this rate of training will fall short of the 552 wind turbine technicians required by 2030. Other relevant schemes welcomed by Mercury include the recently launched 'One More Job' programme, and we wish to emphasise the critical role that apprenticeships will play in Ireland reaching its net-zero obligations, as stated in the national *Action Plan for Apprenticeships 2021-2025*.[4] A significant scale-up of renewable energy sector apprenticeships under the NZIA is something Mercury strongly encourage. We emphasise that these programmes should be rolled out on a countrywide basis, in order to ensure that all regions – particularly those with significant renewable energy potential – have the necessary skillsets to contribute to Ireland's national targets. Mercury's plans for enhancing skills also converge with the Department's regional strategic objectives outlined in its *West Regional Enterprise Plan to 2024*.[5] The plan's skill enhancement goals seek to develop synergies in the local renewable energy economy, and to create a world-leading local labour force that acts as a magnet for further green energy investment, both international and domestic. Mercury intends to contribute to that, and wishes to highlight the potential role that the NZIA can play in realising these objectives.

2. Building industrial partnerships

The NZIA recognises that building industrial partnerships is essential for compliance with our climate targets. Mercury is encouraged by a number of initiatives that are already underway domestically.

Mercury welcomes the fact that Irish Rail is currently examining the potential role that green hydrogen can play in fuelling certain of its services. Given the developed rail networks of the West, this geographic region appears to offer a unique opportunity for trialling green hydrogen in rail transport. Indeed, the Ballina to Manulla Junction rail route is of similar length to a regional route in Canada that trialled green hydrogen in rail transport. Mercury is keen to engage with the Department, Irish Rail and other

[4] https://www.gov.ie/pdf/?file=https://assets.gov.ie/132640/00c012f4-531c-4578-b8bb-179db4351939.pdf#page=null
[5] https://www.gov.ie/pdf/?file=https://assets.gov.ie/217902/00ffbdee-db33-4192-9c86-b1674adc34a8.pdf#page=null

interested stakeholders to establish how Mercury can be of assistance in developing the strategy for such a pilot programme in Ireland.

Mercury notes Hydrogen Mobility Ireland's response to the Consultation on the National Hydrogen Strategy, where it described hydrogen as a "strong contender for decarbonising non-road mobile machinery".[6] Mercury submits that there is huge potential for the use of green hydrogen in non-road mobility such as plant and agricultural machinery, provided that the appropriate policy incentives are put in place to encourage the transition to renewable energy. In considering whether to expand the RTFO to include NRMM, the views of all affected stakeholders should be taken into account. To this end, Mercury calls for the establishment of a cross-departmental working group including the Department of Transport, the Department of Enterprise, Trade and Employment, and the Department of Agriculture, Food and the Marine to examine the role of hydrogen in NRMM.

The submission of hydrogen plane producer ZeroAvia to the same Consultation on the National Hydrogen Strategy further highlights the potential for creating industrial partnerships in the renewable energy sphere. ZeroAvia highlighted that Irish airports could be well adapted to the use of direct hydrogen before long. The submission further stated that "[a]s hydrogen is established as a fuel source for a significant proportion of a medium to larger airport's flight services, the growing scale of electrolysis that would be required to meet this demand may necessitate alignment with regional-scale hydrogen production clusters", indicating that this could be facilitated "by connecting the airport environment to a regional-scale electrolysis facility through a pipeline transmission network".[7] Mercury is committed to working in collaboration with partners across industry and the Department to play its part in ensuring that the necessary capabilities are in place as soon as is practicable. Mercury submits that expediting the widespread use of renewable fuels in aviation is of paramount importance, given the continued growth of the Irish aviation market, and the likelihood that this sector will be considered in our RED III transport targets for 2030.

Conclusion

In summary, Mercury Renewables:

- Calls for the enhancement of renewable energy apprenticeships under the NZIA;

[6] Gavin & Doherty Geosolutions. Hydrogen consultation: Summary report, Appendix A. Summary of Hydrogen Consultation Responses by Question. https://www.gov.ie/pdf/?file=https://assets.gov.ie/255434/58da6e22-d642-4fae-b13e-4e161ecb62f8.pdf#page=null

[7] Gavin & Doherty Geosolutions. Hydrogen consultation: Summary report, Appendix A. Summary of Hydrogen Consultation Responses by Question. https://www.gov.ie/pdf/?file=https://assets.gov.ie/255434/58da6e22-d642-4fae-b13e-4e161ecb62f8.pdf#page=null

- Remains willing to engage with the Department and any other relevant stakeholders in the roll out of a green hydrogen in the rail and aviation sectors;
- Calls for green hydrogen to be rolled out within the construction and agriculture sectors;
- Calls for the establishment of a cross-department working group to examine the rollout of hydrogen in non-road mobile machinery.

Mercury Renewables wishes to thank the Department for the opportunity to contribute to this timely public consultation – and looks forward to the Department's future report. In addition, Mercury looks forward to the imminent publication of Ireland's National Hydrogen Strategy.

Tim Bills-Everett

Mercury Renewables

RWE Renewables Ireland Ltd

RWE

BY EMAIL ONLY
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Department of Enterprise, Trade, & Employment

Org-unit

Our ref.
Contact Peter Lefroy
Email Peter.Lefroy@rwe.com

Dún Laoghaire, 23/05/2023

Dear Sir / Dear Madam,

Re – Public Consultation on the Net Zero Industry Act

Thank you for providing us with the opportunity to provide some comments on the consultation. RWE is a leading global energy player, with a 38 GW global generating capacity and 18,200 employees worldwide. RWE is one of the world's leading renewable energy companies, and the second largest global offshore wind developer for both fixed and floating offshore projects.

RWE has been active in the Irish market since 2016 with two offices, one in Kilkenny and one in Dún Laoghaire. We have two operational battery storage projects in Ireland, an operational onshore windfarm and a strong and battery storage and onshore wind sites across Ireland. We are delighted to have been provisionally successful in the recent ORESS1 offshore wind auction and look forward to the publication of the final auction results in June for our Dublin Array project. We are also developing a Phase 2 offshore wind farm on the South Coast and further projects anticipated to take part in subsequent offshore development rounds planned in the coming years, We welcome recent policy proposals regarding the second ORESS auction.

Please note that we are focusing our response to the areas covered by **Pillar 3, Market Access** and in particular the potential for **Qualitative (Non-Price) Criteria** to be considered.

In order to achieve positive effects on renewable energy supply chains and the project development, any future qualitative auction criteria need to be **carefully selected and well-designed. They need to be transparent, objective, differentiable and target oriented.**

The four criteria proposed by the EU Commission in Art. 19 (2) – **environmental sustainability, innovation, energy system integration and resilience contribution** –represent a good starting point but need to be reflected on in detail and further defined.

We would strongly underline the need to ensure **any qualitative criteria are considered on a technology specific basis,** as renewable energy technologies significantly differ in their

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characteristics, particularly related to the supply chains involved and the impacts on land use, stakeholders, and other societal targets. **Therefore, qualitative criteria need to be selected, designed, and implemented in a way which adequately address the technology-specific characteristics and challenges.**

RWE's recommendation would be to focus on the subsequent qualitative criteria for competitive bidding processes in solar PV, onshore and offshore wind energy auctions in general, which benefit wider societal targets and also renewable energy supply chains and project development, noting of course that any qualitative criteria must be clearly defined and targeted.

1. **Environmental sustainability** criteria in general and in particular measures to boost positive environmental impacts and to improve recycling and circularity, as this contributes to the EU's biodiversity protection, nature restoration and circularity objectives which RWE strongly supports.
2. Certain **social sustainability** criteria, particularly community engagement and citizens participation, as they allow local communities to directly benefit from the energy transition and thereby, increase the public acceptance of renewable energy projects.
3. Certain **energy system integration** criteria, particularly co-location with storage, as this contributes to the stability of the energy system by balancing the volatile electricity generation of renewable energy power plants.
4. **Financial and technical capabilities for avoiding unreliable or speculative bidders** and thereby, increasing the realisation probability of renewable energy projects.

While these criteria are generally well-suited for both solar PV and wind energy auctions, it is important to consider technology-specific differences when it comes to the concrete design of the criteria – and there should not be a *"one-size-fits all"* approach, particularly in auctions with competing technologies.

However, we note there are **qualitative criteria which are not suitable** for competitive bidding and should instead be considered within the **Pre-qualification stage**. This is particularly important in the context of the developing Irish Offshore industry (for Phase 2 projects and beyond), given the early stage of the market and the urgent need to ensure the 2030 targets can delivered and in a fair and equitable manner coupled with the long lead times associated with delivery large offshore projects. In this regard it is important to sure that the design of any qualitative criteria to be used at the prequalification stage focuses on the necessary competences required to deliver and longer-term commitments, rather than a short-term investment horizon to ensure the benefits to Ireland and the EU's supply chains can be delivered.

With regards to **Pillar 4, Enhancing Skills,** we support the need to ensure the availability of a skilled workforce for current and future requirements of net zero industries within the EU, **and** that this will be best achieved through the joint efforts and working with industry, social partners, education, and training providers. As an example, in the UK RWE Renewables developed a national apprenticeship hub at Coleg Llandrillo in Wales where it has already successfully trained over 30 apprentices. RWE is committed to attracting and developing the next generation of green energy professionals with high quality training and long-term, skilled roles for the future and has launched an apprenticeship hub. The programmes available last between two

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to four years, providing trainees with an in-depth understanding of the technical and practical skills required to work in the power and energy industry.

In addition to our apprenticeship program, RWE offers engineering undergraduates the opportunity to participate in the IET's Power Academy, providing undergraduates with an understanding of the technical, practical and soft skills needed to be an engineer of the future. Scholars are mentored throughout the programme by experienced power industry professionals, who are able to provide invaluable guidance on the industry, the company and career advice. RWE also has an extensive graduate programme, operating globally across multiple disciplines.

If you have any questions regarding the above, please contact me or our Regulatory Affairs colleague Kate Garth (her email address is kate.garth@rwe.com).

Yours sincerely

Peter Lefroy
Director, Offshore Development Ireland

Research Lecturer - UCC

I am writing to you in order to express my support on Pillar 2 –Accelerating CO2 capture.

I am the only female academic in Ireland working in the area of Carbon Capture and Direct Air Capture and I have been highlighting the importance of carbon capture for Ireland since 2016.

Please find the link to my RTE brainstorm article about Carbon Capture:

https://www.rte.ie/brainstorm/2023/0413/1376589-7-things-you-should-know-about-carbon-capture/

I am attaching a link to one of my publications in relation to the importance of Direct Air Capture for Ireland:

https://www.sciencedirect.com/science/article/pii/S2352484722016389

I am more than happy to discuss with you how Carbon Capture could be implemented effectively in Ireland.

Kind regards,

Elena

Dr. Elena Tsalaporta BE ME PhD

Lecturer and Principal Investigator

Director of the Sustainability Summer School & Chair of the SoE Internationalization Committee

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