Environmental Pillar
WORKING FOR A SUSTAINABLE FUTURE

Green Paper on Energy Policy in Ireland

Environmental Pillar Submission

Summary

The White Paper should define a vision for Ireland's future energy system which provides an overarching framework within which decisions on energy policy are made.

Given the risk of runaway climate change, this vision should define a future system that is no longer dependent on climate polluting fossil fuels, but rather operates with clean renewable indigenous resources and energy conservation at its core. The three dimensions of sustainability - Environmental, Social and Economic - should underpin every choice on energy policy. This requires nothing less than a complete transformation of the energy system. This visionary approach, or intentionality in plan making is supported by the recent NESC Research on Wind Energy in Ireland – Building Community Engagement and Social Support[1].

Key Messages:

- EU targets for renewable energy in all sectors including transport and reducing energy demand should not be considered a ceiling. Ireland's energy policy can and should be more ambitious than EU targets.
- In addition to being informed on energy policy decisions, individuals and communities must be allowed to evolve into active 'energy citizens', rather than remaining in the 'passive energy consumers' role that is currently prescribed. Government policy should make it easier for communities, individuals and businesses around the country to take control of their own energy needs through saving energy and generating their own renewable energy.
- The focus on energy prices in the Green Paper and current policy is misplaced because many of the factors influencing price are outside Government control. Policy should focus on overall energy *costs,* placing greater emphasis on cost control by reducing consumption and increasing efficiency.
- Introduce a taxing mechanism that enables the switch to a low carbon economy, the tax should be flexible to fall as low carbon technologies overtake fossil fuels, or increase if targets are not met.
- The use of fossil fuels in Ireland need to be phased out. We spend €6.5 billion annually importing fossil fuels for over 90% of our energy needs. The dirtiest fossil fuel plants, peat and coal, should be closed immediately with the long term aim of phasing out gas too.

1 NESC 2014 Wind Energy – Building Community Engagement and Social Support, available at http://www.nesc.ie/en/publications/publications/nesc-reports/wind-energy-in-ireland-building-community-engagement-and-social-support/

- In order for consumers to reduce the amount of energy they use, energy supply companies should be encouraged to make it easier for their customers to use less, and this must be financially attractive for suppliers to generate and sell less energy.

- A moratorium on fossil fuel exploration should be instigated, in line with the recommendations contained within the recent IPCC reports, which explain that to prevent runaway climate change globally over 60% of fossil fuels need to remain in the ground. New exploration is contradictory to this advice.

Introduction

Six Priority Areas are identified within the Green Paper on Energy Policy in Ireland. In addition 47 questions are posed. This response is structured around the six priority areas. While consideration has been given to the questions asked, individual answers to each of the questions are not provided.

Priority Objective 1: Empowering Energy Citizens

We welcome the idea of 'energy citizens' but feel that description in the Green Paper of what it might mean to be an 'energy citizen' is not broad enough.

Public Participation in National Energy Policy:

Given the scale of the challenge we face to transform our energy system from one reliant on fossil fuels, to one that operates with low carbon renewable technologies and energy efficiency at its core, placing citizens at the heart this transition is considered essential.

This should start now, with comprehensive and facilitated consultation on the Green Paper on Energy Policy in Ireland as the White Paper is developed.

In order to ensure meaningful public participation, individuals and organisations must be given

- **Information on energy** in an easy to digest manner - including, what are our energy needs, how much energy can we save through efficiency measures, what energy sources are available, what are the carbon implications of the different choices, what are the local and international environmental impacts, and what are the cost implications of the different choices.

- **A platform to engage** with decision makers in addition to the written response e.g. workshops, debates, online surveys education and awareness events and media coverage across all counties of Ireland. Specifically with regard to this consultation process, we suggest that at the very least, all individuals and organisations who have submitted written responses to this consultation process are engaged further as the White Paper is developed.

- **An opportunity to influence** energy policy, by ensuring that consultation takes place when all options are open for discussion, and ensuring that public concerns are considered.

- **Evidence and assurance that public opinions are considered** in decisions on energy policy.

The process must also be clear and defined in advance so that individuals and organisations understand the point of engagement. The current consultation process for this Green Paper is not clear. An aspiration to host regional workshops was stated by Minister Rabbitte at the launch, but it is still not clear whether these workshops will go ahead, or what the purpose of these workshops will be. If, as it seems, all consultation responses must be submitted in writing in advance of any workshop, there is no clarity on what the purpose of workshops would be, or if issues or concerns or even solutions raised at workshops would be considered by the policy makers.

The recent (2014) Eurobaramoter[2] survey on Climate Change found that 82% of Irish people think fighting climate change and using energy more efficiently will boost the economy and jobs, 74% agree that reducing dependence on fossil fuels could benefit the EU economy, and 89% think it is important for our national Government to set targets for renewable energy.

As per the Strategic Environmental Assessment (SEA) Directive[3], an SEA must be carried out on all plans and policies. It is therefore anticipated that an SEA will be carried out on the White Paper and will be consulted upon. Further information on the scope and proposed timeline for this assessment should be made available to the public as soon as possible.

In addition, we would ask whether the proposed energy policy is likely to have any impacts on any Natura 2000 sites, and if so whether an Appropriate Assessment will be undertaken in line with the Habitats Directive?

The principles of the Aarhus Convention on public participation must be implemented when designing any public consultation/participation process. Guidance on the implementation of the Aarhus Convention are detailed in *Recommendations on Public Participation in Environmental Decision-making*[4] . Examples of good practice consultation approaches can be found in Ireland and abroad and include:

- the Irish Aid White Paper review 2011-2012 (Department of Foreign Affairs), which included professionally facilitated regional meetings
- Experiences from the Transition Movement – Transition Ireland and Northern Ireland
- the recent Constitutional Convention process
- Good practice guidance on consultation from the UK Civil Service Reform Plan, Consultation Principles; Creating an exceptional civil service - less bureaucratic and more skilled, digital and unified
- The UK Planning Advisory Service

2 2014 Eurobaromter survey Climate Change, available at http://ec.europa.eu/clima/citizens/support/docs/report_2014_en.pdf

3 Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment, available at http://eur-lex.europa.eu/legal-content/EN/LSU/?uri=CELEX:32001L0042

4 Available at http://www.unece.org/environmental-policy/treaties/public-participation/aarhus-convention/envpptfwg/envppppdm/ppdm-recs.html

A defining feature of those countries in Europe where successful transitions to low carbon energy systems are underway, is the political and public space that is provided to debate the challenges, options, and solutions to make the transition happen, and to recognise the environmental, economic and social implications of the choices we face on energy. One of the best examples of this is the German Energiewende[5]. In consultation with the citizens of Germany a long term vision of a low carbon energy system by 2050 was agreed, short term implementation plans are thus viewed in the context of this long term vision which is generally accepted by Germans. For Ireland, this approach, or setting a intentionality is supported in the recent National Economic and Social Council (NESC) research[6].

An 'energy citizen' will also have a feeling of sharing ownership of energy systems and resources. Our recent experiences with people's reactions to various energy projects is a demonstration that many people want to have common ownership of natural resources, and are highly sensitive to any perception, real or imagined, of a 'resource grab'. We return to this point in our consideration of ownership below.

Active Energy Citizens:

Placing citizens at the heart of the energy transition is considered fundamental to the success of this transition. The Green Paper states that "*we are all energy citizens - first, as part of the democratic decision-making process, and second, as users of energy ."* We believe it is essential to add a further element to the 'energy citizen' -- as generators of energy.

Citizens need to be facilitated to actively engage with energy savings, energy generation and energy distribution, allowing the burdens and benefits of energy to be shared amongst society. The White Paper is an excellent opportunity to set a policy direction that values citizens and communities as 'active' energy savers and energy generators. It is recommended that the White Paper gives clear support for,

- Community Energy projects and groups/-co-operatives
- Energy Efficiency community groups/co-operatives
- Micro-generation

Local Participation in Local Energy Planning

Local participation in local energy plans is also fundamental to ensuring 'energy citizens' are engaged in local energy issues. A fully participative consultation process should precede the adoption of any energy plans to allow communities, individuals and interest groups to engage with energy planning in their local areas and to help shape the solutions to achieve a sustainable energy future. It should be a requirement that all Local Authorities develop Local Authority Renewable Energy Strategies (LARES) in consultation with the communities in their locality. While there is guidance on how to develop a LARES, not all Local Authorities have undertaken this task. Clare County Council Renewable Energy Strategy 2014-2020 provides a good example, the plan analyses the energy profile of the county and lists strategic aims for the county within each renewable energy technology.

5 More information on the German Energiewende available at http://energytransition.de/
6 Ibid ref 1

The following information should disseminated to the public in the development of the LARES for each Local Authority Area:

- the energy needs of the area, and the potential options available to meet these needs such as renewable energy (and the various renewable technologies) / fossil fuels / imported fuels.
- the resources the area possess including renewable generation, and the potential for community generation, micro generation, auto generation.
- the potential for energy savings and energy efficiency.
- how community energy projects will be supported.

The role of Public Participation Networks

The development of the Public Participation Networks is welcomed and considered an ideal space through which public participation can be facilitated in the future. However it is noted that these networks are only in the initial stages of development and are not yet established sufficiently for public engagement on energy policy to be undertaken, particularly the current Green Paper consultation period. Public participation and engagement in the development of this White Paper should be undertaken immediately and should not wait for the development of the Public Participation Networks.

Community Energy

Community energy is a broad term that describes citizen and local ownership and participation in renewable energy generation, distribution and energy efficiency. It is about embracing the advantages that our natural resources provide for generating energy, and allowing the benefits, economic, social and environmental to flow to all of our people in our communities.

This is not a new concept, communities all over Europe are creating projects where they own and are actively involved in running an energy resource. This could be a wind farm near the area, solar panels on the roof of local buildings, a biomass fed district heating system, an anaerobic digester fed from local farms, or a collective insulation project, the list is extensive. In Ireland, there is a small but growing industry of community and transition groups. Unfortunately there are significant barriers which hinder the success of these groups and projects, and as a result community led or community owned renewable energy in Ireland represents only a tiny fraction of overall energy generation and potential.

The White Paper is an ideal opportunity to ensure some key policy supports allow the community energy industry to reach its full potential. This includes:

- A policy objective to develop a National Community Energy Strategy, including specific targets, co-ownership models, between developers, communities and local people, and
- funded competent intermediary bodies that can support and empower Community Energy projects with feasibility, technical, practical and finance advice. The SEAI could act as a national overarching body with specific supports available in local Energy Agencies all around the country, mirrored on the advice and support provided by the Tipperary Energy Agency and the Waterford Energy Agency.

These recommendations are echoed in the advice provided by NESC in their recent research on wind energy[7]. In addition to the supports outlined above, the main barriers to Community Energy development in Ireland also need to be removed in order to allow this industry to grow. The barriers to community energy projects are outlined in the 'Community Energy Policy Position Paper[8], which was developed by 18 community groups and energy consultants working in the community energy sector in Ireland. The main barriers could be removed by facilitating access to the National Grid for communities, micro-generators and auto generators, ensuring fair and secure payments for energy generated from all renewable technologies and exported to the grid at a price that maintains bills at close to current levels, (suggest reallocating support for fossil fuels from the PSO levy), proving funding and finance support to support groups in initial stages of development, feasibility, planning and construction.

Protecting vulnerable citizens

Everybody has the right to live in a place that is warm, and that they can afford to light and cook in. The current approach to supporting citizens in fuel poverty is to provide people with funds to buy more fuel. However, a cold home is only indirectly related to how much money a householder spends on fuel. The fuel allowance, as it is currently implemented, is a direct support for the fossil fuel industry and works to ensure vulnerable homes continue to be reliant on allowances. The main problem for people who experience cold homes is that they live in poorly constructed cold homes. Solving this problem at source requires insulating and upgrading the housing stock to give people the opportunity to live in a warm home where heating bills are reasonable, and developing on site generation to reduce the need to buy energy. A national upgrade of homes where people are experiencing fuel poverty should be undertaken in the first instance. Allowances to pay for fuel can then be reduced in line with energy savings. Savings in the fuel allowance can be used to upgrade additional homes. It is noted that only 105,000 homes have been upgraded within the Warmer Homes scheme. This represents only a tiny fraction of homes where people are living in cold homes that they cannot afford to heat. A rating or quality assurance scheme for Warmer Homes should be introduced to ensure works are carried out to the highest standard possible.

7 Ibid ref 1
8 Community Energy Policy Position Paper, July 2014 available at http://www.foe.ie/download/pdf/community_energy_policy_position_paper.pdf

Priority 2. Markets, Regulation and Pricing

An energy system that is based on renewable resources will be entirely different to the current centralised system and therefore the approach to costs and pricing must be amended to reflect this.

Particularly as we move towards a system with a high reliance on renewable electricity, changes must be made to take into account the costs of renewable electricity which are mostly confined to infrastructure costs as opposed to the current system where costs are dependent on international fuel prices.

At the moment the majority of the Public Service Obligation (PSO) is paid to gas and peat generators, with the remainder paid to renewable energy generators through the REFIT schemes. As subsidies for peat and other fossil fuels are phased out, there will be additional capacity within the PSO levy to accommodate increased renewables.

The rate of the carbon tax needs to disincentivise utilities from using fossil fuels as a fuel source. The tax should be highest on the most carbon intensive fuels and should work to ensure that it always makes financial sense to use renewable energy sources. It is noted that carbon emissions from the energy sector rose in 2012 and this rise is attributed to the 27% and 16% increases in coal and peat burning over gas and renewables. The increased use of coal is attributed to the falling price of coal on the international market. When the market is allowed to make decisions on the energy mix, a safeguard must be in place to ensure that the costs of carbon are included in the cost of the fuel.

All electricity generated from renewable sources should be eligible for sale and all generators should be enabled to receive payment for the electricity they export to the grid. At present there is no payment to generators of solar electricity, or electricity from Combined Heat and Power either on a large scale or at community or micro levels.

A pricing mechanism should be developed to enable payments to all renewable energy generators at a price that maintains the PSO at close to current levels.

A REFIT programme to support community energy

Feed in tariffs provide a fixed and reliable source of income for renewable energy produced and exported to the grid and are particularly valuable to community scale projects and micro/auto generators. The White Paper should provide clarity on the proposed approach to the Feed in Tariff system post 2017 when the current system will expire.

Although the EU commission recently revised its State Aid Guidelines[9] continuing support through feed in tariffs is permitted for renewable energy developments with a capacity of less than 500 kW and wind development of less than 3 MW, and from 2017 projects with a capacity of 1 MW (or 6MW for wind developments) will be exempt from the proposed competitive bidding process. The maintenance of the Feed in Tariff for developments of this scale will enable the community energy industry to grow.

9 EU Commission, 2014 Communication from the Commission: Guidelines on State Aid for environmental protection and energy 2014-2020 (State aid guidelines) OJ 2014/C 200/01

Ensuring financial sense for Micro and Auto Generators

It should be financially attractive to develop micro or auto scale generation. This could be achieved by allowing micro and auto generators to achieve a fair and secure payment for the energy they produce and export to the grid.

For small scale community, micro or auto generators, it is recommended that up to a certain point, developments are net metered, allowing generators to use the energy they generate that is surplus to their own needs to be sold to the market at the net metered price, and if the generators demand is higher than the supply, to purchase energy from the grid. To ensure the Public Service Obligation is maintained at close to current level, after a certain point the export price should be set at a rate that balances the long term socio-economic costs of this generation (including transmission losses and CO_2) with the net metered price,

Banks should be encouraged to provide financing for micro and auto generation.

Priority 3. Planning and Implementing Essential Energy Infrastructure

Consultation

As the path of our energy future is debated, the infrastructure requirements of any decisions should also be understood and considered. As stated above this requires a facilitated public engagement process on energy policy to inspire a national debate.

Consultation on energy infrastructure should be undertaken in the same way that consultation on other national infrastructure developments should be undertaken. The principles of the Aarhus Convention must be adhered to, and consultation must take place when there is a genuine opportunity to influence decisions, i.e. when all options are open. The spirit of European Directives on Environmental Impact Assessment and Strategic Environmental Assessment must also be adhered to, to ensure that consultation is not just undertaken as a formality or as a tick box exercise, as has often been the case in the past in Ireland.

Information on infrastructure route options, potential environmental impacts, and costs should be disseminated to the public in a timely manner and in a form that is easy to understand.

Electricity Infrastructure:

Upgrades to the national grid to ensure reliability of supply and to facilitate renewables should be undertaken to ensure a successful transition to a low carbon and reliable energy system.

However, it is important that energy infrastructure is developed with the least environmental and social cost. Route options need to be explored in consultation with communities and stakeholders to develop the least damaging routes, rather than the cheapest options.

The option of putting transmission cables underground should be considered on a case by case basis - depending on local, landscape, environmental or tourism concerns - subject to public willingness to bear any additional cost. Denmark has adopted this option where more expensive underground grid routes were favoured over visually intrusive over-ground options.

The installation of Smart Meters in every house should be undertaken sooner than 2016 and completed as a matter of urgency. Coupled with this, time-of-use pricing should be available to incentivise use when renewable supply is high, and discourage use when supply is low.

Opportunities for using smart grid technology should also be explored to ensure the grid is used in the most efficient manner practical. In addition, the opportunity to use smart grid technology with smart local area electricity pools, or micro grid areas, should not be underestimated. Such technology is now a reality and involves using new meters with existing electricity infrastructure, local energy producers, and willing active local consumers. These new technologies partnered with willing communities can enable smart power matching of locally embedded clean generation in local areas that is fully harmonised with national grid networks. Thus the overall constraints on national grid infrastructure are reduced and national grid upgrades are minimised.

Interconnection with neighbouring countries is essential to maximizing the displacement of fossil fuels by renewable energy across Europe, and should be pursued as a matter of urgency.

The new grid infrastructure proposed is currently being met with fierce local opposition from some communities and anti-pylon groups. Whilst visual, health and environmental impacts are often cited as the

main reasons for opposition, it is important to note that at present communities have little or no access to the grid to use for their own benefit, even as it passes through their areas. Allowing communities to access this grid infrastructure for their benefit could reduce the opposition to this infrastructure. This could be facilitated through;

- Facilitating access to the grid for communities who want to generate renewable electricity.
- Fair and secure payments to community energy generators, micro generators and auto generators who export all forms of renewable electricity to the grid (wind, solar, CHP, bioenergy).

Oil Infrastructure:

The Green Paper makes it clear that oil is expected to continue to play an important role in Irish energy up to 2020 and in the medium term (the medium term is not defined). This proposal is not consistent with the aspiration to decarbonise the energy system. Whilst it is recognised that oil currently contributes significantly to the fuel mix at present, a policy priority within the White Paper must be to reduce our dependence on oil. Thus, upgrading oil infrastructure should be redundant, and the focus instead should be on replacing oil in the energy mix with renewable technologies.

Upgrading Whitegate post 2016 should not be a priority.

Gas Infrastructure:

The Green Paper makes it clear that gas is expected to play a significant role in Ireland's energy mix in the short- and medium-term. Conventional gas is less carbon intensive than other fossil fuels and should be prioritised over the use of other fossil fuels, such as coal and peat in the short- to medium-term.

However in the long term, post 2030, gas too will need to be phased out. The use of BioGas within the existing gas infrastructure should be explored and should be a priority.

Priority 4. Ensuring a Balanced and Secure Energy Mix and Priority 5: Putting the Energy System on a Sustainable Pathway

It is stated in the Green Paper under Priority 5, *Putting the Energy System on a Sustainable Pathway* that achieving a low carbon economy is a focal point of Ireland's energy policy. However, from reading Priority 4, *Ensuring a Balanced and Secure Energy Mix,* this assertion is not inherent. Deciding on the appropriate fuel mix and ensuring a low carbon economy can only be achieved by bearing sustainability – environmental, social and economic -- in mind for every decision on energy policy. This will only be achieved by acting with energy efficiency and conservation as a core principle, and by reducing our dependence on coal, peat, oil and eventually gas, and shifting to a mix of low carbon renewable technologies, particularly wind, solar, hydro tidal, biomass, biogas and combined heat and power technologies. The Government needs to act now and make a dramatic shift away from our over-reliance on fossil fuels towards a sustainable, climate-safe and modern energy system. The White Paper is the ideal place for this policy context. It is therefore not considered appropriate to have a separate section on *Putting the Energy System on a Sustainable Basis* and both Priorities 4 and 5 are discussed in this section.

The risks of runaway climate change are well understood, and we are already experiencing the adverse impacts of these changes to our climate. The 2013 IPCC Report confirmed that in order to have any chance of combating catastrophic climate change, the majority of existing reserves of fossil fuels must be left in the ground, and the use of renewable technologies in energy must significantly increase. However, despite recent renewable energy developments in Ireland, the most recent SEAI report[10] describes a nation with increasing dependency on fossil fuels (93%, up from 92% in 2011), an extremely high cost of importing fuels (€6.5 billion in 2012), an increasing reliance on the most polluting fuels (coal and peat used for electricity generation increased by 27% and 16% respectively in 2012), and a subsequent relative decrease in renewable technologies.

Ireland's energy related CO_2 emissions, although dropping, remain high at 36 Mt, and importantly are 19% above the 1990 level. Renewable contribution to the energy system only represents 7.2% of total primary energy[11].

These figures do not paint a picture of a modern, sustainable energy system.

As advised in the recent research undertaken by NESC a long term and intentional vision for the future of Ireland's energy policy is required[12]. While it is welcome news that the 2020 renewable energy targets for Ireland will be reached, it must be noted that recent analysis from the EPA states Ireland is unlikely to meet overall 2020 EU emissions reductions targets[13]. The increase in emissions from the energy sector in 2012 is attributed to the increased amounts of coal and peat in the mix and the relative decline in renewables.

10 Sustainable Energy Authority of Ireland, Energy in Ireland 2013 (data from 2012)
11 Ibid previous reference
12 Ibid ref 1
13 http://www.epa.ie/newsandevents/news/previous/2014/name,54166,en.html#.U8Pz0bEXxYU

In the context of the forthcoming Climate Change legislation, and the objective to move Ireland to a position of near zero emissions by 2050, we must take an ambitious position on our energy policy and focus now on fast and fair emissions cuts.

Specifically,

- Reducing global greenhouse gas emissions must form a fundamental element of Irish energy policy and must be priority.
- The long term costs of CO_2 must be reflected in the price that is paid for energy generating fuels.
- Recognition that the most sustainable energy is the energy we do not generate, do not transport and do not use.
- As we transition away from fossil fuels, it is likely that electricity demand will grow. This coupled with the general growth in the use of electronics and technology suggests our reliance on electricity will increase.
- Communities and individuals have a role to play in generating renewable energy.

Reducing Energy Demand and increasing Energy Efficiency

The most sustainable energy is the energy that we do not generate, do not transport and do not use. To reduce the amount of energy that we use and use energy more efficiently, the following could be proposed within the White Paper.

To enable citizens, businesses and the public sector to reduce energy wastage and save energy, Government policy should ensure;

- **Smart meters** coupled with **demand management** and **time-of-use** billing that incentivises energy use when renewable supply is high and discourages energy use when renewable supply is low.
- Schemes such as **pay-as-you-save** to encourage energy savings (It is understood that much work has been undertaken by the Department to develop a pay-as-you-save scheme for Ireland, however this policy has not yet been implemented, or it has been decided that this model is not an appropriate solution for Ireland. Greater clarity on the reasons why the pay-as-you-save model has not progressed should be provided during this consultation process, to allow the public the chance to make informed decisions.).
- **Tax incentives** on energy efficient materials, so that people pay for energy efficient materials pre-tax (similar to the bike to work scheme).
- Amendment to the **Better Energy Programmes operated by SEAI** which are in decline to ensure insulation, upgrades and retrofit makes financial sense for everybody, and benefits home owners and social housing, and the private rented sector, rather than simply benefiting contractors (who routinely use grant payments as top up payments) and are required to uphold no minimum quality standards. Declining uptake can be attributed to lowering the grant amounts in 2013 and a lack of confidence in expected results and savings. This uncertainty could be removed by ensuring a quality assurance guarantee and review process which would require housing upgrades to meet minimum standards, or minimum BER ratings. Enabling access to capital finance and ensuring reasonable pay

back periods as well as implementing a quality control system with guarantees on energy savings, or a minimum BER ratings could help increase uptake of this scheme.

- **Onsite generation** of renewable energy makes financial sense for everybody and all renewable technologies with net metering or payments for export to the national grid that ensures reasonable pay back periods, and maintains the energy bills at close to existing levels. It is noted that at present there is no guaranteed price for exporting solar or CHP electricity to the national grid. SEAI grants at present allow for oil and gas boiler upgrades, but do not cover biomass boilers or solar electricity for example. SEAI grants should include for renewable energy generation.

- **Community energy** must be supported. Communities who generate their own energy, are more energy aware and use less energy.

- Incentives for energy utilities to ensure that it makes financial sense for energy utilities to generate less energy and sell less energy. In this way energy utilities will be incentivised to help their customers to use less energy.

- Mandate that all new electrical goods sold in Ireland have an **EU Energy Label rating** of A.

- Ensure **reporting** on our progress to meet our targets on energy efficiency outlined in the National Energy Efficiency Action Plan is up to date and current to allow comparisons between users. The only data publicly available on energy efficiency in the public sector is from a pilot study undertaken in 2010 with 18 public sector users.

- Update **building regulations** to include more stringent requirements on energy efficient materials.

- Introducing **energy savings schemes** through utility companies, such as OPower, operated in the USA, to encourage consumers to reduce their energy use by providing information and data on energy use.

- **Data sharing**, so that people, businesses and the public sector can compare their own energy use with their peers Education and awareness, so that people understand how they can make changes to reduce their own energy use.

In addition, in order for energy suppliers to really encourage consumers to reduce demand, it must be in their financial interest to do so. The current model supports energy utilities to generate energy and sell it to consumers. The more they sell the greater their profits. Real incentives from companies to help their consumers to save energy will only come about when it makes financial sense for utilities to generate less energy and sell less energy.

Renewable Energy Should be maximised:

The share of **renewable in total energy must be increased**. At the EU level within the 2030 climate and energy package, Ireland should push for a more ambitious renewable energy target which assigns responsibilities to each member state. We recommend a target of 45% renewable in total energy for member states by 2030 is an appropriate level. In addition, within Irish policy, we must refrain from viewing EU targets and recommendations as a ceiling to our national policy. Therefore in addition to pushing for stronger EU targets, we should include ambitious national renewable energy targets every 5 years from 2020 onwards.

A **low carbon energy** system will only be successful if there are a mix of renewable technologies operating in harmony with each-other, including both intermittent and constant bioenergy sources. While Ireland has excellent wind resources, and these should be maximised, the current almost explicit reliance on wind energy alone will not facilitate the transition to a low carbon energy system, the White Paper must provide support for a mix of renewable technologies, which in Ireland offer excellent potential including solar, CHP, tidal, wave, Bioenergy (biomass, biogas, anaerobic digestion), district heating, pyrolysis.

A mix of developer owned and **community owned** projects should be facilitated to ensure the renewable industry reaches its maximum potential, this includes co-ownership models, co-operatives, trusts, public-private partnerships.

In order to ensure all renewable technologies are supported, all renewable energy generators must be enabled to receive **a fair and secure price** for the energy they generate and export to the grid (developer led projects, community led projects and micro/auto developments). It is noted that solar PV and CHP electricity is not eligible for payment under the current REFIT system and that the prices offered for bioenergy and renewable heat have not proved sufficient enough to allow these industries to grow on a national scale.

Renewable energy developments must ensure that carbon reductions are delivered, and that carbon emissions from renewable energy developments do not outweigh carbon savings. Development of wind farms on active peat bogs, and deep peat must therefore be considered in this context. Disruption, excavation and drainage of peatlands has the potential to cause large scale carbon emissions. Studies from Scotland show that a significant percentage of a wind farms gross carbon savings can be lost from peat soils when development proceeds without due cognisance of the natural environment[14]. However, where sensitive design and management practices to minimise net carbon loss (i.e. undrained floating roads, habitat improvement and site restoration) are used, carbon payback periods can be in the order of months, even on peatlands. It is recommended that an assessment of net carbon gains (or losses) is undertaken for all potential renewable energy developments

Wind energy developments must be developed to ensure environmental impacts are minimised, in particular potential impacts on birds and bats must be minimised through careful design. During the operational life of wind farms, bird and bat mortalities should be monitored and the results of this monitoring should be made publically available. There is no consistent approach to bat impact assessments at present, it is recommended that surveys to assess potential impacts on bats should be undertaken in line with the Bat Conservation Ireland Guidelines or similar standards, such as those in Northern Ireland.

Export of renewable electricity should only occur at times when we have meet as much domestic demand from renewables as practical. The principal purpose of renewable energy import and export should be to even out variations in supply and demand by pooling electricity with neighbouring countries. Interconnection with our neighbouring countries is therefore essential to maximising the displacement of fossil fuels and increasing the use of intermittent renewable energy sources and should be pursued as a matter of priority.

The Green Paper does not provide a separate section on **Bioenergy**. The White Paper should include a section on bioenergy. Bioenergy will play a role in reducing greenhouse gas emissions and meeting vital needs in many parts of the world, including Ireland where we have excellent bioenergy potential, particularly

14 Scottish Government, various documents on wind turbines, peatlands and carbon, available at http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings

biomass for heating and materials for anaerobic digestion. Current policy encourages biomass to be used in an extremely inefficient manner, for electricity production (approximately 30% efficiency), while if used for home heating, efficiencies of 80-90% can be achieved. At the very least, SEAI grants should cover the installation of biomass boilers in homes (as oppose to only covering oil/gas boilers which is the current situation).

Current policies on imported **biofuels** must be readdressed in recognition of the significant environmental and social impacts that the spread of biofuel crops has on developing countries, and the knowledge that biofuels do not result in carbon reductions. The EU's biofuel targets have led to increased rapeseed oil production in Europe but a major reduction in the amount of rapeseed oil available for food production. The result has been a large increase in palm oil imports. This is driving the clearance of peatland rainforests in South-east Asia with massive biodiversity and greenhouse gas impacts.

Fossil Fuels should be phased out

The burning of peat for electricity and all government subsidies that support the peat industry must cease immediately. If it is decided not to cease peat burning immediately, a date for ceasing must be set for the near future. Co-firing peat with biomass is not considered appropriate as it acts to prolong the period of degradation of peat bogs. Under the forthcoming state aid rules subsidies for fossil fuels will no longer be permitted, and therefore co-firing peat with biomass should not be used as a means of securing subsidies under the Public Service Obligation levy.

The reliance on electricity from the coal burning plant at Moneypoint should be reduced as its reaches the end of its operational life. There should be no place for burning coal in Ireland's future energy mix. Moneypoint accounts for approximately 17% of Ireland's electricity generation. In 2012 renewables accounted for 19% of electricity generation, and are expected to easily account for 40% by 2020, thus removing the need to use coal for electricity[15].

Exploration for further oil and gas reserves within Ireland must not proceed. There is no place for additional fossil fuels in a low carbon energy system. As is clearly stated in the IPCC reports, the world must leave the majority of known reserves of fossil fuels in the ground, unburnt. Exploration for additional unknown reserves thus contradicts this recommendation and is not a sustainable direction for Ireland.

Ireland's reliance on oil for home heating must be phased out. This could be achieved in the first instance by improving insulation to reduce heat wastage, and by incentivising the installation of biomass boilers, or wood burning stoves, and air and ground source heat pumps.

SEAI grants that support upgrades to fossil fuel infrastructure should be phased out and replaced with support for renewable technologies.

Transport

The use of electricity to power vehicles provides an extremely useful method of storing electricity from renewable sources. Electric vehicles, coupled with smart meters, and time-of-use pricing would ensure that car batteries are charged at cheaper rates when renewable electricity supply is high (often during the night), and then used during the day.

Sustainable transport options should be pursued through the Department of Transport.

15 Ibid reference 5

Priority 6: Driving Economic Opportunity

The green economy has massive growth potential in Ireland, with increased jobs in the green infrastructure, green technology and renewable energy sector.

Transitioning to a low carbon indigenous energy source will not only bring security of supply, and a reduction in our greenhouse gas emissions, but it will reduce the massive amounts of money we send out of the country each year purchasing fossil fuels (approximately €6.5 billion annually). In particular if the levels of community owned renewable energy increase in Ireland there will be significant economic benefits. Community owned renewable energy developments though co-operatives, limited companies or co-ownership models provide local investment opportunities, generate local jobs and keep money in communities supporting local people, local activities and local businesses.

An ad-hoc group to consider and seek to resolve issues that may be preventing energy related projects from proceeding as is described is welcomed. However in addition to considering investment and employment, a focus of the group should be sustainability, community engagement and affordability. A number of organisations are suggested as potential members. In addition, we propose that a representatives from civil society groups are included such as the Environmental Pillar, Stop Climate Chaos, the People's Energy Charter etc.

Data and modelling on energy should be made publically available to ensure collaboration between researchers, policy makers and interested parties. The modelling work which underpins this Green Paper is not publicly available.

Community energy projects support both local investment, local business and local employment. Community energy projects should be supported and facilitated to ensure these important economic benefits are realised.

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