

GREEN PARTY RESPONSE TO THE GREEN PAPER TOWARDS A SUSTAINABLE ENERGY FUTURE FOR IRELAND

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Prepared by Eamon Ryan TD
Green Party Energy Spokesperson
Dail Eireann, Kildare Street, Dublin 2

Responses to questions posed:

ENSURING THE SECURITY OF ENERGY SUPPLY

1) In addition to enhancing the contribution of renewable energy, what actions could be taken to further diversify the fuel mix for electricity generation and reduce dependence on oil and gas?

The essential first requirement will be to introduce radical energy efficiency measures which will lead to real reductions in energy use rather than just an increase in productivity associated with electricity generation. We need to review the 'business as usual' model of ever increasing energy demand as represented by the assumption in the Green Paper that peak electricity demand will increase to 6,000MW in by 2012 and a growth in energy demand by 2-3% annually to 2020.

Such assumptions run counter to the commitments we are making within the European Union for a reduction in CO2 emissions by at least 15% below 1990 levels by 2020. Achieving such a target would require almost a 3% annual reduction in emissions which could only be achieved by a combination of a reduction in demand due to efficiency gains and widespread introduction of clean renewable fuels.

The assumption in the Green Paper of continued growth in fossil fuel consumption to 2030 is unlikely to occur given we face a peak in global oil production well in advance of that date. Such a peak will be followed by a annual reduction of 2-3% in global oil supplies. The reference to International Energy Agency (IEA) reports in support of continuing growth in fossil fuel use now seems out of date given their latest world energy outlook report which admits that a continuing growth in supply can no longer be taken for granted.

Given this changed global energy outlook we will need to urgently diversify our fuel mix in power generation by relying on new pumped storage facilities, clean coal technologies, micro generation, greater levels of interconnection and a rapid expansion in a wider variety of renewable energy sources.

2) How can generation and transmission adequacy in the electricity sector be

improved?

Generation adequacy from variable renewable supplies such as wind power can be improved via the provision of new storage facilities similar to Turlough Hill. As a country with some of the greatest wind resources we should also be investing in the research and development of new battery storage technologies. Greater use of renewable electricity in the overnight powering of electrical vehicles also provides storage capacity as would the longer term development of hydrogen technologies.

In the short run we need the existing fossil fuel plants to greatly increase their generation performance from an existing capacity availability rate of less than 78%.

We believe that the development of a distributed electricity transmission and distribution system will improve adequacy in this area. It is better to rely on a myriad of renewable and micro generation power sources rather than a smaller number of aging large power plants which are subject to frequent shutdowns.

2) What actions should be taken to create strategic storage capacity in the gas sector?

We welcome the investigation into gas storage locations such as the Kinsale Gas field and also the possible introduction of new Liquefied Natural Gas (LNG) processing and storage facilities in locations such as the Shannon estuary.

3) What are the challenges to greater participation by new players in the development and operation of power generation plant - and how should they be addressed?

For developers of large scale fossil fuel power generation plants the primary challenge to greater participation appears to be the perceived dominance of the ESB. We support the broad measures outlined by the Deloitte report to reduce such dominance including the separation of the actual ownership of the transmission grid into separate state ownership. We also support the proposal to provide long term lease arrangements for new players on existing 'mid-merit' power plants as is proposed in the green paper.

For players involved in the development of new renewable power generation supplies the barriers of entry into the market are more extensive and include:

An Emissions trading system which provides free allocations to existing fossil fuel power producers rather than auctioning such allocations to allow the market include the full cost of the carbon.

A grid connection system which is highly expensive and restrictive for smaller new developers in comparison to the treatment of fossil fuel power plants.

Government support mechanisms which are limited in scale and which have varied significantly in recent years leading to uncertainty among financial backers about such projects.

Direct subsidies given to the most polluting peat power stations while the support

price for renewables is set below the market price for electricity generated from gas.

The lack of a fixed price support mechanism for new cleaner technologies such as offshore wind, wave and tidal power.

The convoluted and expensive development process which requires an operator to get planning, grid, CER license and Government approval for supports mechanisms, before they can then place an order on the international market for the scarce capital equipment that will be required.

An electricity market mechanism which favours larger operators with greater access to market knowledge and trading expertise.

5) How, and over what timeframe, should Ireland pursue greater electricity interconnection with Europe?

We believe that interconnection will provide a vital role in both backing up our variable renewable electricity supplies and also in providing export opportunities for our extensive renewable electricity resources into a wider European market. We believe the concept of a European renewables grid developed with new DC interconnection technologies has merit. Given the long lead times in developing such infrastructure, we believe plans should start now to introduce such a second inter-connector to the continent soon after the proposed new east west inter-connector is introduced.

6) What measures could be taken to encourage the exploration and production of indigenous energy resources?

A key development could be the setting of new building standards which require the use of renewable heating systems. Such standards are already being introduced by Green Party Councillors in local area plans in Fingal, Dun Laoghaire and Wicklow county councils. These new standards require heat demands within the building to be 60% below current building regulations and that at least 30% of the heating comes from renewable energy systems. A variation to the DunLaoghaire Development plan is now out to public consultation which if approved would insure that all new large scale building developments in the county meet these standards.

An expansion of the refit programme beyond the current 400MW limit and into new experimental energy sources such as offshore wind, wave and tidal power could also provide a major incentive in the area of electricity generation.

We should also set new standards so that all large new residential developments have a district heating and Combined heat and power systems which also favour the use of biomass fuel supplies.

7) Given the existing level of dependence on imported fossil fuels, what needs to be done to enhance contingency measures?

The promotion of biofuel industries will provide us a minimal level of fuel security in the advent of a major oil shock. Given that world trade rules preclude the blocking of internationally sourced fuels from any support measures, the Government will have to be creative to insure that Irish grown energy crops are viable under such schemes.

Given the close gap that already exists between global oil production and demand we should maintain as large as possible a fuel oil reserve to provide us with a cushion in the event of any supply disruption.

8) Does the Green Paper generally set out the right policy directions for security of energy supply?

The paper fails to outline the scale of the challenge we face following a future peak in Global production. The assumption that oil will still account for 53% of our energy needs in 2020 seems to be on the basis of a business as usual scenario where a peak will not occur until much later. Unfortunately, as the Forfas report commissioned by the Government itself acknowledged there is a growing consensus that the peak in oil production is now expected much sooner. Mr Bob Hirsche who assisted in the production of that report was also one of the co-authors of a similar report to the US Government Department of Energy. That report highlighted the fact that a government needed to take a series of radical investment measures at least two decades in advance of any peak in Global oil production to insure the minimum of disruption to the economy. Our Green paper fails to set out the radical measures we should be introducing now to prepare us for the same eventuality.

Despite the Governments commitment to a target of 30% renewable electricity supplies by 2020 the reality is that over the next three years we are likely to introduce three new gas fired power stations providing a total of at least 1200MW of gas fired power which will be twice the level of renewable supplies that will be delivered in the same period. Such plants will still be in operation in two decades time when we will be increasingly dependent on gas from Siberia and other long distance locations. To provide real security of supply we should instead be promoting more radical energy efficiency measures and renewable power generation solutions.

PROMOTING THE SUSTAINABILITY OF ENERGY SUPPLY

9) What can be done to improve the pace and range of development of renewable energy resources for electricity generation on a sustainable basis?

As mentioned earlier we need to reform the REFIT program so that it is not capped and includes other renewable technologies and so that prices are reviewed on a regular basis to reflect market developments.

We need to address the existing grid constraints and simplify the development and planning process and insure that market rules do not discriminate against smaller renewable providers.

We should pursue greater consultation with the industry via a revived Renewable Energy Development Group.

10) In addition to electricity generation, what actions should be taken to develop renewable energy usage in the transport and heat sectors?

As mentioned earlier we should amend building regulations to insure district heating and combined heat and power supply systems in all new large scale residential and commercial developments.

We should set a compulsory requirement for public bodies to invest in any new heat or insulation technologies which show a payback return of less than five years as is the case in Denmark.

We should set a statutory requirement that any house extension or renovation over a certain percentage size of a property would require the introduction of renewable energy heating systems.

We should provide state support for building firms that provide a standardised energy insulation package that can be applied to all housing stock from a particular era. The aim of such support will be to reduce the per unit cost for the retrofitting of energy measures to existing homes and provide a 'one stop shop' solution for householders looking to reduce their heating bills.

We should consider amending the stamp duty regime to lower the level of stamp duty that applies to passive energy homes.

We should provide research funding to support electrical and hydrogen fuelled private car transport systems.

We should maintain the existing financial budget outlined in the Transport 21 plan but divert money from the roads programme to additional public transport projects such as the introduction of a luas light rail in Cork city, a new light rail running from Lucan to the Poolbeg peninsula in Dublin and new rail services in Galway city and to Shannon and Tuam

11) What significant new initiatives could be taken to increase energy efficiency across the economy and in particular in households, businesses, the public sector,

the transport sector and the built environment?

We should reconsider the introduction of a carbon tax which would provide a technology neutral incentive for the introduction of efficiency measures. This will be more effective than relying on a more bureaucratic and expensive grant support system to try and achieve the same objective. Analysis from the ESRI has shown that using the revenue collected in such a tax to lower employers PRSI and Vat and increase social welfare payments to combat fuel poverty would lead to a net gain for the economy.

Putting a price on carbon is the best way of delivering energy efficiency gains as there are a myriad of renewable generation and energy efficiency technologies available to companies and it will prove impossible for central or local government to adjudicate as to what system would work best in each case.

12) What additional policy measures should be introduced to significantly expand energy RTDI and what are the priority areas of research, which need to be targeted?

At the moment the following agencies are involved in energy research and development: SEI, Teagasc, Coford, Enterprise Ireland, the Marine institute, CER, the DCMNR energy research group, HEA, the ESRI and a variety of third level educational institutions. There needs to be co-ordination between all these agencies to insure that there is no duplication of effort.

There are real concerns that the general investment being made by the state in research and development is not leading to new commercial developments. The level of exports from indigenous manufacturing and service companies is static despite a very significant investment in R&D in recent years. Two recent reports to the Department of Enterprise trade have highlighted a concern about the lack of connection between commercial companies and the universities in the research we are funding. It will be vital that our investment in energy research overcomes this problem.

There is significant commercial experience in Ireland in the area of building material and construction industries and this could be one area which is targeted for investment in new energy efficient technologies. Given the lack of large scale commercial experience in marine energy and other new renewable energy technologies, development in these areas might first be encouraged via industry groups including state owned and private companies where experience and information could be shared.

13) In light of the Government's Science, Technology and Innovation Strategy, what needs to be done to radically expand the national energy research capacity?

We believe that the remit of Science Foundation Ireland (SFI) should be expanded from the two existing areas of responsibility in information and Bio technology to include energy technologies. New posts funded by SFI could become centres of excellence in energy research. Such a development will be difficult given the small scale of existing energy research and the lack of major commercial operations in Ireland in the energy area. However, we need to start developing such expertise and we should concentrate in areas where we have experience or where the expected applications might suit Ireland's climatic and geographic conditions.

14) What are the key supply and demand questions to be addressed to underpin a fully cohesive National BioEnergy Strategy?

The provision of biomass for heating and power generation provides a great opportunity for Irish agriculture and forestry as well as for new energy enterprises. Existing raw materials from forestry thinning and food industry waste materials could provide a valuable fuel supply. Significant potential also exists from new short rotation wood crops.

The main challenge is to establish a profitable and reliable supply chain for such products. The difficulty is that the competing supply chain for gas and oil fired boilers have been set up and paid for over the last one hundred years. We should target support mechanisms to help kick-start the alternative biofuels industry and then simply regulate for their use once a secure supply system has been set up.

Unlike wood crops for biomass where Irish farmers may have a competitive advantage due to the transportation costs that are involved, Irish farmers looking to grow crops for biofuels face real competition from distant locations. World Trade Organisation Rules preclude discrimination against internationally sourced fuel supplies. However the German and Dutch Governments are now looking at setting criteria within their support mechanisms which favour certain production methods. The Irish Government should investigate similar opportunities.

There is also significant uncertainty about the level of real carbon reductions that different biofuels technologies deliver and the environmental effects that may arise with the growing of certain crops. The Government should provide a clear grading system on the emissions from each fuel and insure that new fuel supplies are not leading to environmental degradation in other countries. Once the supply chain system has been developed we would then support a regulatory requirement on all fuel suppliers to provide a certain percentage of biofuels rather than a subsidy system based on excise duty exemptions.

15) Do we need to choose between mandatory targets and better incentives for renewable energy and energy efficiency - or is a mix of both the best way forward?

The twin energy challenges presented by climate change and a peak in global oil production will arrive for very different reasons but both require a similar response in a dramatic reduction in our use of fossil fuels. By 2050 it is clear that we will not have easy access to the oil supplies which currently provide 60% of our energy needs. Coincidentally within the same time frame it is clear that we will need to achieve at least a 60% cut in our carbon emissions from our use of fossil fuels.

The only way in which such a radical shift can be achieved is if we set long term targets and appropriate annual reductions that will be required to achieve them.

The Green party believes that markets on their own will not be able to manage the scale of orderly withdrawal from fossil fuel use that we will need. We support the proposals that are emerging from the Non Governmental Sector for the development of 'cap and trade' carbon allocation systems. These will allow individuals and companies operate in a flexible national and international market where the overall carbon allocation is reduced each year.

We believe the Minister of Finance should have a central role in delivering an annual resources budget at the same time he delivers his estimates for expenditure and taxation. Should the use of fossil fuels in the previous year be out of kilter with the annual reduction needed to meet the agreed long term target, then he would be compelled to amend fiscal policy and investment decisions to insure that the annual reduction target was brought back on track.

16) Does the Green Paper generally set the right policy directions for energy sustainability?

We believe the Green Paper fails to present the true scale of the climate change challenge ahead of us. The paper does refer to the aspirational target agreed by the EU heads of state in March 2006 for a 15-30% cut in EU emissions below 1990 levels by 2020. However, we have yet to commit our own country to any such long term target. Given that our emissions are likely to be some 30% above 1990 levels by 2010 and given we may agree to the lowest reduction target of a 15% cut below 1990 emissions by 2020, we would then be faced with a 35% cut in emissions within a decade.

Our National Climate Change strategy will bring us nowhere near such a level of reductions and the cost of buying our way out of the problem via the purchase of carbon credits or the use of Kyoto Protocol flexible mechanisms will be prohibitive.

The emissions we achieve in the next decade will already be determined by the investment decisions we make today. The energy policies set by other countries start and finish by the setting of climate change targets. In the UK the goal of a 60% reduction in climate change emissions by 2050 is the central policy goal around which their energy policy evolves. Our failure to set such long term climate change targets and the mechanisms to achieve them is the greatest weakness in the Green paper.

ENHANCING THE COMPETITIVENESS OF ENERGY SUPPLY

17) In the context of liberalisation of the Irish energy market, what further actions should be taken to develop more fully competitive electricity and gas markets and what specific barriers need to be overcome?

The Government should fully implement the main recommendations in the Deloitte report, which could allow for the continued development of the ESB as effective competitor in the evolving European electricity market and at the same time allow for real competition and innovation into new renewable electricity companies here in Ireland.

18) What policy measures and targets should be introduced to reform institutional arrangements and market structure, particularly in the electricity and gas sectors?

We support the proposal from the Government to open to competition the use of existing ESB power plant locations which are coming to the end of their working life. We also support the market arrangements being developed for a single electricity market and the development of both North-South and East-West interconnect which we believe should be maintained in separate state ownership along with the rest of the transmission grid infrastructure.

We believe the gas grid infrastructure should also be held in state ownership and support the development of new gas interconnection to the UK market to provide for a greater security of supply.

We also support the broad outline of the recent European Commission Green Paper on energy and particularly the provision for greater openness in the European electricity and gas markets. As a country at the very end of gas network we will require an open, competitive and transparent gas market to insure our future fuel supplies.

19) While a significant proportion of our energy prices are determined by international oil and gas prices, what actions should be taken domestically to reduce the cost of electricity and gas to consumers?

Again we believe the full implementation of the Deloitte report will help reduce the long term cost of electricity to Irish consumers.

The only other long term solution to the price rises we can expect to face following a peak in global oil production is the development of alternative renewable energy supplies which will be less susceptible to dramatic price fluctuations.

20) State-owned enterprises (e.g. ESB, BGE, Bord na Mona) have played a central role in the development of the energy sector. How should the role of State-owned energy enterprises respond to the challenges of meeting our energy needs in the future?

We need state owned companies such as the ESB, BGE and Bord na Mona to start investing in renewable energy technologies and to insure that the grid connection and market systems support rather than hinder a new renewable energy future.

21) What further action should be taken to alleviate fuel poverty?

As previously stated the allocation of some 25% of revenues from a carbon tax could be directed to the provision of greater social welfare payments to counter fuel poverty.

We should also be directing much greater resources to agencies such as Energy Action who tackle the problem of fuel poverty in a more sustainable manner by investing in physical measures to improve insulation and energy efficiency in existing social housing. A major increase in the investment in this work would provide the dual benefits of reducing our emissions and cutting the fuel bills for those on low incomes.

22) Does the Green Paper generally set the right policy directions for enhancing the competitiveness of the Irish energy sector?

The best way to insure the future competitiveness of the Irish energy sector will be to insure we become leaders rather than followers in the development of new renewable energy technologies. Countries such as Austria and Denmark have created large new industries in the biomass and wind generation sectors. By developing the next generation of renewable technologies we would be providing jobs here as well as helping provide a stable price regime for Irish energy users.