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Millennium Park,  
Naas,  
Co. Kildare.

National Adaptation Framework Public Consultation Climate,  
Policy Section,  
Department of the Environment, Community and Local Government,  
Custom House,  
Dublin 1, DO1 W6X0.

20<sup>th</sup> May, 2016

By email to [NationalAdaptationFramework@environ.ie](mailto:NationalAdaptationFramework@environ.ie)

**Re: Consultation on the Development of Ireland's First Statutory National Climate Change Adaptation Framework (NAF)**

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 works closely as a proactive stakeholder in the work of the Department of the Environment, Community and Local Government (DECLG) and so feels it is important to make a submission on the National Adaptation Framework.

This submission follows on from an earlier submission to the SEA Scoping Report for the National Mitigation Plan (NMP), dated 29<sup>th</sup> October 2015 and IWEA's July 29<sup>th</sup> (2015) submission to the Department on the Development of Ireland's First National Low Carbon Transition and Mitigation Plan.

IWEA warmly welcomes the development of a National Climate Change Adaptation Framework and 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 this national transition agenda and deliver a cost effective renewable option for Ireland's homes, communities and businesses.

We particularly support the clear acknowledgement that *"if mitigation activities succeed in limiting the rise in global temperatures, less adaptation will be needed to deal with the consequences of climate change."* This is clearly a welcome 'least regrets' approach.

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. Today we stand as Europe's fourth most energy import dependent EU Member State, behind only Luxembourg, Cyprus and Malta with an 85% energy import dependency, despite Ireland's abundant renewable energy resource.

This high dependency on foreign fossil fuel energy imports is unsustainable both in terms of its economic and environmental cost. Ireland is currently extremely vulnerable both in terms of meeting future electricity needs, ensuring a dramatic reduction in our emissions and ensuring price stability for the Irish electricity consumer.

Climate change continues to be one of the most serious global environmental challenges and one which will impact on Ireland, our land and our people. **IWEA is clear that the National Adaptation Framework must be ambitious and put in place clear goals and objectives to secure Ireland's adherence to the Paris Agreement and our role in keeping global average temperature "well below 2 degrees Celsius above pre-industrial levels."** In this regard we would propose that SMART (Specific, Measurable, Achievable, Relevant, Timely) metrics should be adopted.

IWEA considers it vital that the NAF sets a strong and ambitious tone from the start in terms of the long term and sustained measures necessary as part of transitioning to a climate resilient future in line with established Government policy as set out in the White Paper "Ireland's Transition to a Low Carbon Energy Future." Today, the focus is increasingly on how to continue social and economic development in the face of an already changing climate, we are clear that Irish wind and renewable energy can significantly contribute.

Low-carbon electricity production is one of the most cost-effective methods of reducing greenhouse gases across the Agri-Food, Transport and Energy sectors. IWEA would urge the newly established Department of Communications, Climate Change and Natural Resources to continue to pursue a reduction in national greenhouse gas emissions in line with our European and international obligations. We would ask that future policy development, including the NAF underpins the transition to a low carbon energy system, a low emissions economy and a sustainable society.

## Climate Education and Awareness Vital Components to Climate Adaptation

IWEA strongly believes that education and awareness measures must make up a key role of explaining and building support for both climate mitigation and adaptation within an Irish context. As highlighted within the Energy White Paper, **there is a need for a greater national conversation on the rationale and need for climate related adaptation and mitigation**, if we as a nation are to make a success of this. We do consider that there was little focus on this within the consultation document and a greater emphasis is needed on building societal support for measures.

Section 1.3 of the consultation document states:

*“Planned adaptation aims to take measures to counter current or expected climatic impacts within the context of ongoing and expected societal change. It is a deliberate decision taken due **to an awareness** that conditions have changed (reactive) or are about to change (anticipatory) and that action is required to return to, maintain, or achieve a desired state.”*

IWEA believes that there is still significant work to be done to ensure that there is actually a broader societal awareness of the impacts of climate change across our society.

A December 2015 survey of Irish people carried out by the Sustainable Energy Authority of Ireland (SEAI)<sup>1</sup> showed that just 49% of Irish people believe climate change is a serious problem. This means that we still have to convince half of the population of the seriousness of climate change. Tackling this challenge of public perception must be at the heart of the national approach to climate change adaptation and mitigation, if such actions not to be perceived as being imposed “top down.”

## Necessary Focus on Economic Considerations

IWEA welcomes the clear focus on economic considerations and also the opportunities which may be available to Ireland from transitioning to a climate resilient future.

### **Costs of Standing Still**

IWEA considers it vital that the NAF reflects at its core the serious costs and economic considerations of non-action on Climate Change, including potential fines. These fines in relation to our binding 2020 EU Renewable Energy targets could place a significant burden on the exchequer, which has been initially quantified by the Government as being in the range of €100 million to €150 million for each percentage point Ireland falls short of the 16% target.<sup>2</sup> We welcome the highlighting of the large and growing costs for Ireland from more intense winter storms and flooding, negative impacts on our land use and associated impacts on insurance. There is a clear role for climate change mitigation as part of the adaptation framework. **We need to be clear that not acting in climate change mitigation and adaptation is not a cost free exercise and therefore the cost of non-action needs to be considered fully.**

### **Economic Opportunities for Ireland**

The 5 year timeframe of the first NAF from 2017-2022, which will include the period 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 also matches a period of sustained global efforts to tackle climate change through responsible energy use.

This period of transition will provide clear opportunities for Ireland. We welcome the listing on page 9 of three areas of opportunity as set out below, however **IWEA would propose that added to this list would be a fourth opportunity – (4) Indigenous Renewables Sector.**

(1) Agriculture in short to medium term;

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<sup>1</sup> [http://www.seai.ie/News\\_Events/Press\\_Releases/2015/Only-half-of-citizens-convinced-that-climate-change-is-a-serious-problem.html](http://www.seai.ie/News_Events/Press_Releases/2015/Only-half-of-citizens-convinced-that-climate-change-is-a-serious-problem.html)

<sup>2</sup> <http://www.dcenr.gov.ie/energy/SiteCollectionDocuments/Renewable-Energy/Draft%20Bioenergy%20Plan.compressed.pdf>

- (2) Tourism (extension of season)
- (3) Industry (IT and Big Data Storage)

IWEA would also highlight, in line with point 3 above that Ireland's renewable energy policy is today providing a driver for inward Foreign Direct Investment, particularly among high tech energy intensive sectors.

2015 alone saw two significant announcements of Irish data centre investment by Facebook in Meath which will be powered 100% from Irish wind energy, and by Apple in Galway which will be powered 100% from Irish renewable energy. These two projects alone amount to over €1bn of combined investment with hundreds of associated jobs in construction and operation. Both companies located these data centres in Ireland in large part due to their corporate requirement to have access to indigenous renewable energy. Ireland must continue to be perceived as an attractive and competitive green economy as Climate Change and Sustainability is important in decisions made by investors.

A green economy must be seen as complementary to the goal of the Irish Government to rebalance the economy as it will create more wealth, economic opportunities and jobs through new investment. Programmes and policies provide greater certainty for investors, reducing risk and therefore the cost of capital, which drives cost-efficient investment for the benefit of industry and ultimately consumers. Therefore, an ambitious, yet achievable NAF will boost Ireland's economy from the development of clean technologies and low or zero carbon energy in a cost-efficient way; help Ireland exploit its abundant natural resources to become a world leader in renewable energy deployment; help Ireland reduce its use of key resources like energy and become less dependent on imports of oil and gas, reducing security of supply risks and improving sustainability and bringing health benefits through reduced air pollution.

The global focus on sustainable energy brings with it immense opportunities for Ireland given the resource we have in terms of our wind and other renewable capabilities. Ireland has sufficient accessible onshore wind energy resource to meet and also 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, at 900,000 square kilometres. Ireland's position at the Atlantic edge of the EU gives an almost unparalleled offshore energy resource, with suitable conditions available for the development of the full range of current offshore renewable energy technologies. Electrifying our energy requirement, including the electrification of heat and transport, is therefore a logical route for Ireland and one which will bring benefits to our climate change adaptation and mitigation efforts.

### **Resilience & resource efficiency**

There is today clear science showing increasing variations in our national climate, and the increasing threats of climatic extremes affecting Ireland. The transitioning of Ireland's energy system to one more diversified with indigenous wind energy and other diverse renewables, allows for greater resilience within our national electricity system. The transition to renewable energy means more decentralised and distributed generation capacity with less reliance on costly external energy imports which today account for 85% of Ireland's energy.

Water shortages in summer are acknowledged within the consultation draft (Section 1.4) as part of the range of increasingly likely climate change impacts for Ireland. In this context water

management and resource preservation in terms of food production, water supply and quality is likely to increasingly feature within Irish climate change adaptation.

It is important to note that electricity generation (primarily cooling water) uses the highest amount of water in the EU (44%)<sup>3</sup>. The EU's Water Framework Directive aims to integrate more efficient use of water into broader European policies and strategies on energy, transport, agriculture, fisheries, tourism and others (Directive 2000/60/EC of the European Parliament and of the Council).

In this regard, it is important to note that wind energy uses virtually no water in comparison to other forms of generation, and so is contributing to more efficient resource utilisation. Across Europe, wind energy avoided the use of 387 million cubic metres (mn m<sup>3</sup>) of water in 2012 - equivalent to the average annual household water use of almost 7 million EU citizens; In 2030 wind energy will avoid between 1.22bn m<sup>3</sup> and 1.57bn m<sup>3</sup> of water according to calculations based on the EC 2050 Energy Roadmap's projections and avoided costs of water use from increased wind energy deployment would amount to between €3.34bn and €4.30bn in the year 2030.

### **Cost competitiveness in renewable energy**

Ireland's national policy position on Climate Action and Low Carbon Development requires that objectives are achieved at least costs to the national economy and are cost effective.

As a sector which is now over 20 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 our Irish need to make a transition to a low carbon economy and power system. Throughout this period as global uptake of wind and renewable energy has grown the costs have fallen significantly.

In this context it is important to recognise the role of onshore wind energy as the most cost effective Irish renewable option today. The Value of Wind Energy to Ireland study<sup>4</sup> 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 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<sup>5</sup> 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.*"

A recent wholesale market report<sup>6</sup> based on provisional EirGrid statistics has shown that for 2015 wind energy has delivered almost a quarter (24%) of Ireland's electricity demand, and with that strong delivery of wind energy as a key factor the average wholesale price of electricity in the Irish market for 2015 was 5.12c/kWh – down 9.4% from the average price recorded in 2014. (This is in addition to a drop of 14% in 2014 compared with 2013.) The drop

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<sup>3</sup> [http://www.ewea.org/fileadmin/files/library/publications/reports/Saving\\_water\\_with\\_wind\\_energy.pdf](http://www.ewea.org/fileadmin/files/library/publications/reports/Saving_water_with_wind_energy.pdf)

<sup>4</sup> <http://www.iwea.com/index.cfm/page/industryreports?twfid=1467&download=true>

<sup>5</sup> <http://register.consilium.europa.eu/doc/srv?l=EN&t=PDF&f=ST+5599+2014+ADD+6+REV+1>

<sup>6</sup> <http://vayu.ie/2015-vayu-annual-energy-report-23-drop-in-irish-wholesale-gas-prices-in-q4-2015-compared-with-last-year/>

in prices is directly attributed by Energy Analysts to strong wind generation alongside lower prices for gas.

Energy Market analysts Vayu in their most recent monthly report for April 2016<sup>7</sup> state: *“increased wind energy now plays an ever more important role in meeting Ireland’s electricity demand, helping to drive down prices and reduce the country’s dependence on more expensive sources of energy...Wind energy has accounted for 19% of overall electricity generation so far during April, reaching a peak of 2,442 MW on the 1<sup>st</sup> of April when it met 58% of demand at the time. Some 11,037 gigawatt hours (GWh) of wind energy has been generated in Ireland since the start of the year, representing 24% of total electricity demand during this period.”*

Globally there is a clear acknowledgment of the significant role of renewable energy in ensuring cost savings in electricity as stated by the International Renewable Energy Agency (IRENA) in March 2016: *“Doubling global share of renewable energy by 2030 can save trillions. Savings would be up to 15 times higher than costs thanks to avoided expenditure on air pollution and climate change”*.<sup>8</sup>

The recent fall in oil prices has given some short-term respite from the cost of imports. But there is no certainty that prices will remain low or stable. It remains imperative, from both an economic and an environmental perspective, that we reduce our reliance on these imports, which in line also builds national security of supply and national resilience to external energy shocks.

As highlighted earlier, it is also clear that there are costs associated with non-compliance with EU 2020 renewable energy targets, which as has been set out already by the Irish Government, could impose a large burden on the exchequer. The costs of non-action are also expected to be large in terms of the impacts of climatic change.

It is clear that wind energy can play a strong role in the cost effective mitigation of climate change. We acknowledge that this is one piece of a wider framework, however the NAF should seek to maximise the benefits that can be achieved through increased electrification of the energy sector.

**IWEA calls for the positive experience, and future potential contribution of cost effective renewable generation for Irish onshore wind energy be highlighted within the NAF and the work of the Climate Change Advisory Council.**

## Ensuring Irish Leadership on Climate Action

As a nation, we have a long and proud history of punching above our weight. We’ve shown the world how a small country can be a leader on the global stage. And now we have the chance to do so again, but this opportunity has far reaching consequences for Ireland and the entire planet.

IWEA welcomes the focus within the discussion document of the need to ensure that, as well as reducing emissions associated with generation, that there needs to be a clear focus on enabling the incorporation of new technologies and lowering the cost of existing technologies. Ireland can be the global proving ground for new wave and tidal technologies, in the field of

<sup>7</sup> <http://vayu.ie/45-drop-in-irish-wholesale-gas-prices-for-april-compared-with-last-year/>

<sup>8</sup> [http://www.irena.org/News/Description.aspx?NTtype=A&mnu=cat&PriMenuID=16&CatID=84&News\\_ID=1443](http://www.irena.org/News/Description.aspx?NTtype=A&mnu=cat&PriMenuID=16&CatID=84&News_ID=1443)

energy storage and also we are already leading globally on the integration of renewables onto a small Island electricity grid. In terms of our R&D, Ireland is already leading on clean energy innovation and research.

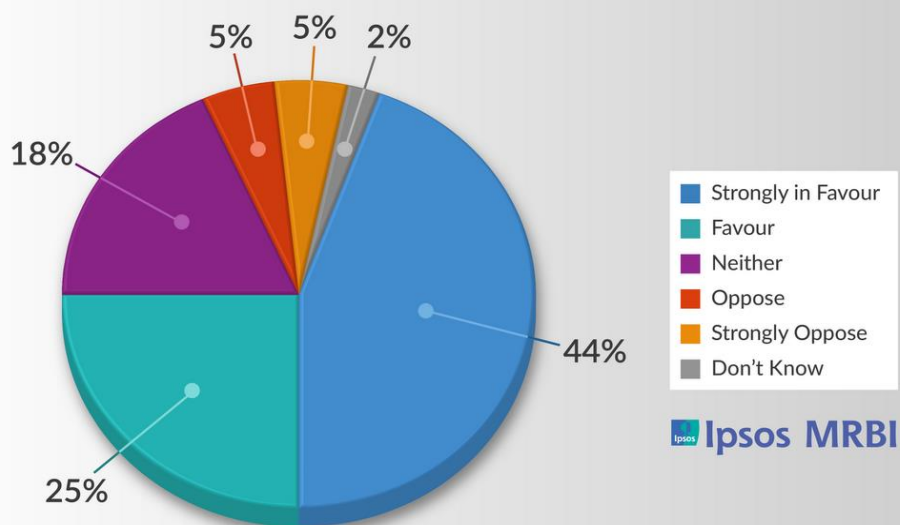
IWEA is clear that in order to achieve this focus there must be stability and consistency in the supporting legal, regulatory and environmental policy areas. This policy stability is vital to drive investor confidence and to support inward investment in the technologies necessary for Ireland's electricity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

The focus of the NAF as Ireland's first statutory strategy for the application of adaptation measures cannot be silo-ed purely within a single Government Department but must be mainstreamed across Government Departments and expert agencies such as the SEAI and EPA brought together under the National Adaptation Steering Committee.

### **Irish public support for home grown wind energy and renewable energy remains high**

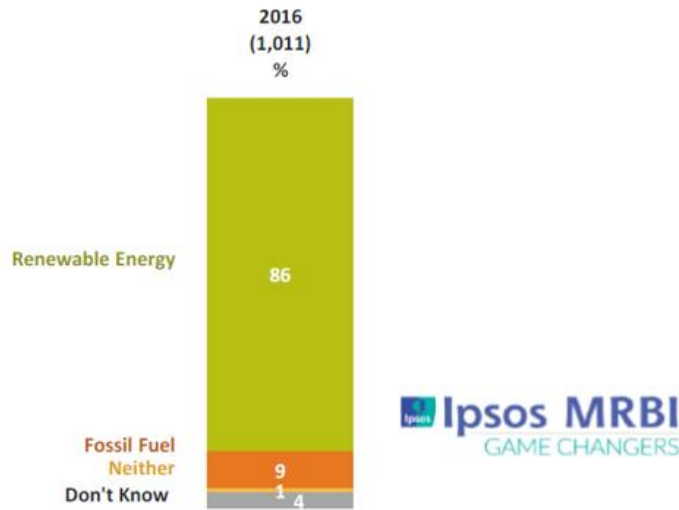
IWEA points to the recent findings of an IPSOS MRBI public opinion survey<sup>9</sup> carried out in a March 2016 which show clear 70% public support for wind energy (with 10% opposed) and 86% support for the use of renewable energy (with 9% supporting Fossil Fuels.)

*"To what extent are you in favour of or opposed to the use of wind power in the Republic of Ireland?"*



<sup>9</sup> March 2016 Survey carried out by Ipsos MRBI, commissioned by IWEA. The data is weighted in line with the known profile of the population according to the latest CSO estimates. The sample size achieved on is robust at over 1,000 respondents, giving a low margin of error. Fieldwork for this research was conducted from the 1st until the 15th of February 2016.

## Choice Between Fossil Fuel Or Renewable Energy



Fossil fuel energy refers to the use of fuel such as coal or gas in order to produce energy, while renewable energy refers to energy from a source that is not diminished when used, such as wind or solar power. If you could power your home with a) fossil fuel or b) renewable energy, which one would you choose if they were both available at a similar cost to your current energy source and provided you with the same level of service?

IWEA are clear, as set out in the “Good Neighbour Guidelines for Community Engagement”<sup>10</sup> that there is an ongoing need to proactively engage and encourage the silent majority of energy users to be more proactive about their energy needs and visions of our energy future. We welcomed the recent focus within the Energy White Paper on engaging energy citizens and communities in this regard. We must avoid polarised one-sided interventions and ensure that we promote a broad, factual conversation on our energy future and climate mitigation.

### **Mainstreaming**

IWEA strongly backs the need for climate change policies to be integrated across national, sectoral and local strategic policies, plans and programmes. **IWEA would also stress the need to enable and empower leadership and advocacy across our national, sectoral and local levels.**

**We strongly believe that Ireland’s climate focus must move beyond compliance to one of clear global leadership.**

There must continue to be clear political Leadership towards Ireland’s energy future both centrally but importantly locally and an open and frank discussion of options and the benefits which can flow towards Ireland, especially in relation to our wealth of renewable and wind energy, which international independent research has shown can bring considerable economic, societal and environmental benefits.

In this regard the important work of the NAF and Climate Change Advisory Council should be communicated to all political representatives as access to accurate factual information is key to ensuring leadership by example at both national and local governance levels. While we welcome the web based information platform “Climate Ireland” in this regard, we do consider that alongside agencies such as the SEAI a clear network of thought leaders must be developed

<sup>10</sup> <http://www.iwea.com/index.cfm/page/iweabestpracticeprinciplesinco?twfId=1236&download=true>



who can clearly work to inform and advocate for Irish climate action. We would highlight the Al Gore initiative “The Climate Reality Leadership Corps”<sup>11</sup> as one international example in this regard.

The issue of climate change and its impacts pays no regard to political cycles and so our responses must be developed through consensus and with clear leadership and clarity of strategic regulatory approach. Ireland’s already existing and potential future leadership role in the international and European energy transition must be emphasised and be at the heart of our national discussion.

Strategic and values driven Irish approaches to climate change should instil confidence in industry to invest in new technologies to bring about the necessary scale of change required, with the general public also playing their part in this change.

## Conclusion

IWEA believes that renewable energy represents the single greatest opportunity for Ireland to continue to progress in its transition to a low-carbon economy, promote energy sustainability and improve security of supply, whilst paying attention to long-term affordability for the benefit of consumers. Ireland has an abundant, diverse and indigenous renewable energy resource which provides a sustainable and economic opportunity for the country. Given this, renewable electricity must play a key role in displacing fossil fuels in transport, heating, cooling and cooking as the electricity could come from renewable sources like wind, solar, hydro, tidal and biomass or other low-emission sources.

In the short to medium term the Irish power sector must continue to shift away from more carbon intensive fossil fuels. A diverse generation fleet comprising a mix of renewable and non-renewable lower carbon fuelled technologies is vital for Ireland’s long-term sustainability and ability to protect against fossil fuel price rises. Electricity storage and Demand Side management must also play an important role in facilitating the deployment of renewable energy technologies such as wind, solar, and ocean technology.

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 globally electricity at present to 80% by 2050 if we are to limit global warming to below 2 degrees.

Ireland has now signed the Paris Agreement which forms a legally binding commitment to pursue actions necessary to hold increases in global temperature to well below 2°C above pre-industrial levels and to increase the ability of countries to adapt to the adverse impacts of climate change.

We would echo the words of the then Minister for the Environment in Ireland’s National Statement on signing the Paris Agreement on April 22<sup>nd</sup>; *“in moving forward we must translate this motivation into action if we are to achieve the ambition set out for all of us in delivering an effective global response to climate change.”*

Within an Irish context it is clear that Irish onshore wind energy is providing a clear example of developing renewable energy of scale in a cost effective and sustainable way. Wind energy

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<sup>11</sup> <https://www.climaterealityproject.org/leadership-corps>

alongside other renewables must continue to lay a leading role in Ireland's energy transition, and as a key contribution to reductions in emissions from electricity generation. The SEAI have confirmed that without Irish onshore wind energy in 2014 emissions from generation would have been 16.2% higher and the carbon intensity of our electricity has fallen by 49% since 1990.

IWEA has absolute confidence that with the vision and commitment of all government bodies, a joined-up strategy as set out through Ireland's first statutory National Climate Change Adaptation Framework, and alongside the advice of the Climate Change Advisory Council to deliver this we will not only reach our 2020 targets but in doing so will create jobs, investment, reduce carbon emissions and future-proof our energy system.

IWEA would welcome 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 illustrate 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 NAF at this early "pre-draft" stage and we look forward to further engagement on the subsequent consultations on the draft.