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Department for Communications, Energy and Natural Resources,
29-31 Adelaide Road,
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22 April 2016

By email to Renewableelectricityconsultation@dcenr.gov.ie

Re: Invitation to Submit Views on the Renewable Electricity Policy and Development Framework

Dear Sir/Madam,

The Irish Wind Energy Association (IWEA) is Ireland's leading renewable energy representative body and as such has an active interest in the potential for renewable energy, and in particular wind energy, in Ireland. IWEA feels it is important to make a submission to the Department for Communications, Energy and Natural Resources (DCENR) consultation on the development of Ireland's Renewable Electricity Policy and Development Framework and to contribute actively towards future strategy.

IWEA warmly welcomes the primary goal of the Renewable Electricity Policy and Development Framework Draft SEA Scoping Report to optimise Ireland's opportunity to develop renewable electricity on land at significant scale, to serve both the All Island Single Electricity Market and any future regional market within the European Union, in accordance with European and Irish law, including *Directive 2009/28/EC: "On the promotion of the use of energy from renewable resources"*.

IWEA has consistently supported the need for a clear strategic and plan-led approach to our low carbon transition. We believe that the development of a Policy and Development Framework for renewable electricity generation on land, with particular focus on large scale projects for indigenous renewable electricity generation, can contribute to the existing frameworks, and IWEA welcomes that this report aims to provide additional guidance and clarity for planning authorities and An Bord Pleanála.

IWEA is firmly of the view that Irish wind energy as our leading renewable energy asset can, alongside other Irish renewables, make a continued valuable contribution to Ireland's national transition agenda, as set out in the recent Energy White Paper and deliver a cost effective renewable option for Ireland's homes, communities and businesses.

We very much welcome this opportunity to make a submission and look forward to engaging constructively with you in the future as this proceeds.

Yours sincerely,

**sent by email, bears no signature*

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Brian Dawson,
Head of Communications
Irish Wind Energy Association

Introduction

In recent years Ireland has become heavily dependent on the importation of fossil fuels in order to meet its energy needs, with imported fossil fuels accounting for over 85% of electricity generation in Ireland. This high dependency on foreign energy imports is unsustainable, costly with over €15.6m per day being spent on energy imports and leaves Ireland vulnerable both in terms of meeting future electricity needs and ensuring price stability. Accordingly, the Department for Communications, Energy and Natural Resources' (DCENR) energy policy has been moving progressively towards greater levels of self-sufficiency, with renewable energy being a key focus in the Government's Energy White Paper[1].

The White Paper states that renewable energy sources (wind, hydro, landfill gas, biomass and biogas) accounted for almost 23% of Ireland's electricity consumption in 2014; over halfway to our 40% 2020 target. In the same year, wind generation accounted for 18.2% of electricity generated and represented the second largest source of electricity generation after natural gas. Provisional SEAI figures for 2015 show that wind provided over 20% of electricity generation.

According to the most recent EirGrid Generation Capacity Statement, the 2020 target of 40% RES-E has risen and will now most likely require between 3,800-4,100 MW of onshore renewables generation capacity[2]. As of March 2016, there was 2,436 MW of wind energy connected and EirGrid have stated, therefore, in order to achieve this target, the average rate of build of onshore wind generation will need to increase to 300 MW per year.

IWEA acknowledges that while the focus of this framework is on large scale wind energy development, both large and small-scale wind energy projects, both on- and offshore, will be vital to our future renewable energy mix. IWEA understands that the current sub 50 MW wind energy development process will be and should be maintained as these projects will continue to play an important role meeting our renewable electricity targets.

Meeting Ireland's future needs with Renewable Energy in a Sustainable Manner

IWEA strongly agrees with the central driver for this framework, that, in order for Ireland to meet its future renewable electricity needs in a sustainable manner, and in compliance with environmental, heritage, landscape and amenity considerations, it is necessary to put key enablers such as the Renewable Electricity Policy and Development Framework in place. IWEA welcomes that this report proposes that the framework "*will contribute toward meeting Ireland's future energy needs, particularly up to 2030 and beyond, as informed by national and European policy*".

[1] http://www.dcenr.gov.ie/energy/SiteCollectionDocuments/Energy-Initiatives/Energy%20White%20Paper%20-%20Dec%202015.pdf

[2] http://www.eirgridgroup.com/site-files/library/EirGrid/Generation_Capacity_Statement_20162025_FINAL.pdf

Climate change continues to be one of the most serious global environmental challenges. Low-carbon, renewable electricity production is one of the most cost-effective methods of reducing greenhouse gases across the Energy sector, as well as providing the possibility of contributing additionally to the meeting of targets in Heating and Transport Sectors. IWEA would urge the DCENR to continue to pursue a reduction in national greenhouse gas emissions in line with our European and international obligations under COP21. We would ask that future policy development, including this Renewable Electricity Policy and Development Framework underpins the transition to a low carbon energy system, a low emissions economy and a sustainable society, as outlined in the Energy White Paper.

We welcome that the international context of Ireland's low carbon work is being brought to the forefront of the Renewable Electricity Policy and Development Framework. With the 2020 EU Climate and Energy targets now on the horizon, the 2030 climate and energy policy under development, and the recent COP21 global agreement on Climate Change reached late last year in Paris, it is vital that action on sustainable energy is pursued more urgently than ever.

The global focus on sustainable energy brings with it vast economic and community opportunities for Ireland given the resource we have in terms of our wind, wave and other renewable capabilities. Given the appropriate development framework, Ireland has sufficient accessible onshore wind energy resource to meet and exceed our current renewable electricity target of 40% by 2020. In the longer term, Ireland has a landmass of around 90,000 square kilometres, and a sea area of around 10 times that size. Ireland's position at the Atlantic edge of the EU gives an almost unparalleled offshore energy resource, with suitable conditions which yield a great potential for the development of the full range of current offshore renewable energy technologies. Electrifying our energy requirement is therefore a logical route for Ireland.

The timeframe to 2020 is a crucial period around the need to focus on the delivery of EU 2020 Climate and Energy targets. The period to 2020, and beyond to 2030 and 2050 is aligned with a period of sustained global efforts to tackle climate change through responsible energy use. The Irish Government in late 2014, agreed to EU targets to 2030 which include a binding renewable energy target of "at least 27%" and a 40% cut in Green House Gas emissions. While the detail of these proposals must yet be confirmed through the EU's legislative process, Ireland must begin our planning beyond 2020 to ensure our level of climate ambition matches these 2030 goals.

The primary role of IWEA is to actively promote the use of renewable energy in Ireland, in particular, wind energy. On this basis, IWEA firmly supports the principles of this Renewable Electricity Policy and Development Framework Draft SEA Scoping Report which are to:

- maximise the sustainable use of renewable electricity resources in order to develop progressively more renewable electricity for the domestic and potential future export markets;
- assist the achievement of targets for renewable energy, enhance security of energy supply and foster economic growth and employment opportunities; and
- provide for appropriate community engagement and encourage new models thereof;

Q.1 Have all relevant energy policy considerations been described in Ch.2?

IWEA welcomes the focus within the document on the need to ensure that, as well as reducing emissions associated with generation, there needs to be a clear focus on enabling the incorporation of new technologies.

The recent DCENR policy publication, the White Paper - *Ireland's Transition to a Low Carbon Energy Future 2015 – 2030*, sets out a framework to guide Government policy and actions taken in the energy sector up to 2030. The paper accounts for climate change objectives and agreements on National, European and International levels. This policy direction will ensure Ireland has secure supplies of affordable and competitive energy as we move towards a low carbon energy system. IWEA believes that there should be clear consistency between the White Paper and this Policy Framework. IWEA notes the mention of the White Paper's publication in section 2.3 and commends the strong emphasis placed on the further development of the renewable energy sector in Ireland.

The 2030 climate and energy framework sets three key targets for the year 2030: At least 40% cuts in greenhouse gas emissions (from 1990 levels), at least 27% share for renewable energy; and at least 27% improvement in energy efficiency. The framework, which was adopted in October 2014, builds on the 2020 climate and energy package. It is also in line with the longer term perspective set out in the Roadmap for moving to a competitive low carbon economy in 2050, the Energy Roadmap 2050 and the Transport White Paper[3].

IWEA would recommend the inclusion, within the report, of the COP 21 agreements made in Paris last year, which mark a significant step for Ireland in our move towards a low carbon economy and in reaching our EU targets.

IWEA supports that Irish policy remains clearly in line with the EU Renewable Energy Directives and EU Environmental Directives; however, IWEA would request that clarity is provided on the policy objectives and the interactions between the different Directives, at a European level.

IWEA commends the publication of the Offshore Renewable Energy Development Plan (OREDP). In section 2.3.1, a roadmap is set out for the long term sustainable development of Ireland's offshore resource to develop a diverse portfolio of offshore renewable energy in Irish Waters. As outlined in the report, "*Our offshore wind resource will be developed as an export opportunity to UK and North West Europe, provided this is economically beneficial to the state.*" The focus on developing offshore wind energy as a potential export resource for Ireland is in line with Ireland's efforts to attain security of supply and energy independence and IWEA is in support of this at the current time, however we consider that the benefits of offshore wind for domestic use should also be considered as it becomes more cost competitive. It should be noted that section 2.4 on *Security of Supply* has been revised, to a situation where by the end of 2014, Ireland relied on 85% imported energy, 97% of imports were fossil fuels, costing an estimated €5.7 billion[4]. We call for a holistic view of energy policy which looks at the full spectrum of resource availability both onshore and offshore.

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[3] http://ec.europa.eu/clima/policies/strategies/2030/index_en.htm

[4] http://www.seai.ie/Publications/Statistics_Publications/Energy_Security_in_Ireland/Energy-Security-in-Ireland-2015.pdf

Q.2 What is the best way to facilitate community engagement?

IWEA strongly supports meaningful engagement with local communities where developments are proposed. There is no singular 'best approach' to facilitating community engagement, considering that there are as many different types of communities as there are methods of engagement.

IWEA published a Report entitled "*Good Neighbour: IWEA Best Practice Principles in Community Commitment*"[5] in 2013. We believe that increasing community engagement in relation to wind and renewable energy projects is central to the efficient deployment and expansion of wind and renewable energy in Ireland, ensuring that the concerns of the local communities can be taken into account. The wind sector, with almost 25 years of experience of working with communities, has worked hard to ensure that an extensive community benefit serves those living close to an onshore wind farm. Local communities also benefit directly with rates and development contributions paid to local councils, and the communities hosting wind farms often benefit directly from community commitments which have been used for local causes such as sports club improvements, energy efficiency projects, and support for a wide variety of community initiatives.

The Wind Energy sector is constantly looking to new possibilities for direct engagement with communities and wind farms are opening their doors to the public and hosting free tours, such as Mount Lucas Wind Farm in County Offaly, which offers a range of community amenities including walking and cycling tracks. Through the month of June 2015 to celebrate Global Wind Day 2015, more than 2,000 people visited open Wind Farms around Ireland and through 2015 over 5,500 people visited wind farms to see for themselves wind energy in action. The need for safe and secure infrastructure means that where wind farms are being developed, local road and infrastructure are often improved at no cost to the community.

IWEA strongly supports the active positive engagement of wind developers with communities and promotes the following principles when planning the engagement strategy and preparing the associated literature. We have outlined the following principles in our *Good Neighbour* document.

- Developers will endeavour, where possible, to engage with host communities from an early stage.
- Developers should seek to understand the views of host communities and this should be done early enough to influence final design where possible.
- Engagement with the local community is recommended at each relevant stage of the project, e.g. early project stages, EIA and planning, construction, and operation.
- Wind Energy Developers should engage with communities with integrity, fairness and transparency.

IWEA is absolutely of the view that Community Engagement must be at the forefront of development, in the wind and other sectors. IWEA recommends that an open and transparent policy be adopted in the development of the National Renewable Electricity Policy and Development Framework. In this regard, IWEA agrees with the statement, that

[5] http://www.iwea.com/iweabestpracticeprinciplesinco

"*public and community acceptance are key to the timely development of strategic infrastructure*."

Q.3 Are there other important issues to be addressed by the proposed Policy and Development Framework as set out in Ch.3?

As a sector which is now almost 25 years old, wind energy in Ireland has been developing in parallel with the growing understanding and acknowledgement of the importance of climate issues, security of supply concerns, and Ireland's need to make a transition to a low carbon economy and power system. We are keen to bring this work and experience to the Renewable Electricity Policy and Development Framework.

Section 3 discusses the framework goal, to "*optimise the opportunities in Ireland for renewable electricity generation development on land at significant scale, to serve both the All Island Single Electricity Market and potential, future export markets*." The following areas are discussed: policy and development framework time horizon, geographic scope, planning, inventory, re-powering, grid access, community engagement and export policy. We would request that there would be a clear focus on ensuring cost effectiveness for the Irish consumer within the development of our renewable energy opportunities.

IWEA strongly agrees with the case made for Re-powering in section 3.5. Re-powering will be a significant issue as the Irish renewable generation fleet ages. The advantages of re-powering are clear: as windfarms can re-power, significantly improve efficiency, produce more power and use more cost effective, advanced technology. Neighbours of longstanding wind farms often have a positive view of replacing turbines with more efficient modern versions. The re-power opportunity for Ireland should be embraced and Ireland can learn from the Danish experience of repowering, as cited in the Draft Development Framework.

Life extension of wind farms is also something that merits consideration in the Framework. Typically, wind farms have an assumed life span of over 20 years, and may have requirements to decommission under their planning approval. Due to advances in technology, in many cases now it is expected that projects are still able to generate renewable electricity beyond this if an extension was to be granted, without the need to repower. The benefits of life extension would include the potential for cost savings and a reduction in environmental impacts.

A key area which IWEA would urge the DCENR to focus on, is maintaining competitiveness. With Ireland now progressing towards economic recovery, the issue of economic value and securing the most cost effective solutions to our low carbon transition is vital for business and energy citizens. Within the electricity generation sector, wind energy is proven to deliver the most cost effective renewable electricity for Ireland. This point has been acknowledged by the European Commission in the European Commission publication *A policy framework for climate and energy in the period from 2020 to 2030*[6] and by Government within the recent the Energy White paper[7].

[6] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52014DC0015

[7] http://www.dcenr.gov.ie/energy/SiteCollectionDocuments/Energy-Initiatives/Energy%20White%20Paper%20-%20Dec%202015.pdf

The ongoing integration of wind energy onto the Irish grid is assisting in reducing the amount of fossil fuel generation used to produce electricity, which is reducing the wholesale cost of electricity. Provisional EirGrid statistics have shown that by the end of 2015, 24% of total electricity demand in Ireland had been met by wind energy. A further electricity market report carried out by Vayu showed that the average wholesale price of electricity in the Irish market for 2015 was down 9.4% from the average price recorded in 2014, with strong wind generation identified as a key factor[8].

The Value of Wind Energy to Ireland[9] study was published in March 2014 by Pöyry, a leading international consulting and engineering consultancy, and Cambridge Econometrics. The analysis shows that if Ireland deploys wind capacity to meet 2020 targets, the wholesale price will fall by €2.10/MWh by 2020 and states that wind energy does not place a burden on the Irish consumer due to the net economic benefits of wind energy development. The European Commission confirmed in its Working Document on Energy Prices and Costs[10] that "*for wind electricity in Spain and Ireland the benefits for electricity consumers in terms of reduction in whole-sale prices outweigh the costs of subsidies."* Furthermore, the 2014 Pöyry report showed that if Ireland meets its 2020 targets using wind energy this will bring €3.5 billion of direct investment into the economy, contribute considerably to economic growth and provide at least €1.8bn additional cumulative tax revenue to the Irish State.

IWEA is clear that in order to achieve these goals there must be stability and consistency in the supporting legal, regulatory, consenting and environmental policy areas. This policy stability is vital to drive investor confidence and to support inward investment in the technologies necessary for Ireland's electricity generation sector to further develop our low carbon credentials.

The section 3.2 '*Geographic Scope'*, states that "*The land area of the State is proposed as the initial study area for the Renewable Electricity Policy and Development Framework."* IWEA requests clarity on the definition of the 'land area of the State', in terms of what is included in the study area, given the reference to offshore wind within the document.

Q.4 Are there other appropriate renewable energy technologies not included in Ch.5?

IWEA commends the extensive listing of renewable energy technologies as set out in Chapter 5. We fully agree that a diverse portfolio of renewable energy technologies will be critical to meeting our country's future energy needs. IWEA suggests that the report also features the wide range of storage technologies, such as battery storage, Compressed Air Energy Storage (CAES), Hydrogen storage, and Flywheel energy storage, among many others, as energy storage technology is a key enabler of renewable energy.

In order to maximise efficient use of the electricity grid and of other valuable resources, it is furthermore important to consider the issue of co-location. Examples of this might include

[8] http://vayu.ie/2015-vayu-annual-energy-report-23-drop-in-irish-wholesale-gas-prices-in-q4-2015-compared-with-last-year/

[9] http://www.iwea.com/index.cfm/page/industryreports?twfId=1467&download=true

[10] http://register.consilium.europa.eu/doc/srv?l=EN&t=PDF&f=ST+5599+2014+ADD+6+REV+1

the co-location of wind and solar energy developments on the same site. Additionally, storage facilities could also be installed on the same site as wind and solar developments.

There is massive potential for offshore renewable energy in Ireland, despite the many challenges. While we acknowledge that onshore wind is the most cost effective renewable technology, consideration should be given to developing the offshore resource. There is already a solid foundation of knowledge built up in Germany, United Kingdom, Netherlands, Sweden[11] and other parts of the world. It would make sense, therefore, to share this knowledge and experience collectively, in order to furthering our evolution of offshore renewable energy technology, in order to reduce the cost.

Q.5 Are there other significant baseline data sources not mentioned in Ch.6?

The report provides a comprehensive overview of the environmental baseline data which will inform the environmental assessment of the Renewable Electricity Policy and Development Framework. IWEA applauds the comprehensive inclusion of key aspects ranging from the biodiversity, flora and fauna and the associated Habitats Directive, National Parks and Reserves, to Geology, Water, Air and Climate, Human Health, Grid, Cultural Heritage and other factors.

IWEA would highlight the section on Population and Human Health. There has been world-wide study and many peer-reviewed articles published on the subject of human health and wind turbines, which have shown that wind energy is not harmful to health. To date 25 individual studies have been collated by Professor Chapman, School of Public Health at Sydney University Medical School[12]; these include studies by Australian, UK, US and Canadian Health authorities, among others, which come to this same broad conclusion.

IWEA welcomes the proposal that the SEA will examine the potential impacts of renewable electricity generation on air quality (s.6.6.1). IWEA recommends that the DCENR emphasises the benefits of wind energy to human health in the report, showing how wind energy is working to reduce harmful air emissions. In this regard we would also point to a 2015 study from Harvard University and published in the Journal *Nature*[13] which showed that wind farms actually benefit public health through lower levels of emissions into the local environment, and are actually saving lives through ensuring the air we breathe is cleaner.

In relation to section 6.6 on Air and Climate, IWEA would draw attention to the statement which reads, "*Noise is transmitted through the air. The SEA will have regard to the Wind Energy Development Guidelines in relation to noise emissions from wind farms."* IWEA cautions the phrasing of this sentence and would recommend the re-wording of this sentence as to use the word "sound" instead of "noise". It is our understanding that noise would not be considered as an air quality issue.

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[11] http://www.ewea.org/fileadmin/files/library/publications/statistics/EWEA-European-Offshore-Statistics-2015.pdf

[12] http://ses.library.usyd.edu.au/handle/2123/10559

[13] http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate2771.html

Q.6 In addition to those cited in Ch.7 and Appendix I of this Draft SEA Scoping Report, are there other plans and programmes which will significantly interact with the proposed Renewable Electricity Policy and Development Framework?

The Energy White Paper, as mentioned in the Report, has set out a policy roadmap and will interact directly with the framework. It is essential that this framework is developed in the context of the White Paper and EU mandated renewable energy targets.

Q.7 Are there particular alternatives you would suggest for examination per Ch.8?

Section 8.2 *Strategic Choices Scenarios* has identified some strategic draft alternatives, including alternative locations and methodologies. IWEA requests further clarity on where the alternative locations are sited.

When the area under consideration is the land of the State, clarification is required as to what alternatives could be considered, for example, is consideration being given to developing wind energy offshore, alternative technologies or the "do nothing" scenario which would involve significant fines or costs associated with not meeting our renewable energy targets domestically?

Additional Considerations

As the vast majority of new renewable capacity will be provided by on-shore wind, the 40% target is a significant challenge for the Irish wind industry as a whole. Ireland's current total installed wind capacity is 2,436 MW, generated from over 200 wind farms and with the capacity to supply electricity to over 2 million homes[14]. There are also associated positive economic impacts from the use of wind and renewable energy in Ireland.

The requirement for large scale data storage is growing year on year and data centres will be at the core of the 21st century economy. Given their considerable electricity consumption, internet giants, such as Facebook, Apple, Amazon, Intel, are increasingly looking to power their data centres using clean and renewable power sources, which constitutes a massive opportunity for Ireland, which has clean wind energy in abundance. 2015 saw investments totalling over €1bn from Facebook and Apple in 100% renewable powered data centres, which are premised on the availability of Irish renewable energy.

The further increased electrification of heat and transport are both key necessary developments for the next period. With this in mind and in line with the EU roadmap, we would further call for a key focus to be the electrification of heating and transport. By electrification of heating, cooling and transport, for example through employing highly efficient heat pumps and electric vehicles, Ireland's primary energy requirement may be reduced while at the same time enabling increased use of renewables in our energy mix.

The growth of Irish renewable energy will see the need for our planning system to be properly resourced and supported. IWEA is clear that along with a necessary consistency of policy environment, that further support should be provided to Local Authorities in

[14] http://www.iwea.com/_windenergy_onshore

developing strategic approaches to fulfilling their renewable energy potential, and this should be done in line with the Methodology for Local Authority Renewable Energy Strategies (LARES) as developed by the Sustainable Energy Authority of Ireland (SEAI). The REPDF should facilitate the local authorities in this regard.

The report mentions the importance of the integration of renewable energy into current and future European markets. IWEA feels it is important to ensure that the costs are reduced where possible to ensure that wind can continue to be increasingly cost competitive in energy markets, and to drive down electricity prices.

The successful delivery of a follow-on support scheme to REFIT for renewable electricity is another key area which will interact directly with this proposed framework.

IWEA agrees that the Grid 25 Strategy, as mentioned in the Environment and Planning section of Appendix I, will directly interact with this proposed framework. The DS3 Programme, along with the innovative use of infrastructure, technology and operational practices will contribute the increased and more efficient use of renewable electricity and the reduction of curtailment. An important issue to consider is the rapid evolution of technology, and IWEA would caution against introducing specific rigid requirements which might hamper the introduction of new and improved technologies. We recommend a flexible approach is taken with respect to technology innovation.

It should be noted within the REPDF SEA that the sustainable expansion of the Irish wind and renewable energy sector will be an extremely positive economic development for Ireland and will result in greater energy security, job creation, lower energy prices and bring about a reduction of Green House Gas (GHG) emissions. Concurrently, we are likely to see a probable future which will require the necessity of a combination between sufficiency, efficiency and various forms of renewable technology.

While IWEA welcomes the proposed five-year review of this Framework (S. 1.2) to ensure it remains fit for purpose, we would stress the importance of enshrining the original commitments and policy objectives made with regard to wind energy in Ireland.

Conclusion

The International Panel on Climate Change has put forward its clear assessment that the window for action on climate change is rapidly closing and that renewable energy sources such as wind energy will have to grow from 30% of global electricity at present to 80% by 2050 if we are to limit global warming to below 2 degrees.

IWEA has confidence that with the vision and commitment of all Government bodies, and a joined-up strategy to deliver this, we will not only reach our 2030 decarbonisation targets but in doing so will create jobs, investment and future-proof our energy system. We must also keep a clear eye beyond 2020 as outlined within the Energy White Paper.

IWEA welcomes policies and objectives that explicitly illustrate our national move towards indigenous renewable energy, maintain a consistency of policy framework, work to ensure our indigenous energy security of supply, and develop collaborative initiatives which clearly

demonstrate and educate about how such a transition to a low carbon economy can continue to be moved forward.

We thank you again for the opportunity to contribute to the Renewable Electricity Policy and Development Framework and we look forward to further engagement on the subsequent consultations on the Framework.

IWEA would welcome an active engagement with the Department to discuss any aspect of our feedback and offer our positive contribution as the largest renewable energy representative body in Ireland to the work of the Department.