

LABOUR'S PLAN FOR GREEN ENERGY JOBS

Executive Summary

The dual concern of climate change and energy security has resulted in countries around the world adopting policies to change their energy sources and alter their use. With the right energy policy and institutional framework, Ireland has the potential to reap significant societal, environmental and economic benefits.

The current policy framework has been defined by a lack of policy and institutional coordination combined with delays in planning. For example, onshore wind farm developers in Ireland can experience delays in planning applications of up to 33 months and are forced to contact an average of 14 governmental or local authorities to obtain a decision.

Labour proposes to overcome the shortcomings in Ireland's current energy policy by coordinating the input from both the public and private sector through a Coordinating Policy Office within the Department of Communications, Energy and Natural Resources.

Labour believes that the right energy policies could deliver 80,000 jobs in various sectors. For example, a National Retrofit Programme of the estimated 1.2 million homes in need of improving their energy efficiency has the potential to employ up to 30,000 construction workers.

This paper sets out Labour's range of practical solutions to meet the deficit in Ireland's energy policy, which can be divided into electricity, heat and transport.

Electricity

Ireland has set a national target that 40% of its electricity consumption will be derived from renewable sources by 2020. To reach that goal there is a need to:

- Develop a significant extension of the transmission infrastructure.
- Develop a Smart Grid with the capability to decarbonise the electricity sector.
- Develop technology Road Maps for the connection of different types of renewable technologies e.g. offshore, solar, ocean.
- Diversify fuel sources to help insulate the consumer from price fluctuations in primary fuels e.g. oil and gas.

Renewable Heating

Ireland has set a target of 12% penetration in the renewable heat sector by 2020. The application of renewable energy in the heat sector can help to reduce an over-dependence on fossil fuel imports and increase levels of sustainability in the broader domestic, commercial and industrial sectors:

- Set and enforce building standards.
- Reduce CO₂ in the industry sector through greater electrification, for example through the wider use of heat pumps instead of boilers.

Transport

Ireland is almost 100% reliant on fossil fuels in the transport sector. In order to end that reliance, the current transport strategy to roll out 250,000 electric cars by 2020 must be strengthened:

- Create jobs by developing the new technologies needed to roll out electric cars

INTRODUCTION

The dual concerns of climate change and energy security has resulted in countries around the world adopting policies to change their energy sources and alter their energy use. With the right energy policy and institutional framework, Ireland has the potential to reap the societal, environmental and economic benefits associated with this change.

In 2009, the Labour Party published *The Energy Revolution*, outlining the potential to create up to 80,000 jobs in the green economy.

The Energy Revolution set out the Labour Party's ambition for Ireland to capitalise on the real potential for job creation from the green economy, while at the same time combating the twin threats from climate change and our over-reliance on dwindling fossil fuel resources.

Job Potential: 75,000 (approx.)

- 30,000 direct construction sector jobs that will lead to additional indirect and induced jobs.
- 10,700 wind energy jobs, including more than 7,000 in the construction sector.
- 3,700 new clean energy jobs in Ireland created by the ESB.
- 300 new clean energy jobs created by Bord na Móna.
- 100 permanent jobs from the creation of one geothermal plant.
- 20,000 jobs in ocean energy.
- 5,000 jobs in biofuels and afforestation.
- 5,000 jobs in biomass.

The retrofitting of existing building stock has been identified as one of the most promising opportunities for job potential at a rate of 30,000 jobs. In its recent report on the issue, 'Greenprint for a National Energy Efficiency Retrofit Programme', the Institute of International and European Affairs (IIEA) stated that there are 1.2 million dwellings in Ireland in need of an energy efficiency retrofit.

Retrofitting tackles many problems at once: It addresses the significant problem of fuel poverty, competitiveness, security of supply and our carbon emissions. It is also an area that could see much of our unemployed construction workforce put back to work.

Ireland is in a strong position to maximise the job potential in renewable energies, clean technologies and energy efficiency products. To do this we need policy and regulatory certainty.

This paper sets out the current obstacles to enabling this significant job potential. We highlight the shortcomings in Ireland's current energy policy process and we present a range of practical solutions to fill the gaps.

HOW TO DELIVER THE ENERGY REVOLUTION

POLICY RECOMMENDATIONS

Meeting Ireland's future energy security needs and reducing our carbon emissions will require a broad willingness to alter our energy-intensive lifestyles. The market alone will not deliver this change.

The Labour Party believes that the State must create a new economic architecture that provides certainty and investment in any future low-carbon energy sector.

The public sector must intervene to stimulate investment from the private sector in order to create a balance in the business cycle. A well regulated, monitored and enforced market structure will ensure that the real economic, environmental and social benefits from this public-private sector coordination will accrue to the Irish people.

This top-down approach must be accompanied by grassroots support. The current Government has failed to galvanise widespread social acceptance for this change. Bottom-up support must be seen as an integral part of any strategy that will require changes in the way we all use energy.

Energy policy covers a broad range of sectors, which can usefully be divided up into electricity, heat and transport.

Any approach to energy strategy must involve separate - but interrelated - elements:

Labour recommends:

- A coordinated approach to the implementation of energy policy would help focus planning across the energy, heat and transport sectors. A coordinated approach would enable a convergence of the political, economic and regulatory structures, which would drive progress.
- The creation of a Coordinating Policy Office within the Department of Communications, Energy and Natural Resources. This would have the benefit of joined up thinking and be in a position to enhance sustainability measures in a coordinated way across a number of sectors.
- A strengthened policy/institutional framework is required to ensure the delivery of government strategy.
- Putting sustainability at the heart of energy policy across all sectors. It is imperative to promote a sustainable approach to our energy usage, improve our energy efficiency, and integrate renewable forms of energy.

- A major National Insulation/Retrofit Scheme: to leverage investment; to reduce our national carbon emissions; to reduce our national bill for imported fuel; to save householders money on their heating bills to create employment and business opportunities for builders, architects, engineers, energy services companies, plumbers, electricians, the renewable energy sector, and the supply of green construction materials.
- Investment in renewable energy and carbon reduction initiatives through a National Strategic Investment Bank.
- Enacting Legislation to ensure the growth of geothermal potential.
- Enacting the Fuel Poverty and Energy Conservation Bill.
- Enacting the Labour Party's Climate Change Bill which received cross-party support and is in line with EU targets.
- Implementing an ambitious strategy to promote Ireland as a test-bed for the electrification of transport and introduction of 350,000 electric vehicles by 2025.
- Equipping the workforce with 'green skills' through the Labour Party's skills drive.
- The establishment of a Renewable Manufacturing Hub to attract investment from international and national companies and facilitate companies to enter carbon-neutral green energy business parks.
- The Development of a Smart Grid system with the infrastructural capacity and the technological capability to decarbonise the economy is a fundamental component of any strategy.
- The promotion of solar and other renewable forms of heating.

What would the Coordinating Policy Office do?

A fully harmonised and coordinated approach to the implementation of energy policy - run through an energy policy coordinating office - would offer a number of important benefits, including:

- The capacity to bridge the gaps between government departments, state agencies, local authorities and civil society to ensure energy policy is formulated through an inclusive process.
- The capability to ensure sustainability remains at the heart of future energy policy strategies across all sectors.
- The ability to develop tailor-made policies to reflect the maturity of individual technologies.
- The ability to be proactive in the renewable energy space. This would ensure that Ireland would implement international standards in research, development, demonstration and deployment (RDD&D) and ultimately translate this into sustainable long-term jobs.
- The policy certainty required to attract financial investment across all energy sectors.
- The capacity to increase public awareness through the dissemination of a harmonised public policy message.
- The ability to set ambitious new renewable energy and energy efficiency targets that are based on an informed understanding of the capability of our energy systems and the needs of the people and the economy.
- The capacity to coordinate energy policy with climate policy.
- Work with the National Consumer Agency to provide mandatory, accurate and up-to-date information to the public on petrol/diesel prices across the country.

THE CURRENT POLICY FRAMEWORK – THE SHORTCOMINGS

The Labour Party recognises that some progress has been made in the energy space in Ireland over recent years. However, we believe that there has been a systemic failure to streamline conflicting policy objectives and legislative requirements, resulting in a number of significant shortcomings.

Lack of Co-ordination:

To date, the transition to a low-carbon energy future in Ireland has been defined by a lack of policy and institutional coordination. This lack of clarity in the framework that supports the development and deployment of low-carbon technologies has delayed progress in the energy sector.

The Labour Party believes that without the appropriate institutional arrangements in place, Ireland is unlikely to achieve its 2020 renewable energy targets.

Delays in planning:

A recent study conducted by the European Wind Energy Association (EWEA) showed that on-shore wind farm developers in Ireland experience average delays in planning applications of 33 months and are forced to contact (either directly or indirectly) an average of 14 governmental or local authorities to obtain permission to build.

The Labour Party is committed to strengthening the planning, licensing and grid connection processes.

Lack of Diversification:

The existing framework has produced a situation, where certain renewable energy technologies have received priority governmental support over others. It is internationally accepted that at present wind power is a more established renewable technology than most other technologies. However, current policy practice has failed to enable Ireland to become a test-bed for other technologies and to promote manufacturing of emerging technologies, ultimately harnessing them for our energy use.

In 2010, the level of wind load factor fell to 22%. For the last decade, the level of wind load factor was an annual average rate of 31%. While the wind capacity in 2010 was a weather glitch, it highlights the importance of diversifying our renewable energy sources.

Diversifying our renewable energy portfolio is an important element of meeting our future energy security needs.

To meet our climate change goals all technologies in the low-carbon portfolio must make a full contribution across all energy sectors.

The Labour Party believes that this lack of policy support has restricted the development of these new technologies in Ireland. In the absence of a clear policy commitment that supports these emerging renewable technologies, accessing the required financial backing to facilitate their development is almost impossible.

We believe that current energy policy has failed to develop an appropriate mechanism to support research, development and demonstration for renewable technologies in Ireland. The consequence of this is that new Irish start-up companies are forced to look abroad for support.

Biofuels:

The Labour Party believes that the current government target for biofuels will increase imports and do little for indigenous industry. We will prioritise the use and development of indigenous biofuel products.

In March 2010, the EU Commission published a report which indicates that their own biofuel target of 5.6% in the transport sector by 2020 is only borderline sustainable. Due to a shift in land use, the research shows that greenhouse gas emissions would increase rapidly after only 4.6% biofuel use. In addition, the effect of low-cost biofuel imports on an emerging indigenous biofuels market could put local farmers out of business.

EU:

The Labour Party will ensure Irish energy policy is consistent with broader developments at the European level and that Ireland proactively works to inform energy policy strategies in the EU.

Renewable Manufacturing Hub:

The Labour Party believes we should encourage the development of renewable manufacturing hubs to attract investment from international and national companies. We could facilitate companies to enter carbon-neutral green energy business parks.

SUSTAINABILITY AND VALUE THROUGH ENERGY EFFICIENCY

Adopting a programme of energy efficiency is the most cost effective means of decoupling the growth in energy supply from economic growth.

A programme of energy efficiency could also significantly reduce Ireland's dependence on fossil fuels and reduce greenhouse gas emissions.

According to the EU, energy demand could be reduced by as much as 20% through currently available efficient technologies and, importantly, this could be achieved economically, with the cost to society of delivering the improvements less than the value of the energy savings.¹

The current National Energy Efficiency Action Plan (NEEAP) 2009-2020 has recognised the importance of energy efficiency and has acknowledged the many gaps between targets and the capacity of existing policy measures to achieve these targets. The NEEAP fails to put in place the necessary institutional framework and policy measures to deliver on the target.²

The current policy mechanisms are nowhere near ambitious enough and have not stimulated the required influx of green building contractors into the sector. The implementation of robust environmental standards supported by strong enforcement processes are needed to ensure all current and future housing/buildings in the country achieve a significant level of energy savings.

The concept of sustainable development is an attempt to combine growing concerns about a range of environmental issues with socio-economic issues. Through a programme of energy sustainability Ireland could achieve a balance between the expansion of the electricity power system during times of economic growth and normal population growth, and reduce overall electricity demand. Taking steps to decouple GDP from related CO₂ emissions would be the clearest way to measure the impact of Ireland's level of sustainability development. The long-term impact of increasing energy efficiency will be to reduce the need to generate energy from any source.

The three core areas where the introduction of energy efficiency measures will have the most benefit include:

- **Building Retrofitting.** This is arguably the single most important energy efficiency improvement Ireland can make. Approximately 25% of Ireland's CO₂ comes from residential energy use. Increasing building quality can therefore produce large benefits. Fuel poverty is also a serious issue in Ireland. Thus, minimising the energy costs for those who can least afford them must be a crucial element of any decision taken to increase the deployment of energy efficiency standards and renewable energy in Ireland. It is widely recognised that improving the thermal efficiency of Ireland's dwelling stock is imperative to tackle fuel poverty. This will also help reduce greenhouse gas emissions.

¹ Quoted in the National Energy Efficiency Plan 2009-2020

² The current Energy Saving Schemes include: the Home Energy Saving Scheme, the Warmer Homes Scheme, the Housing Aid For Older People and the Greener Homes Scheme.

- **Electric cars.** Implementing an ambitious strategy to introduce electric vehicles would save a lot of wasted energy and reduce our overall CO₂ emissions.
Reducing Electricity Demand. We support the adoption of real-time pricing of electricity (Smart Metering), which has the potential to manage electricity demand and reduce costs.

While energy efficiency is not a substitute for energy security, it is a vital step towards achieving it.

Increasing the country's overall energy efficiency levels can support our renewable energy targets. Managing demands in our economy will reduce both energy costs for business and consumers, and overall greenhouse gas emissions. Investing in energy efficiency is often far cheaper than expanding the energy supply to meet growing demand. Efficiency investments typically yield a high rate of return, save consumers money, and reduce CO₂ emissions.

Training and education in the sustainable energy sector should be a cornerstone of energy policy. It has the potential to stimulate jobs and help convince the population of the need for lifestyle changes.

Labour recommends:

- Equipping the workforce with 'green skills' through the Labour Party's skills drive. This will provide training places to re-skill those who are unemployed and could use the opportunity to develop the tools essential to 'green' industries. There is a particular role here for the retraining of unemployed construction workers and trades people in green construction skills.

ELECTRICITY

Despite the recent downturn in electricity demand, it is expected that Ireland will experience an annual demand growth rate in the region of 1% up to 2020. As electricity is mostly generated by fossil fuels and is one of the largest sources of global emissions (in Ireland electricity generation accounts for approx. 21 % of overall carbon emission), policymakers have begun to recognise the importance of decarbonising the electricity sector. Over the past decade, the deployment of renewable generation around the world and the implementation of policy strategies aimed at introducing measures to increase energy efficiencies have exceeded all expectations. Indeed, renewable energy sources accounted for 62% of the new electricity generation capacity installed in the European Union in 2009.

While using electricity more efficiently can help reduce carbon emissions, the integration of renewable energy into the electricity power system will be the main driver underpinning a commitment to decarbonise the sector.

Ireland has set a national target that 40% of its electricity consumption will be derived from renewable sources by 2020.

In order to reach it, a number of important elements need to be in place. There is a need for the significant development (extension) of transmission infrastructure, much of it on an all-island basis. This infrastructure is required to meet both economic demands and to facilitate the increasing levels of renewable penetration. Its delivery will require all parties to work together to further enhance public acceptability for the development of strategic infrastructure.

Labour recommends:

- That grid infrastructure and enhanced interconnection, combined with an appropriate mix of supporting conventional plants, will be required to reach the 40% renewables target for electricity.
- Incorporating new demand-side technologies and energy storage in the power system to foster a new mindset in the way we use our energy. There are many benefits that can stem from the introduction of Smart Grid/ network technologies. These include, inter alia, an enhanced customer awareness of energy usage and, thus, energy and cost saving possibilities.
- Developing a Smart Grid system with the infrastructural capacity and the technological capability to decarbonise the electricity sector is a fundamental component of any strategy.
- Re-examining the current connection method. Incentivising renewable generators to connect in locations with current grid infrastructure would minimise the need and cost for new build.
- Develop coordinated technology specific strategies (technology Road Maps) for the connection of different type of renewable technologies in Ireland (offshore, solar, ocean etc). This must be led by government and done in conjunction with the relevant state agencies and industry players. Technology Road Maps would help identify and address technology-specific barriers, highlight necessary deployment policies and incentives and direct increased R&D funding for new technologies supporting technology diffusion and knowledge sharing among countries.
- Diversification in fuel sources to help insulate the consumer from potential price volatility in underlying primary fuels.
- Develop a realistic strategy on microgeneration to assist local communities.
- Exporting electricity as a core feature of grid planning.

It is important that governments set realistic targets and effective policy measures to provide a robust framework for long-term investment in the energy sector. Adopting strong government policies and targets can send powerful market signals and encourage businesses and/or households to invest in new energy technologies.

Public Service Obligation:

The Public Service Obligation levy has played a crucial role in ensuring energy security and attracting investment into the renewable energy sector. However, the Labour Party believes it is important to conduct a full review of the current structure of the PSO levy, in order to ensure that the financial

costs levied on the consumer are balanced against the future potential cost savings and broader environmental economic benefits.

TRANSPORT

A significant reduction can be made in our overall CO₂ emissions by introducing measures to integrate renewable energy into the transport sector. Ireland is over 98% reliant on fossil fuels in the transport sector. For any workable solution in the transport sector, the link between fossil fuels and transportation has to be broken. The current transport strategy designed to ensure 250,000 electric cars in Ireland by 2020 is missing some important ingredients.

Labour recommends:

- Encouraging technical research to anticipate the impact of the growth of electric cars on the grid and the potential demand shift on the power system. We will ensure communication with EirGrid/ESB and industry to conduct these studies will provide the know-how to deliver the facilities to meet the target.
- Putting technologies to mitigate emissions in the power sector hand-in-hand with the transformation of transport as Electricity consumption rises as petrol demand falls.
- Coordinating the roll-out of grid connection technology/infrastructure in cooperation with industry – is also imperative to ensure interoperability across the EU.
- Offering the potential to create new jobs in the emerging niche market of Electric cars which involves new clean automotive technologies,

RENEWABLE HEATING

Ireland's target in the renewable heat sector is 12% penetration by 2020.

The thermal energy sector in Ireland "is defined as energy used for space, process and water heating, cooking, etc."³ The fact that energy demand in this sector is driven by a number of interrelated factors, including: population, climate, income, services and cultural factors, reducing CO₂ emissions and energy use in the thermal energy sector is a challenging policy goal.

The application of renewable energy in the heat sector can significantly aid efforts to reduce an over-dependence on fossil fuel imports and increase levels of sustainability in the broader domestic, commercial and industrial sectors.

Labour recommends:

- Setting and enforcing building standards. Building standards around the country have rarely been enforced.
- Maximising the deployment of energy-efficient technologies and new technologies decarbonise the fuel supply in the building sector.

³ Renewable Energy in Ireland 2010 Update - SEAI

- Ensuring that renewable cogeneration⁴ and district heating⁵ feature strongly in any new energy action plans.
- Reducing CO₂ in the industry sector through greater electrification, for example through the wider use of heat pumps instead of boilers/CHP.

CONCLUSION

The transition to an energy secure and efficient economy will bring opportunities for growth

The issues of sustainability, renewable energy and energy efficiency cut across a range of social, economic and environmental areas and historically have been managed by different government departments with responsibility for these areas.

As a consequence, society has sometimes seen the uneven application of policies and targets.

A Coordination Policy Office, based in the Department of Communications, Energy and Natural Resources, that can act as the medium between government departments, state agencies, local authorities and civil society could help focus policy planning in these areas.

The office could guide action across all relevant stakeholders and help achieve broader sustainability targets more efficiently.

It would have the benefit of joined up thinking and be in a position to enhance sustainability measures in a co-ordinated and mutually reinforcing way across a number of sectors. All energy sectors are and should be considered fully interrelated. Indeed, without these developments our current renewable energy targets are unlikely to be reached.

Public awareness should be a core part of an energy strategy. All stakeholders need to coordinate and intensify communication efforts to gain public understanding of the need for renewable generation and the consequent need for transmission extension and development to bring that renewable generation to the market.

⁴ The European Directive (2004/8/EC) defines cogeneration as the simultaneous generation in one process of thermal energy and electrical and/or mechanical energy.

⁵ District heating can be usefully defined as a system for distributing heat generated in a centralized location for residential and commercial heating requirements.