

NECP Initial Consultation,
Strategic Energy Policy Division,
Department of Communications, Climate Action & Environment,
29-31 Adelaide Road,
Dublin 2, DO2 X285.

By email to: energy.consultation@dccae.gov.ie

Seán Finan,
Chief Executive Officer,
Irish Bioenergy Association,
DCU Alpha,
Old Finglas Road,
Glasnevin,
Dublin 11, D11 KXN4

By email from: seanfinan@irbea.org

12th November 2018

Submission by Irish Bioenergy Association to Initial Consultation – Ireland’s National Energy & Climate Plan 2021-2030

Dear DCCAE,

Please find our submission below.

Thank you for the opportunity to respond to this consultation. We look forward to working with you on behalf of our members in the development of the NECP.

Yours sincerely,

Seán Finan

Seán Finan
CEO
Mob. 087 4146480
Email: seanfinan@irbea.org

Irish Bioenergy Association (IrBEA)

Response to

Initial Public Consultation National Energy & Climate Plan (NECP) 2021-2030

Document prepared by: Seán Finan, IrBEA CEO & Noel Gavigan, IrBEA Technical Executive

Date: 12/11/18

With reference to consultation documents issued by the Department of Communication, Climate Action and Environment at:

<https://www.dccae.gov.ie/en-ie/energy/consultations/Pages/Initial-Consultation-NECP-2021-2030.aspx>

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1 Introduction

The Irish Bioenergy Association (IrBEA) is pleased to respond to the Department of Communication, Climate Action and Environment Initial Public Consultation on the National Energy & Climate Plan (NECP) 2021-2030

2 Format of the IrBEA Response

The consultation questions were circulated to all members of IrBEA. Responses and feedback were received and compiled. The Management Executive Committee reviewed and approved this document prior to formally submitting it to the Department of Communication, Climate Change and Environment. This document presents a coherent view from across the bioenergy industry of the key principles and proposed policy changes

3 About the Irish Bioenergy Association (IrBEA)

IrBEA was founded in 1999. Its role is to promote the bioenergy industry and to develop this important sector on the island of Ireland. Our diverse membership includes: farmers and foresters, fuel suppliers, energy development companies, equipment manufacturers and suppliers, engineers, financiers and tax advisers, legal firms, consultants, planners, research organisations, local authorities, education and advisory bodies – anyone with an interest in the bioenergy industry.

The association's main objectives are to influence policy makers to promote the development of bioenergy, and to promote the interests of members. Improving public awareness, networking and information sharing, and liaising with similar interest groups are other key areas of work in promoting bioenergy as an environmentally, economically and socially sustainable energy. The organisation is a self-governing association of voluntary members and is affiliated to AEBIOM, the European Biomass Association, and EBA, the European Biogas Association. Further information on our association is available at www.irbea.ie

4 Summary of key points in this submission

The following are a summary of the key points from our submission:

- **Ireland** needs to **act now** and have a **diverse renewable energy policy** with the various renewable energy forms including **bioenergy** contributing to the targets.
- **Bioenergy** offers the **most potential** in terms of **renewable energy** due to its **continuous production potential**. There are **multiple paths** to bioenergy in Ireland, from both domestic and non-domestic origins.
- **Bioenergy and Renewables** contribute to the **economic and growth agenda** through **rural employment, indigenous supply chains and supporting local enterprise**.
- **Contributions** from the *individual sectors* should be made based on **least marginal cost of carbon mitigation**.
- Clear, realistic specific **sector goals** should be **set** in the **NECP**.
- **Cost of incentives** used should be **justified** to the taxpayer by ranking renewable energy options by **potential impact versus cost** to the taxpayer.
- Full roll out of the **SSRH scheme** is required immediately.
- Development and roll out of a **similar scheme** to incentivise the use of **Biogas**.
- Development of a government **"land use policy"** which clearly identifies the land areas within the country suited to afforestation and growth of energy crops. This will allow for the **acceleration of the afforestation** programme. It will also allow for a more sustainable approach to land use and afforestation.
- Increased **electricity grid capacity** is required to provide prompt connection for all legitimate renewable projects.
- **Reviewed grid access rules** to give priority to dispatchable renewable energy to build on renewable stabilisation capacity on the grid.
- Provide specific **incentives** for **district heating** projects.
- Establish an **energy crop support system** with payments similar to those received by participants in the current Forestry Programme. Annual Payments to include for the establishment and growth of energy crops over a medium to long term period.
- Establish the most effective ways relevant to Ireland to **decouple GDP growth from emissions growth**.
- Accelerate the development of **Anaerobic Digestion/Biogas** at all levels and scales.
- **Biogas** will reduce our **dependence on imported gas** product while at the same time **reduce Non ETS emissions** in the Agricultural sector where an abundance of feedstock is available.
- Accelerate the amount of **biogas to grid to 10%** of all gas in the grid and target increasing this over the period of the plan.
- Access to **dispatchable renewable energy** should be given **priority to enhance grid stabilisation** and reduction in carbon footprint.
- **Maximise** the capacity utilisation of the **gas grid**, which is a **major asset**, which could handle a considerable **increase in gas throughput**, at no extra cost.
- Government need to work with stakeholders to **remove all impediments** to the **development of Anaerobic Digestion** in Ireland including: legal, constitutional, land ownership, planning, biosecurity, and cultural issues etc.

- Solutions to be developed rapidly to bring Ireland into line with EU member states on the use of **Anaerobic Digestion** as means of reducing non-ETS emissions particularly Denmark.
- Introduce a **Capital investment schemes** like the Rural Development Programme Targeted Agricultural Modernisation Scheme (TAMS) for development of farm energy infrastructure. A scheme would **offset the capital cost** of small on-farm bioenergy and Anaerobic Digestion projects as a means of reducing emissions at farm level.
- Roll out a **public awareness campaign** highlighting the potential for additional employment, rural development and public health benefits associated with meeting our Renewable Energy targets.
- Adopt **best practice** available from other EU states such as Denmark on the **use of as straw and energy crops** as a source of biomass.
- Provide **funding for research** into the mobilisation and collection of Anaerobic Digestion feedstocks such as grass, silage and slurry.
- **Carbon taxes** need to be **increased incrementally**.
- Eliminate the '**Fuel Tourism**' issue whereby there is already in excess of a €2,000 per truck market distortion incentive from transporting ONE truckload of residential solid fossil fuel North to South due to the **differential North/South tax regime**.
- **Full implementation** of the **ban** on the sale, distribution and **burning of smoky coal**.
- Review of **air quality / CO2 emissions** in the context of other **solid fuel** such as peat.
- All legal, technical and revenue **obstacles/impediments** need to be removed to facilitate the **importation, registration & use** of large-scale wood chipping machines.
- **Fuelling infrastructure** needs to be developed on **forecourts** to provide **5% renewable gas** for HGVs up to a level of 5% of the fuel mix.
- **Increase the use of biofuels** in transport vehicles over a defined period up to **10% and progress towards 20% of total energy consumption**.
- Explore the **production and use of Biochar and activated carbon** from energy crops and unused biomass. Assess its role in reducing agricultural emissions as a soil remediator and additive to animal feed and slurry.
- Promote the **Wood Fuel Quality Assurance Scheme** as the vehicle for ensure consumers receive wood fuel to the correct specification from QA wood fuel suppliers.
- **Energy Efficiency** should be acknowledged as central to **transition** to a **sustainable economy**.
- Target **70% renewable electricity** in the grid by **2030** as set out in the recently published **Baringa report**.
- As we transition, **Co-firing generation assets**, with the biomass component supported, can provide Ireland with low cost dispatchable, renewable energy.
- **Greater community and public engagements** are required to ensure all **citizens** are empowered and buy into a **National renewable energy strategy**.
- New **energy poverty strategy** is required up to 2030.
- **Detailed independent research** is required to achieve maximum GHG reduction with the lowest cost deployment of energy generating technology.
- A single government department dedicated to **Energy, climate action and the environment** be set up.

5 Conclusions

The development of the National Climate and Energy Plan offers Ireland the opportunity to plan our journey towards decarbonising the Irish economy and make the transition from fossil fuels to more renewable energy sources. Our submission to this consultation focuses on the untapped potential which exists through the development of the Irish bioenergy sector. IrBEA believes that renewable bioenergy sources such as biomass, biogas, biofuels and energy crops offer huge opportunity and potential in the drive towards reducing carbon emissions and addressing climate change.

Our submission provides answers to the questions raised in the consultation document. We identify further measures that need to be implemented to reduce non-ETS emissions and achieve ambitious renewable energy targets.

Many EU member states have embraced the use of bioenergy many years ago and Ireland need to urgently follow suit. Ireland needs to use the best practice and knowledge available from other EU member states to drive the renewable energy sector here. Meaningful policy interventions at a government level that support investment and use of renewable energy sources instead of fossil fuel is immediately required.

Climate action is not only a challenge but also a considerable opportunity for Ireland to become a leader in this space. We are in real danger of losing our green image with the lack of action by the government over the past 15 years. Many long-term plans and targets have been set for 2008, 2012, 2015, 2020, 2030 and now 2040. IrBEA strongly encourages Minister Bruton to show advancement on emissions targets within his ministerial timeframe and be ambitious in the targets which are set within this NECP plan.

Bioenergy is Europe's largest renewable source providing half of all renewable energy. 8.5% of Europe's energy comes from biomass. Ireland is currently only getting 3% of our energy from biomass. The majority of this is used in the sawmilling sector for drying lumber.

The skills & resources needed for the expansion of the bioenergy industry here and mainstream use of renewable energy offer immense potential in terms of jobs and economic activity. The skillsets and personnel required to advance the industry are closely matched to those that will become available from scaling back on fossil fuel reliance. Ireland has a natural advantage in its people and in its resources, none more-so than our ability to grow wood, energy crops and feedstock for Anaerobic Digestion better than most other countries around Europe the World. There are real opportunities to develop the full potential of Irelands Bioenergy sector by local job creation, fuel cost reductions, enhancing Irelands energy balance of trade as well as the obvious and vital reduction in carbon emissions.

IrBEA members are still waiting for the opening of the Support Scheme for Renewable Heat (SSRH). The full opening of this SSRH scheme is a fundamental first step in developing the renewable energy sector here. The immediate launch of the full SSRH scheme would be a very welcome development by all stakeholders within the bioenergy sector.

IrBEA as the representative body for the bioenergy sector on the island of Ireland, is looking forward to working with Minister Bruton and his department in removing the roadblocks

which exist in the development of the Irish bioenergy and renewable energy sector. We want to ensuring Ireland becomes a leader in responding to climate change and reducing emissions by developing and realising the potential of the Irish bioenergy sector and lobbying for the policy changes that are needed to allow this potential to be realised.

6 IrBEA Detailed Response to NECP Consultation Questions

The Irish Bioenergy Association responses to the questions posed in the consultation document are as follows:

Question 1: Taking into account the National Mitigation Plan¹⁷, the National Development Plan 2018-2027¹⁸ and Ireland's target under the Effort Sharing Regulation, what further measures to reduce non-ETS emissions do you believe Ireland should take?

IrBEA believes many further measures should be implemented to reduce non-ETS emissions in Ireland. Measures need to be backed up with coherent government policy and necessary budgets to ensure emission reductions targets are met. Growth of the Irish Bioenergy sector is critical to achieving emissions reductions targets in Ireland.

IrBEA proposes the following measures:

- Full roll out of the SSRH scheme immediately.
- Development and roll out of a similar scheme to incentivise the use of Biogas.
- Development of a government "land use policy" which clearly identifies the land areas within the country suited to afforestation and growth of energy crops. This will allow for the acceleration of the afforestation programme. It will also allow for a more sustainable approach to land use and afforestation.
- Increased electricity grid capacity is required to provide prompt connection for all legitimate renewable projects.
- Reviewed grid access rules to give priority to dispatchable renewable energy to build on renewable stabilisation capacity on the grid.
- Provide specific incentives for district heating projects.
- Establish an energy crop support system with payments similar to those received by participants in the current Forestry Programme. Annual Payments to include for the establishment and growth of energy crops over a medium to long term period.
- Establish the most effective ways relevant to Ireland to decouple GDP growth from emissions growth.
- Accelerate the development of Anaerobic Digestion / Biogas at all levels and scales in Ireland.
- Government need to work with stakeholders to remove all impediments to the development of Anaerobic Digestion in Ireland including: legal, constitutional, land ownership, planning, biosecurity, and cultural issues etc.
- Solutions to be developed rapidly to bring Ireland into line with EU member states on the use of Anaerobic Digestion as means of reducing non-ETS emissions particularly Denmark.
- Introduce a Capital investment schemes like the Rural Development Programme Targeted Agricultural Modernisation Scheme (TAMS) for development of farm energy infrastructure. A scheme would offset the capital cost of small on-farm

bioenergy and Anaerobic Digestion projects as a means of reducing emissions at farm level.

- Roll out a public awareness campaign highlighting the potential for additional employment, rural development and public health benefits associated with meeting our Renewable Energy targets.
- Phase out the use of coal in Moneypoint much sooner than planned.
- Adopt best practice available from other EU states such as Denmark on the use of as straw and energy crops as a source of biomass.
- Provide funding for research into the mobilisation and collection of Anaerobic Digestion feedstocks such as grass, silage and slurry.
- Carbon taxes need to be increased incrementally.
- Eliminate the 'Fuel Tourism' issue whereby there is already in excess of a €2,000 per truck market distortion incentive from transporting ONE truckload of residential solid fossil fuel North to South due to the differential North/South tax regime.
- Full implementation of the ban on the sale, distribution and burning of smoky coal.
- Review of air quality / CO₂ emissions in the context of other solid fuel such as peat.
- All legal, technical and revenue obstacles and impediments need to be removed to facilitate the importation, registration and use in Ireland of large-scale wood chipping machines.
- Explore the production and use of Biochar and activated carbon from energy crops and unused biomass. Assess its role in reducing agricultural emissions as a soil remediator and additive to animal feed and slurry.
- Promote the Wood Fuel Quality Assurance Scheme as the vehicle for ensure consumers receive wood fuel to the correct specification from quality assured wood fuel suppliers.

Question 2: How do you believe Ireland's national contribution towards the EU's 2030 renewable energy target of 32% should be determined? Please include your reasoning

Implementation of the measures outlined in question 1 above will assist in achieving our national renewable energy target of 32%. At a high level, the scale of Ireland's national target should represent a technically feasible, cost effective and fair sharing of the EU efforts to combat climate change across RES-E, RES-T and RES-H.

Ireland needs to have a diverse renewable energy policy with the various renewable energy forms contributing to the targets. Bioenergy offers the most potential in terms of renewable energy due to its continuous production potential compared with Wind and Solar both representing more intermittent generation-

Specific measures are required to support the use of energy from biomass which, being dispatchable and renewable, complements wind currently and solar increasingly into the future. As we transition to a low carbon economy, co-firing of biomass for power generation delivers on this objective at scale at low cost to the State and ultimately to the end consumer while helping to provide much needed grid stability at high levels of intermittent renewable energy supply.

Ireland is fortunate in already having over 350MW of assets in the energy mix that can consume biomass and produce dispatchable renewable energy.

Biomethane and Biogas can contribute to RES-T targets with huge potential for the production of biogas from an abundant supply of feedstock. The scaling up of Biogas production will also help reduce Non ETS emissions from Agriculture.

Biomass boilers offering scope towards RES-H delivery, supported by the SSRH scheme. While the SSRH also supports heat pumps it should be remembered that these are only effective with energy efficient structures – so must follow appropriate works if wishing to adopt on a broad scale. The SEAI estimating that it will take €35 billion over 35 years to transform the existing housing stock in Ireland to low carbon status, making it clear that heat pumps will not represent an overnight solution.

Question 3: How do you believe the contribution to be made from the individual sectors (i.e. electricity, heat and transport) should be determined? Please include your reasoning.

See also response to Q2.

The contribution from the individual sectors should be made on the basis of least marginal cost of carbon mitigation, taking into account the need for some technology diversity while balancing the supply of intermittent and non-intermittent dispatchable renewable energy.

That said, the marginal costing exercise should be on the basis of a form of discounting model to ensure that Transport makes a contribution which is somewhat related to its scale of energy consumption and non ETS emissions. The use of biofuels in transport vehicles needs to increase over a defined period up to 10% and progress towards 20% of total energy consumption.

Biogas production capacity in Ireland needs to develop with significant government support required. Targets should be set to increase the quantity of biogas injected into the gas network over a period.

Fuelling infrastructure needs to be developed on forecourts to provide 5% renewable gas for HGVs up to a level of 5% of the fuel mix. A support mechanism needs to be considered to offset the cost of renewable methane as opposed to fossil (marketed as natural) gas.

Question 4: What policies and measures do you believe Ireland should adopt to achieve its renewable energy contribution and what are the grounds for your recommendations?

Please see question 1 response above.

IrBEA believes that clear specific sector goals should be set. The renewable energy contribution and targets should be realistic, and incentives should be used. The cost of incentives should be justified to the taxpayer by ranking renewable energy options by potential impact versus cost to the taxpayer.

As we transition to a low carbon economy, Ireland's policies and measures should realise the ready and scalable benefits from biomass co-firing at scale, as a non-intermittent dispatchable renewable energy source to accompany the intermittent supply of other renewable energies. Ireland being in the fortunate position of having over 350MW of assets – spread among three generation units - in the energy mix that can consume biomass and produce dispatchable renewable energy. As we transition towards renewable energy sources, conversion of Ireland's peat plants to biomass offer a short to medium term opportunity on the road towards a decarbonised economy.

Mobilising the indigenous supply chain for biomass; it is likely that having strong counterparties (power stations) for biomass offtake will also stimulate the market for additional high quality/specification biomass at more local levels, better suited for renewable heat units in Ireland and conversion to energy through Government supports under the SSRH scheme.

All legal, technical and revenue obstacles and impediments need to be removed to facilitate the importation and use in Ireland of large-scale wood chipping machines. These machines can work at the forestry site to chip the naturally dried secondary material including brash and lesser quality residual product remaining after the thinning and clear-felling processes. This lower quality woodchip (which has no other use) is capable of being utilised by the large biomass consumers, will reduce our reliance on imported product and return a significantly better margin for the forestry owner.

Question 5: Bearing in mind Ireland's current state of progress on energy efficiency, what contribution do you believe Ireland should make to the EU indicative energy efficiency target of 32.5% by 2030, and why?

Energy Efficiency has made a significant contribution to the energy market in Ireland's homes and businesses both across the Public sector as well as through Energy Suppliers. The Energy Efficiency Obligation Scheme (EEOS) has been a central pillar for Ireland's progress in energy efficiency. EEOS is a cost to Energy Retailers and therefore a cost to the customers

which the CRU reported on in 2017. It is important that policy does not overburden the Energy retailer with costs that will impact negatively on energy pricing to the customer. As Ireland progresses towards 2030 compliance, policy needs to ensure all areas of the National Energy Efficiency Action Plan (NEEAP) are supported and incentivised sufficiently to contribute to the EU target.

Energy Efficiency is acknowledged as central to transition to a sustainable economy, we believe that policy should always incentivise cost effective energy efficiency as well as ensuring that the material and capital cost of energy efficiency measures are properly costed and apportioned.

Question 6: What indicative national milestones for energy efficiency do you believe that Ireland should set for 2030, 2040 and 2050, and why?

Ireland should encourage Best Available Technology principles in terms of setting targets, regarding the building sectors there is no reason for the highest standards of energy efficiency to be adopted and the elimination of the need for central heating systems in our building stock.

Energy Efficiency as a stand-alone target on its' own may not lead to Ireland achieving set targets to 2030 and beyond. It may be more appropriate to set specific targets around electrification, appliances, lighting, building stock refurbishment standards that will ensure Ireland achieves energy efficiency targets overall. Important to recognise that 'Energy efficiency first' is a key requisite for Heat pump deployment in the context of electrification of heat in the home – and that the necessary pre-requisites for electrification will take time (energy efficient homes and strengthened distribution networks). Heat pumps are ineffective and wasteful in low energy rated homes.

Question 7: What policies and measures do you believe Ireland should adopt to achieve its energy efficiency contribution and what are the grounds for your recommendations?

Energy efficiency can be achieved through Government incentivisation of clean energy. Launch of the full SSRH scheme is required as a matter of urgency. It should be a requirement of the new SSRH scheme that an annual review of the scheme takes place. This review should monitor to ensure that uptake of the scheme is in line with the trajectory of RES – H targets.

An investment scheme in new waste-to-energy and biomass-to-energy technologies is also required.

Policy and measures by DCCAE should be more specific under the overall Efficiency strategy. Housing Stock would need a firm target and support. EV's would need a firm target and support, as well as the associated charging infrastructure. Electrification of heat needs to

have a firm target and support. This type of approach would firmly translate to all sectors what needs to be done to achieve greater energy efficiency.

Question 8: In terms of the areas of energy security identified in the template, are you satisfied with the resilience of Ireland's national and regional (with other Member States) energy systems and if not, what suggestions would you make for improvement?

IrBEA is not satisfied with the resilience of Ireland's national and regional energy systems. Ireland has considerable potential to dramatically increase its indigenous supply of energy in the coming decades, Ireland has significant natural resources in biomass, wind, solar and wave. These natural resources if fully utilised will significantly aid Irelands energy security, boost our indigenous economy and lower our carbon footprint in Ireland has well documented low external electricity interconnection.

The Ireland to France interconnector needs to be accelerated. To increase the diversification of energy sources and supply from third countries, the promotion and support of both indigenous and imported biomass is a way of improving energy security as we decarbonise our energy system. Ireland already has over 350MW of assets in the energy mix that can consume biomass and produce dispatchable, renewable energy. It is critical that in the first instance, mechanisms are designed and implemented to ensure that these existing plants transition to consuming renewable biomass. This can be achieved in tandem with mobilising the indigenous supply chain for biomass; it is likely that having strong counterparties (the three power stations) for biomass offtake will also stimulate the market for additional high quality/specification biomass, better suited for renewable heat units in Ireland. It will however, be necessary to ensure that market conditions in Ireland are such that they can also access international biomass where required in the short term. Better utilisation and processing of Energy crops as a renewable source of biomass should be promoted and increase.

The grid and the delivery of secure dispatchable renewable generation capacity is critical especially given Irelands limited interconnection and uniquely high level of supply of intermittent renewable generation – to keep the lights on (for grid frequency, inertia, etc reasons). The distribution network will need to be strengthened to facilitate the adoption of EVs and of Heat pumps.

Accelerated development of the biogas sector will reduce our dependence on imported gas product while at the same time reduce Non ETS emissions in the Agricultural sector where an abundance of feedstock is available.

IrBEA supports the drive towards achieving 70% renewable electricity in the grid by 2030. This target was set following the recently publishing of the Baringa report by the Irish Wind Energy Association.

Question 9: What policies and measures do you believe Ireland should adopt to achieve its energy security objectives and what are the grounds for your recommendations?

Setting clear targets and support mechanisms for the role of biomass and biogas in the renewable energy mix would be a welcome first step. As we move towards a low carbon economy, co-firing generation assets, with the biomass component supported, can provide Ireland with low cost dispatchable, renewable energy. Indigenous supply of biomass should be incentivised to increase local production.

Greater community and public engagements are required to ensure all citizens buy into a National renewable energy strategy. The successful adoption and use of renewable energy sources will come down to citizens realising an economic benefit from the use of renewable sources compared to fossil fuel options. It's the responsibility of National Government to ensure that policy measures are implemented to support this transition. Policy needs to be backed up with the necessary financial supports and incentives in the short to medium term around the production of renewable energy. This will ensure that renewable energy can be provided to citizens at a lower or equal cost to the fossil fuel alternatives.

Question 10: Taking into account the EU electricity interconnection target, what do you believe should be Ireland's priorities in terms of further electricity interconnection, and why?

See response to question 8 above. No further comments on this question by IrBEA.

Question 11: What policies and measures do you believe Ireland should adopt to achieve its electricity interconnection objective and what are the grounds for your recommendations?

See response to question 8 above. No further comments on this question by IrBEA.

Question 12: What electricity and gas transmission infrastructure projects would you consider to be of greatest importance in terms of Ireland's achievement of the objectives, targets and contributions under the 5 dimensions of the Energy Union strategy?

IrBEA proposes an acceleration in the amount of biogas to grid to 10% of all gas in the grid. Establishing a sustainable route to market for biogas is very important to support this development.

IrBEA proposes that access to dispatchable renewable energy should be given priority to enhance grid stabilisation and reduction in carbon footprint.

Question 13: What policies and measures do you believe Ireland should adopt to achieve its energy transmission objectives and what are the grounds for your recommendations?

Ireland could put a lot more focus on maximising the capacity utilisation of the gas grid, which is a major asset, which could handle a considerable increase in gas throughput, at no extra cost.

Question 14: Noting considerable progress on the regional integration of Ireland's wholesale electricity and gas markets with neighbours, for example via physical interconnection and changes to market arrangements and rules, what further objectives do you believe Ireland should set in the area of energy market integration as set out above and why?"

No comments on this question by IrBEA

Question 15: What policies and measures do you believe Ireland should adopt to achieve market integration objectives and what are the grounds for your recommendations?

No comments on this question by IrBEA

Question 16: Ireland currently has an energy poverty strategy 2016-2019. 19 Do you believe that a new strategy is required to cover the period up to 2030 and what objectives should it contain?

IrBEA believes a new strategy is required up to 2030 given the rate of change in the marketplace to better reflect a road map over the next 12 years. Although careful planning is required IrBEA would caution against spending too much time and effort planning without leaving adequate time to achieve what is required. The Irish Government adopted a national social target for poverty reduction which was to reduce consistent poverty to 4 percent by 2016, however the percentage of Irish people living in consistent poverty in 2016 was 8.3%, up from 4.2% on 2008.

Clearly Ireland needs to carefully adapt its Energy Poverty strategy to cater for the unprecedented amount of change in delivery of energy to this vulnerable sector of the population all the way to 2030. Full implementation of current programme and incentivising cheaper, more efficient clean fuel would also assist achieving objectives.

The key objectives should be to:

- ensure secure supply
- at affordable cost; bearing in mind potential increasing transmission and distribution charges

- considering the scale of change, and delivery time required to incorporate
- reduce consumption through energy efficiency
- strengthen the distribution network to facilitate EV charging infrastructure at the level of the home with the potential for micro-generation.
- leverage the potential income from fuel poor domestic micro generation using a FIT or similar which would lift a significant number of homes out of the fuel poor category whilst also providing working capital to work on energy efficiency.

The objective needs to be framed within the scale of the issue. DCCAE's 'A Strategy to Combat Fuel Poverty; key considerations are that 28% of homes could be in Fuel Poverty with social housing having a very high prevalence. This follows the general trend in Europe where energy prices have risen faster than household disposable income and where poorest households spend a growing share of their budget to pay for energy bills.

With the SEAI estimating that it will take €35 billion over 35 years to transform the existing housing stock in Ireland to low carbon status there will not be an overnight solution. A considered roadmap is required which incorporates realistic and achievable support and incentivisation mechanisms, to ensure energy poverty is not in actuality exacerbated by policy decisions.

Question 17: What policies and measures do you believe Ireland should adopt to achieve its energy poverty objectives and what are the grounds for your recommendations?

Policies/measures already in place target energy efficiency and social housing:

- Warmer Homes Scheme
- Warmth and Wellbeing Scheme
- Deep Retrofit Pilot Scheme
- Better Energy Communities

These are all commendable however their relatively modest scale of potential delivery must be considered in targeting the overall objective. These will all help in the journey from residential solid fuel towards renewable fuel sources and in the delivery of objectives and associated policies which must recognise the key role which solid fuel will continue to play over this transition period given its usage prevalence among the Energy Poor in delivering secure heat supply.

IrBEA would suggest that consideration is given to incentivising the installation of Eco-design solid fuel appliances such as Eco-design pellet stoves and Eco-design firewood stoves into energy poor homes, reducing the actual demand for fuel, thus reducing costs, carbon emissions and air pollutant emissions. Furthermore, the nature of these appliances would discourage burning of household waste in domestic appliances as these appliances would not operate unless fuelled by the proper fuel types.

There are limited heating options currently available to for those dependent on oil or solid fuels and this will remain the case for some time. UCC research found that even for those customers who have access to the gas grid, many of those in energy poverty do not avail of gas, preferring instead to remain using solid fuels. This may be due to a preference for frequent purchases of lesser amounts or billing issues. Potentially large bi-monthly gas bills or indeed the cost of filling an oil tank in one period, are more difficult for households to deal with than regular weekly purchases of solid fuels. In this regard it will be important that policies supporting a transition to renewable heat consider carefully the potential impacts on the energy poor.

New policies are required to co-enable the rollout of electrification of heat and transport among the Energy Poor. There is no reason why this sector should not be able to make its sectoral contribution towards delivering relevant targets, with relevant milestone plans. The issue here being timescales and cost of achieving the required level of energy efficiency in homes for the effective use of heat pumps.

This will require the strengthening of the distribution network to facilitate the electrification of heat and EV charging infrastructure at the level of the home with the potential for micro-generation.

Question 18: What objectives do you believe Ireland should set for the funding of research covering the five dimensions of the energy union, and why?

The five dimensions are:

1. Security Solidarity and Trust
2. Fully integrated internal Energy market
3. Energy Efficiency
4. Climate Action – decarbonising the economy
5. Research, innovation and competitiveness

Within the scope of this document it would not be appropriate to tackle each dimension in detail, however we would suggest that Ireland's objectives should be related to our island status and that we should consider that this limits our ability to fully integrate with the EU market – this presents a challenge and an opportunity for Ireland to be as self-sufficient as possible. Furthermore, our policies should embrace the opportunities presented by the above dimensions and should open discussions around these separately.

Demand response and flexible demand response needs more funding in terms of research. It also needs dedicated state resources / body – such as the role SEAI have undertaken in Energy Efficiency to enable more of Ireland's Energy consumers to participate in Demand Response initiatives. Eirgrid have set out remuneration mechanisms for demand response under the DS3 programme. More needs to be done to support customers in their transition to flexible demand profiles in response to grid signals, so that they understand fully the commercial benefits, as well as the merits for Ireland's steps towards sustainable and secure grid.

More work needs to be done to support research at TSO level, but also at the distribution, i.e. DSO level. Ireland is significantly lagging behind other EU countries with regards DSO level trials and programs for demand side response, and there is also a need to put more funding into research at a DSO level.

Ireland also has a unique capability in this area of technology, as the world moves towards increased levels of non-dispatchable renewable technology. Ireland's unique advantage will be in developing technology to support the intermittent supply of renewables at high levels of non-synchronous wind and perhaps solar. This will be supplemented by dispatchable renewable power from biomass co-firing which will bring increased stability to the grid.

Ireland needs detailed independent research to develop the model for optimum roll-out of available feedstocks in the agricultural sector to achieve maximum GHG reduction with the lowest cost deployment of energy generating technology such as anaerobic digestion.

Noting the resourcing and skills demand required to deliver this transition, specific focus and investment in the education curriculum at all levels. Targets to incentivise increased research in the university system to ensure Ireland's workforce competitiveness in this sector. There are obvious regional and local links through third level education sector to enterprise and development.

Question 19: What policies and measures do you believe Ireland should adopt to achieve energy research objectives and what are the grounds for your recommendations?

Ireland should formalise policy to capitalise on its natural resources and consider the challenges of adapting to be a decarbonised economy to be an opportunity for Ireland both in terms of research and in terms of commercial opportunities.

Ireland does not have a policy on demand side response, or targets for a flexible grid that reflects the future 2030, 2040 and 2050 scenarios. This is a central piece of the decarbonisation journey, and energy research objectives should have clear targets set in supporting TSO & DSO research to enable more Demand response for the future flexible grid.

Use the funds already available, such as the SEAI RD&D programme to specifically address the challenges facing Ireland in achieving its' 2030 RE goals, such as why Ireland which has

the greatest potential per capita for Anaerobic Digestion has the 3rd lowest deployment of this technology in the EU.

Question 20: Are there any other comments or observations that you wish to make?

IrBEA would propose, that given the enormity of the challenge that government face, should now formally create a single government department dedicated to Energy, Climate Action and the Environment. Setting up such a department and installing a Minister with an uncompromised brief would greatly assist Ireland in not only adopting to the challenges, but in becoming a leader in addressing them.