

Energy Policy

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1 Summary and Key Points

The science is unequivocal: the climate and biodiversity emergencies are real, and we are beginning to experience their impact. In October 2018, the International Panel on Climate Change (IPCC) published a Special Report on Global Warming which set out with devastating clarity the impact that a rise of 1.5C in global temperatures will have on the world.

The IPCC stated that there remains a window of only one decade for us to make the radical changes needed to halt the warming of our planet and in doing so save millions of lives, protect our natural world, and change the way we live for the better.

The changes we need to make in the coming decade are substantial, but we believe that they can be beneficial to all of our people - urban, rural, young and old and most importantly to our future generations. We in the Green Party have been learning about the solutions to climate breakdown for 40 years. We know that climate action has to be at the heart of all our policies.

This policy paper sets out the Green Party's Energy Policy Working Group's proposed actions on the pathway which, if implemented immediately, will transform Ireland's Energy Policy from climate laggard to climate leader.

This policy from now and going forward will aim to build upon existing national policies in the areas of Energy and Climate action by identifying gaps or areas of improvement. This is not a catch all policy and should be used to supplement existing national policies, many of which are excellent.

Currently the majority of the fuel used to supply our energy system today comes from fossil fuels despite significant efforts since 2005 to reduce the Greenhouse Gas (GHG) emissions of our energy system.

There have been some significant positive changes since 2005:

- Coal consumption has reduced by 47.3%
- Peat consumption has reduced by 33%
- Oil consumption has reduced by 14.4%
- Natural Gas – a cleaner fuel than the above has increased by 44.1% displacing the above sources of energy as a lower carbon intensive fuel source
- Renewables have increased by 159% since 2005
- Non-electrical renewables account for only 3.9% of the energy mix

- Overall, fossil fuel and biofuels that are combusted have reduced by 6.4% - more efficient thermal generation as a result of technology improvements and fuel changes have made the most significant improvements in this area. The electrification of some heat as a result of the use of heat pumps or other technologies has contributed. However, this is insignificant in comparison to the aforementioned changes.
- Electricity usage has increased by 16.7% - primarily due to increased population and economic activity.

More detailed analysis of Ireland's energy usage can be found in the SEAI's Energy in Ireland 2020 available on the SEAI website: www.seai.ie

Note:

The terms Energy Efficiency and Energy Conservation appear frequently throughout this document, and these complimentary terms are often confused. Energy Efficiency simply means to use less energy to complete the same task, such as use of LED light bulbs instead of CFL, whereas Energy Conservation refers to the decision and practice of using less energy e.g. turning off the lights when not in a room.

Key take outs

1. Renewable Energy in 2019 accounts for only 11.1% of our total final energy consumption. Our current target for Ireland is to source 70% of our Electrical Energy from Renewable Energy Sources by 2030. This will amount to 16.9% of our total final energy consumption – this will be dependent on the portion of electrification undertaken in the years to come.
2. With our current targets we will still need to source 83.1% of our total final energy consumption from fossil fuels assuming a zero-growth scenario in total final energy consumption. The Renewable Energy Directive (RED) sets out increased percentages of biofuels in transport fuels which will further reduce the fossil fuel portion of our total final energy consumption.
3. To meet our future climate action targets, it is essential to reduce our total final energy consumption. Since 2005 despite all of the work done in this area we have reduced our total final energy consumption by only 1.5%. Our policy must ensure that Energy Efficiency and Energy Conservation are at its core. For every kWh of energy we save or avoid using we improve our chances of finding alternative low / zero carbon energy sources to help meet our 2050 net zero goals.
4. Electrification of both Heating and Transport will be an enabler for further carbon emissions reductions in the coming years given our success in increasing the renewable energy portion of our electricity mix.

5. To move away from high carbon energy sources such as Coal, Peat and Oil we must accept that electricity alone cannot technically meet these energy demands. Currently electricity accounts for approximately 23% of the total final energy consumption of these three fuels. Natural Gas will play a supporting role particularly in the displacement of coal and peat in power generation, however it should be considered only as a transition fuel to ensure security of supply. All investment in infrastructure such as turbines or pipelines at this point should consider the use of clean fuels such as Biomethane or Hydrogen in the future. The majority of oil consumed is in the transport sector. The Green Party Policy working groups are currently preparing a transport policy and for the purposes of this group's work, Transport has been excluded from our scope.

The Green Party must set our expectations of targets for Total Final Consumption from renewable sources which are in line with the Climate Action Plan. These must be practical and based on a technically feasible strategy. Targets and policies for Electricity alone are simply not enough. There are a number of challenges to decarbonization of the remaining fossil fuel energy sources:

1. The uptake of Electric Vehicles has been slow and with the average car age in Ireland being 9 years old it is difficult to understand how the Climate Action Plan targets of 1 million cars will be met.
2. Long distance commercial haulage solutions for decarbonization are not technically mature.
3. There are currently no technically or economically feasible alternatives available for displacement of gas in the large industrial energy sector for high temperature heat with the exception of biomethane.
4. Hydrogen, while envisaged to be a future solution will not be a significant contributor to our 2030 requirements for carbon emissions reduction.
5. Upgrade of the housing stock to standards suitable for use of heat pumps has a significant cost and will take considerable efforts to achieve the level of reductions required by 2030 – it is not impossible but will be difficult.
6. The electrical infrastructure required to add such additional loads to the grid will be significant – the pace of upgrades needs to match the pace of electrification of both the heating and transport sectors.
7. The requirement for baseload power generation and peaking power when the wind doesn't blow or solar energy is unavailable will rely on fossil fuels in the short term however we believe that all investment should be future proof and that all efforts be

made to eliminate our reliance on fossil fuels through Energy Storage, further interconnection and other measures not yet identified.

8. Cognizant of the urgent need to frontload decarbonization, arising from the Climate Emergency, and despite the shift towards electrification in home heating and transport, the Green Party will set a target to reduce carbon emissions from the Irish electricity generation sector of at least 60% on 2018 levels by 2030. Our policy is to meet this target using renewables, interconnection, demand management and various storage technologies. At this point we do not believe that Carbon Capture and Storage will be useful in meeting the target. If necessary, demand control and/or various low-carbon electricity generation technologies will be open for consideration.¹

Our vision for the future of Energy Policy in Ireland is to pursue and achieve transformation to a lower carbon, climate resilient and environmentally sustainable energy system which will be underpinned by a secure and competitive energy supply, and to support and facilitate through offshore renewable energy development and international coordination the limiting of the effects of Climate Change in line with Climate Science.

1.1 Principles

The initial principles on which this Energy policy document is based are:

1. Energy Efficiency and Energy Conservation are key policies which will enable a transformation to a lower carbon society.
2. Energy Supply from all energy sources must decarbonize at a rate in line with the latest Climate Science to limit Global Warming in line with the agreed terms of the Paris Agreement.
3. Energy transformation projects must be enabled and accelerated where possible through removal of all bureaucratic and legislative barriers to their implementation and supported through policy and funding and other supports where necessary.
4. Energy security is a key factor, ensuring that we can provide our country with reliable, economically competitive energy – where possible we must endeavour to source our Energy from our own resources, reducing our reliance on imported energy.
5. Control of the Energy System should be improved to enable greater citizen participation, together with fair, affordable and equal access to energy and the goods and services it provides.

¹ Successful amendment from Dublin Bay South

6. Energy system transformation should bring with it significant health benefits, improved social well-being and environmental safeguards. The positive economic effects of the energy transformation on employment and across all sectors of the economy should be maximized.
7. Energy system change should account for population growth, demographic change, behavioural changes and assist in the adaption to our changing weather and climate.
8. Energy transformation will require a collaborative approach with every citizen in Ireland contributing to the energy future. Central and local government should collaborate in developing energy plans in consultation with local communities and businesses to set targets, identify opportunities to reduce demands and where possible produce energy where it is most efficient to do so.

The primary goal of this Energy Policy is to achieve net zero Carbon Emissions in our energy system as soon as possible to mitigate the effects of our energy consumption on Climate Change.

2 Policy details

2.1 Policy 1 - To reduce the Total Final Energy Consumption of our nation through mandating Energy Efficiency and implementation of policies which will ensure Energy Conservation in all sectors.

Short Term Actions (0-3 Years)

2.1.1 Action 1: Development and delivery of a major public information campaign on the urgent need for decarbonization.

This campaign should focus on the facts of climate change and the challenges faced by humanity as a result. This campaign must be run by the government in a manner that is hard hitting, yet hopeful showing the positive effects of the transformation on all sectors. The campaign must ensure:

- a. Awareness is raised across all sectors of society
- b. The urgency of the need for change and Ireland's role in contributing to this change
- c. Provide all sectors with an understanding of our Energy System – supply, generation, networks and demand.
- d. Illustrate the influence the people have on the energy system and its climate impact.
- e. Demonstrate the benefits of a low carbon energy system for our health, economy and future generations.
- f. Simple and effective ways to play ones part
- g. Demonstration that Climate Action reduces inequality across all sectors of society

2.1.2 Action 2: Build on existing legislation in SI426:2014 (3) (Energy Efficiency Directive) and its amendments.

- a) Expand the scope of the legislation to include SME's with a reduced scope of requirements commensurate with their scale.
- b) Introduce an agreement program whereby all practical opportunities identified in Energy Audits of companies must be implemented if the opportunities have an Internal Rate of Return (IRR) greater than 33% for the first 3 years of the program increasing to an IRR greater than 12% after the initial transition period.

- c) Introduce an assessment of auditor competence based on experience and educational backgrounds in order to increase the competence and supply of energy auditors. Consider increasing the requirements to undertake energy audits, engineering degrees at a minimum and sectoral specific experience.
- d) Publish the results of all audits on the SEAI website including only the following details to ensure commercial sensitivity:
 - a. Electricity kWh savings identified
 - b. Fuel kWh savings identified
 - c. CO2 Tonnes savings identified
 - d. Water m3 savings identified
 - e. IRR% to complete all agreed practical projects

2.1.3 Action 3: Mandate a systematic approach to Energy Management for all large energy users which meets or exceeds ISO50001 standards.

- a) Base the mandate to comply on emissions – CO2 emissions using EPA Environmental licences and Energy Companies as a source of information to inform of organizations that must comply with the standards.
- b) Ensure competence in delivery and implementation.
- c) Align with sectoral targets
- d) Assertive audit style must be applied – there are far too many cases of poor auditing
- e) Ensure accredited audit body – there are a number of agencies undertaking certification which are unaccredited.

2.1.4 Action 4: Develop legislation to ensure that all investment in retrofits, expansions or upgrades to manufacturing facilities which do not fall under the national building regulations must undertake an Energy Efficient Design review which complies with IS399.

- a) The necessity to undertake this EED review must be based on project value.
- b) This policy can be supported in the immediate term by the SEAI EXEED program.

2.1.5 Action 5: Review barriers to Energy Efficiency and Energy Conservation Measures and retrofit of buildings and assess if barriers are created by having technology focused grant supports.

Propose alternative supports for buildings retrofits based on Carbon Reduction potential of the projects over a ten-year time scale and agnostic of technology.

The application for all grants must be made to a central body and evaluated on a CO₂e Tonne / € basis with all applications and decisions published to ensure transparency.²

2.1.6 Action 6: Development of sectoral targets on Energy Efficiency which far exceed all current targets and are in line with the latest Climate Science to limit global warming to maximum 1.5 deg C.

These targets should be approx. 30% by 2030.

These targets must be placed on the Energy Companies through the Energy Efficiency Obligation Scheme and should align with international, national, local and organisational targets. Annual reporting on progress should form part of the SEAI's Energy in Ireland Report

2.1.7 Action 7: Mandate all large organisations to report their GHG Emissions in line with ISO14064 or GHG Protocol standards to a central government body which will publish these emissions, these then should be compared with the Carbon Budgets set in the Climate Bill.

On March 10, 2021, the European Union's Sustainable Finance Disclosure Regulation ("SFDR") came into force and this instrument needs to be translated into Irish law and effective means for enforcement created.

2.1.8 Action 8: Use the National Treasury Management Agency (NTMA) to underwrite low-cost loans to support.

Energy Efficiency, Energy Conservation, Community Energy and Energy Efficiency Related Enterprise development - this can be done through state agencies such as An Post.

This scheme should offer the lowest rate possible to ensure its operated on a not-for-profit basis while also protecting the integrity of the organization from bad debtors and changing ECB interest rates.

2.1.9 Action 9: Develop up to date sectoral guides on Energy Efficiency and monitoring methodologies using experts from the private sector and industry collaboration.

This should include equipment specifications, operational controls and toolkits to enable self-assessment of energy efficiency performance. This should be done through the SEAI.

2.1.10 Action 10: Develop a national Energy Efficiency task force which will call on members of the public and private sector to contribute, with the panel being open to all suitably qualified and experienced individuals through the application process.

This task force will form part of a National Decarbonization Task Force.³

² Successful amendment from the Parliamentary Party

³ The Energy Group accepted this amendment from the Parliamentary Party

2.1.11 Action 11: Target Energy Efficiency Assessments of all high carbon fuels in Industry.

In 2018 there were significant dirty fuels still being consumed in industry in Ireland: Using the EPA reported figures, identify the users of these fuels in Ireland and provide an energy audit specific to this fuel usage through the SEAI to identify opportunities to change fuel to a lower carbon source such as natural gas or LPG, renewable electricity or biofuels.

2.1.12 Action 12: Set a Public sector Total Final Consumption target of 50% absolute from a baseline of 2018 by 2030 to encourage Climate Leadership from this sector and a 55% reduction in Carbon Emissions by 2030.

These are initial numbers and require more detailed study.

2.1.13 Action 13: Set Internal Carbon Pricing for the public sector starting at a minimum of €100/Tonne in 2022 to encourage energy efficiency and decarbonization measures.

This should be used to part fund Energy Efficiency and decarbonization measures.

2.1.14 Action 14: Development of expertise within the public sector to build capacity to meet the targets and future needs of a Low Carbon Economy.

- a) Educational supports to all employees in the public sector to complete approved third level courses in Energy and Climate.
- b) Develop a team of energy managers within the public sector which report centrally to lead the achievements of the targets.
- c) Ensure that pay scales within the public sector in the Energy and Climate teams align with other equivalent professional disciplines such as Engineering and Science and are benchmarked with the private sector to ensure that the best talent can be sourced to deliver results as expertise in these sectors currently commands a premium in the private sector.
- d) Energy Management: Develop competence in implementing energy management using ISO 50001 with a practical focus on energy savings rather than bureaucracy to meet certification requirements. This would encompass most of the other areas of increased competence required in the sector.
- e) Energy performance measurement: Current methodologies in use in Ireland, e.g. LIEN and the Public Sector MandR system need urgent replacement and development of competence in carbon emissions calculations. Improved metrics using International Standards which are not intensity based and are absolute will be required to ensure we can move forward and know if we are succeeding. Build capacity in smart metering, software, tariffs, reporting, etc. to support the monitoring of targets and also to support the identification of further initiatives.
- f) Design: There needs to be education/training available to increase the level of competence of designers, both engineers and architects and others in terms of

energy efficient design. This applies to both the technical and process aspects of design. A good example of the process is currently under development in IS399 “Energy Efficient Design”

- g) Construction: Constructors and installers need to be competent in the various technologies that will be involved.
- h) Commissioning: Commissioning contractors need to be competent in the various technologies that will be involved.
- i) Operation and maintenance: In house and Service companies need to be competent in the various technologies that will be involved and how to operate and maintain them efficiently. This can be the basis of a significant part of the reduction targets in terms of low hanging fruit from housekeeping type activities such as improved maintenance checks on assets etc. International experience supports the potential for very significant improvements in this area.

2.1.15 Action 15: Develop policy and financial supports for heat recovery of Industrial processes which accounts for a significant portion of the fossil fuel consumption in this sector.

Approximately 30% of all heat consumed in industry could be practically recovered for use within the plant reducing the necessity for fossil fuel use.

A mandatory heat recovery assessment should be undertaken in all SI426 (3) audits and where practical should be mandated to be implemented.

2.1.16 Action 16: Developing a National Culture of Energy Efficiency and Energy Conservation.

Developing a culture of Energy Efficiency and Energy Conservation in an organisation or in a country is difficult, but it can be done effectively through developing Energy Awareness, promoting good behaviour and education at the earliest time possible.

- a) Develop a policy of Energy Efficiency and Climate Action Education by introducing it to the curriculum in all schools from Primary level right up to Third Level.
- b) Supports to business and organizations in developing Energy Awareness programs for employees.
- c) The national media campaign on Energy and Climate action should run for an indefinite period and be updated frequently to account for the latest information and technologies available.

2.1.17 Action 17: Develop a national careers program for 2nd Level in collaboration with the 3rd level institutions to promote careers in Energy and Climate Action.

Promote, Educate and Inform about the career possibilities in this area at secondary school level to further build capacity to meet future demand - more innovators, change makers, consultants, activists.

2.1.18 Action 18: Develop a national standard for Carbon Management which builds upon existing standards such as IS14001, ISO50001, ISO14064 to ensure that organizations have a standardized methodology for management of their Carbon Emissions.

Medium Term Actions (3-6 Years)

2.1.19 Action 1: Develop legislation and regulations around the embodied carbon of buildings with the view to development of near zero embodied carbon for all new builds by 2030 and net zero by 2050.

This will considerably reduce the use of cement and insulation materials such as expanded polystyrene in the construction of buildings, which will have an impact on the national emissions as these are manufactured here. It will also reduce global emissions considerably through reducing/eliminating the use of steel in the majority of buildings and encourage the development of low carbon manufacturing processes for these materials such as insulation, structural timber and low carbon cement. This legislation will also encourage the development of a long term sustainable indigenous market for timber products.

2.1.20 Action 2: Modify the building regulations to ensure that fossil fuel combustion equipment cannot be installed in new buildings within 3 years.

Action 3: Modify the building regulations to ensure no combustion equipment can be installed in urban areas to ensure air quality and maximize energy efficiency.

2.1.21 Action 4: Modify the building regulations to ensure all new builds incorporate rainwater harvesting, greywater reuse, reducing the energy needs of the water sector.

2.1.22 Action 5: Modify the building regulations to ensure all new builds enable free cooling where possible and that air conditioning equipment must be only used to provide supplementary cooling over and above the energy availability in the outside air.

2.1.23 Action 6: Encourage the development of market conditions favourable to the electrification of steam heat in industry whereby industrial energy users can operate hybrid heating systems operating on electricity from the grid at times when excess renewable energy is available and fast response is required.

This will enable an increased renewable penetration on the grid, decarbonize the heating sector and enable an increase in energy efficiency as steam heating systems in industry are usually 70 - 80% efficient.

2.1.24 Action 7: Modify the building regulations to regulate that heating can only be sourced from Renewable sources in all new commercial buildings from 2030.

2.1.25 Action 8: Introduce stipulations in all future planning applications for data centres that a significant portion of the useful waste heat must be utilized.

To do this data centres should consider co- development with complimentary industries such as aquaculture, horticulture, industry or consider district heating solutions for nearby population centres.

Long Term Actions (6 - 10 Years)

2.1.26 Action 1: Update SI426 (3) legislation in the period approaching 2030 to mandate that all technically feasible energy efficiency projects with an IRR% greater than that of the forecast European Central Bank interest rates for the project payback period to be implemented by all organisations through funding from the Irish Strategic Investment Fund (ISIF) with loan repayments paid from the savings generated from the projects through their energy suppliers.

2.1.27 Action 2: Extension of the home renovation scheme to allow for the recovery of VAT on all money spent on Energy Efficiency measures.

2.1.28 Action 3: The installation of smart meters represents a significant opportunity to improve the energy efficiency of our homes, public sector, commercial sector and industry however this data is currently available only to ESB Networks. This dataset should be made freely available to the public and research bodies for the purposes of collaboration in the development of opportunities for energy efficiency.

This data should be shared on an anonymous basis with only metadata identifying the type of users, e.g., sectoral and location by county. This data should be retained indefinitely.

2.1.29 Action 4: Ban the sale of all equipment which does not meet the highest standards of energy efficiency from 2026.

- 2.1.30 Action 5: To encourage the upgrade of existing housing stock a stamp duty rate of 0% should be applied to houses over 10 years old with a BER of A3 or above.**
- 2.1.31 Action 6: To encourage an upgrade of the private residential rental stock allow for an offset of income tax for all energy efficiency upgrades for a period of 2 years.**
- 2.1.32 Action 7: A review of the SEAI reporting structures on success of programs – An independent full review of all programs implemented since 2008 should be undertaken to ascertain value for money (€/Tonnes) and develop key learnings to ensure reform in this agency for the future.**
- 2.1.33 Action 8: To encourage upgrades of Building stock and improve the return on investment consider a policy of rates reductions for properties with a BER rating of A3 or above.**
- 2.1.34 Action 9: Consideration should be given to the quality of retrofits and to the standards to which they are upgraded - there are concerns with B rated homes that overheating is a considerable issue and the net benefits and costs of upgrading to an A2 are considerable from a wellbeing and Energy Efficiency perspective.**
- 2.2 Policy 2 - To increase the share of Renewables in our Total Final Energy Consumption to a level in line with the latest Climate Science which limits global warming to a maximum temperature increase of 1.5 degrees Celsius.**

Short Term Actions (0-3 Years)

- 2.2.1 Action 1: Adequately resource government departments/state bodies which deal with the processing and support of renewable energy projects in a timely manner.**

The Department of Energy, the Commission For Regulation of Utilities (CRU), and An Bord Pleanála are all significantly under resourced. (Department of Housing)

- 2.2.2 Action 2: Legislate for the enactment of Article 23 of REDII (EU) in Irish legislation in order to promote the use of renewable energy in the heating and cooling sector.**

This obligation should be placed on the suppliers of energy in a similar manner to that of the Energy Efficiency Obligation Scheme and therefore create suitable market conditions for the development of renewable solutions in the heating and cooling sector.

2.2.3 Action 3: Undertake an assessment of the potential for sustainable renewable gasses in Ireland and develop a sustainable renewable gas strategy, focusing on biomethane and hydrogen generation.

The review would identify if financial supports are needed to support this industry and at what level Opportunities for farmers should be identified, including bioenergy from farm waste, and bioenergy crops coupled with biodiversity.

In the first instance renewable gasses should be developed for use in the hardest to electrify elements of the energy system such as heavy industry, agricultural machinery, heavy goods vehicles, shipping, aviation etc. The review should also focus on the potential for direct injection into the gas grid in the context of the electrification of heat and reducing the national demand for gas in building heating and cooling.

Special attention should be given to the potential environmental impacts on water quality and biodiversity and any impacts on food supply and land use from encouraging farmers to switch from food production to energy crops for the production of biomethane. Only hydrogen produced from renewable energy sources will be considered, i.e. 'green' hydrogen.

Any supports that are offered to develop this industry should where possible leverage available funding through the European Union green deal and be considered in a holistic manner incorporating other environmental concerns such as wastes, water quality and biodiversity. The scheme where possible should provide funding to research organisations and private sector research into this area specifically.⁴

2.2.4 Action 4: Any sustainable renewable Gas Strategy that is developed should incorporate the immediate need for policy directing the development of Biomethane production and in the future Hydrogen or other sustainable renewable gases.

This strategy should ensure that there are suitable policies in place to:

- a) Ensure the sustainability of renewable gases in line with the EU REDII directive
- b) Ensure that the development of any renewable gas industry has adequate legislation in place which is aligned to existing and future Environmental legislation to ensure the protection of the environment from potential future issues which may develop in the areas of:
 - a. Biodiversity
 - b. Waste
 - c. Water Quality

⁴ Successful amendment from the Parliamentary Party

- c) Ensure that any supports that are offered to farmers to switch from food production to energy crop production are designed to ensure an overall reduction in greenhouse gas emissions from the agricultural sector, and are focused on those agricultural activities with the highest greenhouse gas emissions. In addition, the need for biodiversity enhancement on any farms participating in energy crop production must form part of any support scheme, for example the EIP-Agri schemes.⁵

2.2.5 Action 5: The carbon tax will continue to be applied to all fossil fuels and will increase each year to at least €100 per tonne by 2030 informed by the findings of the ESRI study on how best to prevent fuel poverty.

As commitments have already been made in the Programme for Government to hypothecate all additional carbon tax from 2021 to address fuel poverty, home retrofit and agricultural schemes, appropriate funding sources for renewable gasses should be investigated.⁶

2.2.6 Action 6: Provide state guaranteed low interest loans with standard payment terms through community lending facilities such as Credit Unions and Post Offices to promote upgrades to houses from an Energy Efficiency or Renewable Energy perspective.

The repayment terms will be tied to the Return on Investment of the technology with performance contracting terms with all installers and suppliers of equipment requiring

Measurement and Verification of savings to IPMVP standards 1 year after the installation. To enable those with poor credit history to avail of these state guaranteed loans repayments at source could be added to the Energy Suppliers billing.

2.2.7 Action 7: Create a network of Community Energy Champions whereby a training curriculum is developed by the SEAI in collaboration with the private sector to upskill Energy Champions in each community.

These Energy Champions would agree on application of training to provide a number of hours per year to the local community to offer relevant advice on Energy Efficiency, implementation of home, SME or farm Energy upgrades or supports available from the SEAI.

2.2.8 Action 8: Create a network of Community Energy Champions whereby a training curriculum is developed by the SEAI in collaboration with the private sector to upskill voluntary Energy Champions in each community.

These Energy Champions would agree on application of training to provide a number of hours per year to the local community to offer relevant advice on Energy Efficiency,

⁵ The Energy Policy Group accepted this amendment from the Parliamentary Party

⁶ The Energy Policy Group accepted this amendment from the Parliamentary Party

implementation of home, SME or farm Energy upgrades or supports available from the SEAI.⁷

2.2.9 Action 9: Removal of all legislative and regulatory barriers that limit the opportunity for homes and business with microgeneration or energy storage to participate in the open market as “prosumers” and offer the flexibility to trade energy in real time.

In support of this a complete market review is proposed, in order to assess all potential shortfalls, and define the most equitable arrangements for all stakeholders, including the emerging rights of the prosumer, with the purpose of suitably developing the low voltage distribution grid in an energy efficient and cost-effective manner. As part of a complete market review, it is proposed to review the CRU’s role and mandate, and its ability to represent all electrical consumers and prosumers in a rapidly changing electrical system.

2.2.10 Action 10: We support the Micro Generation Support Scheme (MGSS) however we have made a submission to the consultation which outlines issues we believe in the design of the scheme.

This submission is included in the Appendix of this document.

2.2.11 Action 11: Explore introducing grants for Renewable energy generation that are not linked to specific technologies for any technology that can generate energy from sustainable renewable energy sources as defined by the REDII.

This may promote the development and acceleration of new technologies while also ensuring that sole profiteering by suppliers of equipment such as Heat Pumps or Solar Panels where grants are available is avoided.⁸

2.2.12 Action 12: Contractual agreements between public or semi-state bodies that prevent or limit the deployment of renewable energy projects must be examined and renegotiated to remove these limitations.

2.2.13 Action 13: High Voltage DC networks will be required to meet our future targets for Wind Energy on the grid. A HVDC Strategy in collaboration with Eirgid, ESB, developers and neighbouring countries should be commissioned in the immediate term.

2.2.14 Action 14: The Wind Energy Planning Guidelines need to be fully composed, agreed and implemented for onshore Wind Turbines. We need to create Offshore Wind Guidelines which enable acceleration of deployment of renewables while also ensuring protection and enhancement of the marine environment.

These guidelines should integrate with protection of marine species and habitats.

⁷ The Energy Policy Group accepted this amendment from the Parliamentary Party

⁸ The Energy Policy Group accepted this amendment from the Parliamentary Party

Medium Term Actions (3-6 Years)

2.2.15 Action 1: Develop a National Research group focused specifically on Energy Networks of the future.

This group should include all stakeholders from Industry, State and 3rd Level Institutions

2.2.16 Action 2: Increase the funding available for the Galway Smart Bay project and ensure that this facility's use can be maximized to accelerate the development of new technologies in the area of Marine Energy.

2.2.17 Action 3: A National Heat Networks strategy should be developed to build upon the work already completed in the areas of renewables and waste heat and the experience gained by Codema.

Heat networks should, where practical and economical, be developed in urban centres or in clusters of industrial centres in order to facilitate the use of waste heat from existing or future Power plants, incinerators or large industry.

Policy and further research will be needed to determine the barriers to development of such a strategy.

2.3 Policy 3 - Remove all bureaucratic and legislative barriers to the development and acceleration of Energy transformation projects.

Short Term Actions (0-3 Years)

2.3.1 Action 1: Planning permission requirements around Solar PV installations should be reviewed and legislation to allow for smooth and efficient planning process for all rooftop and ground mount PV installations for auto-production should be considered, and extend the exemptions from planning permission for on-site solar PV to include public buildings, community buildings, and schools.⁹

2.3.2 Action 2: Grid connection permitting, export licenses and other permitting requirements for Solar PV installations should be evaluated and where practical, a technology specific process should be developed due to the low impact nature of the technology.

2.3.3 Action 3: Create a national strategy for Energy Networks which applies to all large-scale investment in infrastructure to enable economies of scale in increasing the capacity of the networks by installing energy networks at the same time as transport system upgrades in rail and roads.

⁹ The Energy Policy Group accepted this amendment from the Parliamentary Party

2.3.4 Action 4: Removal of the regulatory barriers to Community and Industry led Microgrids by removing the requirement for a distribution licence for networks up to 100 MW (Megawatts).

This can be done by changing the scope of the CRU (Commission for Regulation of Utilities) to allow licencing of electricity distribution beyond ESB networks. Remove the requirement for private companies, communities and other small distribution networks (up to 100 MW) to require a distribution licence by the CRU.

2.3.5 Action 5: Create provisions for special planning regulations for small or community based electricity distribution networks (Up to 100MW).

2.3.6 Action 6: Legislate that all Grid Enhancement Projects to be deemed of strategic national importance allowing these to be assessed directly by An Bord Pleanala.

2.3.7 Action 7: Removal of the regulatory barriers to dynamic / real time retail energy pricing based on the wholesale market prices.

2.4 Policy 4 - To promote the development of an Energy System where the people and communities of Ireland have an enhanced level of control to ensure fair, affordable and equal access to clean energy.

Short Term Actions (0-3 Years)

2.4.1 Action 1: Develop legislation which allows the state to profit from each Offshore Renewable Energy Project on behalf of the people of Ireland through the introduction of a lease agreement / fee based on output to promote the development of the Energy System and provide the people of Ireland with a portion of the profits from the development of Renewable energy in Ireland.

2.5 Policy 5 - Energy system transformation should bring with it significant health benefits, improved social wellbeing and environmental safeguards. The positive economic effects of the energy transition on employment and across all sectors of the economy should be maximized.

Short Term Actions (0-3 years)

2.5.1 Action 1: The combustion of waste through incineration represents a significant risk to public health and air quality. Our general policy is that waste should be avoided where possible, recycled or reused where practical and where incineration is required then there needs to be very strict criteria for approval of future projects

- a) Accelerate the transition to the latest BAT(2019) standards for existing plants.
- b) All incineration facilities must comply with air quality regulations.¹⁰
- c) Where possible to be located within pipeline distance of large heat users – e.g., Industry that can utilize the waste heat of the process or alternatively, the incinerator should be developed in co-operation with a complimentary business that can harness this useful heat e.g., Aquaculture.

2.5.2 Action 2: The Green Party believes that the burning of Biomass on a medium to large scale in all areas should be reviewed based on air quality requirements.¹¹

This includes all plants which fall in the range of Medium Combustion Plants 1 - 50 MW as defined by EU regulations and above and situations where multiple plants located in close proximity to each other would create a combined detrimental effect on air quality.

This will include for power generation and heat generation. Biomass combustion represents a significant risk to human health due to the resultant emissions particularly in the local area in close proximity to the plant. The efficiency of Biomass combustion is also considerably lower than that of other energy conversion methods. All existing plants must be evaluated to ensure they comply with the latest EU directives on clean air and Ireland should take the lead on defining our own standards for clean air in Urban Areas.

2.5.3 Action 3: The Energy Transition brings with it a significant opportunity to develop our economy and create thousands of jobs for the people of Ireland. There is currently a skills gap in this sector of the economy and to meet these need a Climate Leaders of the future fund should be set up, paid for out of Carbon Taxes to provide 3rd Level Institutions with additional funding outside of the usual budgets to promote, develop and create new or existing 3rd level courses specifically aimed at Climate Action / Energy.

¹⁰ Successful amendment from Longford Westmeath

¹¹ Successful amendment from Longford Westmeath

2.5.4 Action 4: Additional research funding aimed at Climate Action / Energy should be made available through SEAI, Enterprise Ireland, IDA, Teagasc, Bord Bia and Science Foundation Ireland etc. and this funding should increase year on year in line with our targets for emissions reductions up to the year 2030.

2.5.5 Action 5: A national skills assessment to be undertaken by the 3rd level institutions to develop an understanding of the future needs in the areas of Education, Training and Apprenticeships in the area of Energy and Climate Action to inform government funding to build capacity in this area.

2.6 Policy 6 - Development of a dynamic Energy Policy that allows for changes in population, behavioural change and ensure resilience against the changing Climate and Weather conditions.

Short Term Actions (0-3 years)

2.6.1 Action 1: Energy Policy can no longer be considered in isolation. The development of national policies in the areas of Transport, Land-use planning, Environment, Agriculture, Climate and Finance must operate synchronously.

Currently many of these areas operate separately to each other and given the scale of the transition and need to develop policies, legislation and regulations at pace over the coming 30 years it would be prudent to ensure from the start of the journey that there is coherent and joined up approaches taken in all departments / bodies of the state. A mapping exercise of all existing legislation, policies and regulations should be undertaken in the immediate term.

2.7 Policy 7 - Energy transformation will require a collaborative approach with every citizen in Ireland contributing to the energy future. Central and local government should collaborate in developing energy plans in consultation with local communities and businesses to set targets, identify opportunities to reduce demands and where possible produce energy close to the final consumption point.

Short Term Actions (0-3 Years)

2.7.1 Action 1: Establish Local and Regional Energy Agencies in collaboration with the SEAI, Local Authorities, Local Enterprise Organizations and Enterprise Ireland.

The most successful of these organizations to date have been formed as private not for profit organizations with support from the local authorities and SEAI. There are currently 14 in Ireland. The purpose of these organizations should be to act as impartial energy consultants and project managers to the domestic, commercial, and SME sectors.

These organizations should operate as central centres of excellence and should not be given any competitive advantage / funding over similar types of for profit businesses, however their not for profit status should afford them competitive advantage in itself in offering lower cost services to those sectors of society that may be vulnerable in the energy transition.

One simple solution to expand the reach of such organizations would be to support the Local Development Agencies in delivery of services in this area.

2.8 Policy 8 - To develop Ireland's offshore renewable potential in line with the EU Commission's Strategy of November 2020 to harness the potential of offshore renewable energy for a climate neutral future.

Short Term Actions (0-3 Years)

2.8.1 Action 1: The creation of a separate Ministerial Portfolio for the offshore to ensure the aligned objectives of offshore energy generation, marine protection, sustainable fisheries, aquaculture and marine tourism are considered holistically.

Numerous interdepartmental groups and high-level teams have already been identified in previous government strategy papers, but the complexities of the issue are such that unless there is accountability and element of control under one Portfolio the objectives are unachievable. This has been shown to be the case if the previous strategies are examined.¹²

2.8.2 Action 2: Enact the Marine Planning and Development Management Bill by Q3 2021 having engaged in prior detailed consultation on its terms.

Ireland is required to submit a Marine Spatial Plan for their territory by March 2021 and this has been delayed. Ensure the process for grid connection is sufficiently robust to facilitate the growth of the full wind potential both onshore and offshore.

¹² The Energy Policy Group accepted this amendment from the Parliamentary Party

2.8.3 Action 3: Ensure the Departments responsible for granting licences and leases are given immediate and sufficient resources to deal with all licence and lease applications without delay, if necessary, by engaging external resources to expedite licence and lease applications.

Such resources to be put in place by Q2 2021 at the latest. Establish an independent entity responsible for granting offshore lease and negotiating the commercial terms.

A foreshore licence is needed to allow developers to investigate the suitability of foreshore locations for development of offshore renewable energy. Without a licence, a developer cannot carry out these investigations, which are an essential first step towards a subsequent planning application.

The delay in issuing site investigation licences will block achievement of Ireland's 2030 commitment for renewable energy and impact on grid investment strategy, such that the opportunity to participate in a larger offshore strategy to help meet the EU needs for renewable energies will be lost. The resources to approve site investigation licences is minimal, yet the consequences are enormous. Appropriate resources must be put in place immediately.

Ensure An Bord Pleanála has sufficient resources, both in terms of quality and quantity, to address the complex issues brought to them in relation to offshore wind development and protection of the marine environment.

Ensure CRU also has sufficient technological and other resources to meet the regulatory obligations arising from increased integration of offshore projects domestically to meet the challenge of a new European regulatory environment or International regulatory environment.

Ensure Eirgrid has sufficient resources to develop the grid infrastructure to meet the potential renewable generation of onshore and offshore and to engage with other Technical Standard Orders (TSOs) in the establishment of spatial and mesh grids to facilitate offshore development.

2.8.4 Action 4: Grid Infrastructure needs to be developed in parallel to offshore wind farms.

However, Grid Infrastructure requires long term planning and the Grid Infrastructure both onshore and offshore necessary to meet the potential for renewables to be produced by 2050 requires significant investment in grid commencing immediately.

2.8.5 Action 5: During the transition to a more meshed offshore energy system, networks will become more integrated in time and the projects more complex. A predictable long term legal framework is necessary to provide certainty to all parties involved and to mobilise investor financing.

Given the zero-marginal cost of offshore renewable generation, wholesale electricity prices currently tend to be low in states with high penetration of renewable entry

generation. This reality needs to be considered carefully in terms of how offshore wind can be funded, using mechanisms such as the Revenue Stabilization System. Clear responsibility must be taken for entering discussions on a European Regulatory Framework and for negotiating international government agreements to facilitate an expanded role for renewable energy on a transnational basis between Member States of the EU and possibly the UK.

2.8.6 Action 6: To achieve the upscaling of capacity to reach Irelands full offshore renewable energy potential utilising all our territorial waters with maximum benefits to Ireland, the offshore renewable supply chain must be able to ramp up its capacity and sustain higher installation rates.

Ireland needs to create policies and long-term planning with a clear regulation framework to provide signals and indicate the future estimates of offshore wind using Ireland as a base for development, manufacturing, maintenance and research. This will facilitate anticipated investments in the supply chain, including our ports. With its vast offshore wind potential particularly, Ireland is well placed to be a global leader in 'green hydrogen' production in the coming decades. Development of the green hydrogen economy should be led by Ireland and the economic benefits accruing from its realisation should be spread fairly across Irish society.¹³

2.8.7 Action 7: Both research and innovation are an important pre-condition for the deployment of large scale offshore renewable energy projects.

The funding of the proposed Acceleration of Floating Offshore Wind Technology (AFLOWT) by SEAI needs to be confirmed without delay and additional focus research and development for the technology that may be required for the expansion of the offshore wind industry needs to be developed.

The development of floating offshore wind facilities has enormous potential for the Irish coastal waters and Ireland currently ranks well behind other countries which have initiated research and development projects for floating wind platforms.

Focused research and development on grid technologies will also be required and Ireland can play a leading role, following on from its role in increasing wind power on the grid. and Ireland can now look to develop technologies for increased interconnectivity for using offshore wind platforms.

2.9 Policy 9 - Ireland should be active in International and European cooperation in the supply of renewable energy and in the reduction of global carbon emissions.

¹³ The Energy Policy Group accepted this amendment from the Parliamentary Party

Short Term Actions (0-3 Years)

2.9.1 Action 1: The purpose of climate change strategy is to avoid the predicated consequences of an increase in planetary temperature of 1.5 degree Celsius. Thus, the Irish Green Party must see its role as addressing the real threat to climate change, which is the emissions from not just Ireland, but all other countries that produce carbon emissions.

Europe is at the forefront of addressing this crisis and Ireland should play a key role within Europe's push for decarbonisation and should not only be a player with and among the Member States but must also push the EU to ensure carbon leakage is minimised and that the EU seeks to convince and encourage other countries to adopt similar climate change strategies.

One of the most powerful ways on doing this is through trade policy. Thus, in International Trade Agreements and at the level of the WTO, Ireland should encourage and insist on significant climate change reductions such as will achieve the Paris Targets for 2050. Countries that do not take sufficient steps to meet these targets must suffer a consequence in relation to its trade relationships with the EU. The current EU proposal for a carbon adjusted border measure is one tool that should be encouraged as part of international policy to drive forward the carbon agenda.

2.10 Priorities

Priority 1 - Bring everyone onboard

Development and delivery of a major public information campaign on the urgent need for decarbonization. This campaign should focus on the facts of climate change and the challenges faced by humanity as a result.

We need every citizen of Ireland to be aware of the challenge and be inspired to support the transformation.

Priority 2 - Public Sector Leadership

Follow our 9-point plan to improve the public sector response to Climate Change.

Priority 3 - Remove the non-regulatory barriers to the acceleration of renewables

Remove all possible non regulatory barriers to accelerating the Energy transformation. This includes the resourcing of all departments / agencies of government to accelerate implementation and approval of necessary measures.

Priority 4 - Immediately Fund research into future Energy Networks

This is a long-term problem that needs immediate research to deliver the transformation required - all the answers are still not available on how we do it - we need to fund it.

3 Amendments

Data centres are large consumers of energy and are a key part of making the internet work. Large numbers of data centres are being proposed in Ireland, which according to Eirgrid and the Commission for Regulation of Utilities, threaten to destabilise the electricity grid and derail the decarbonisation of energy in Ireland.

All new data centres in Ireland should be required to adhere to pre-conditions as follows:

- € No new fossil-fuel burning infrastructure should be installed to power the data centre, either on or off site, either owned and operated by the data centre owner/operator or otherwise
- € The data centre should be required to invest in renewable energy generation on the grid it is connected to (ie the Irish grid), and locate in places where it is feasible to generate sufficient energy from renewables and transmit that energy to the data centre location.
- € The data centre should be required to consume grid electricity at times when there is plentiful wind or other renewable energy on the grid relative to demand, and reduce consumption of electricity when there is scarce renewable energy on the grid relative to demand. To facilitate this, they may turn off servers and delay low priority computing tasks, and install batteries or other energy storage infrastructure.
- € A significant portion of the useful waste heat of data centres must be utilized. To do this data centres should consider co- development with complimentary industries such as aquaculture, horticulture, industry or consider district heating solutions for nearby population centres.
- € Data centres should not be allowed to run “mining” of bitcoin or other cryptocurrencies which consume huge energy resources and have been banned in some jurisdictions already.

As well as these pre-conditions being applied to new data centres, existing data centres should also be brought in line with these conditions within acceptable timelines.

Ireland should work through the European Union and global bodies to ensure that similar pre-conditions are attached to data centres in Europe and globally.¹⁴

¹⁴ Adopted October 2021.