The Irish Farmers' Association

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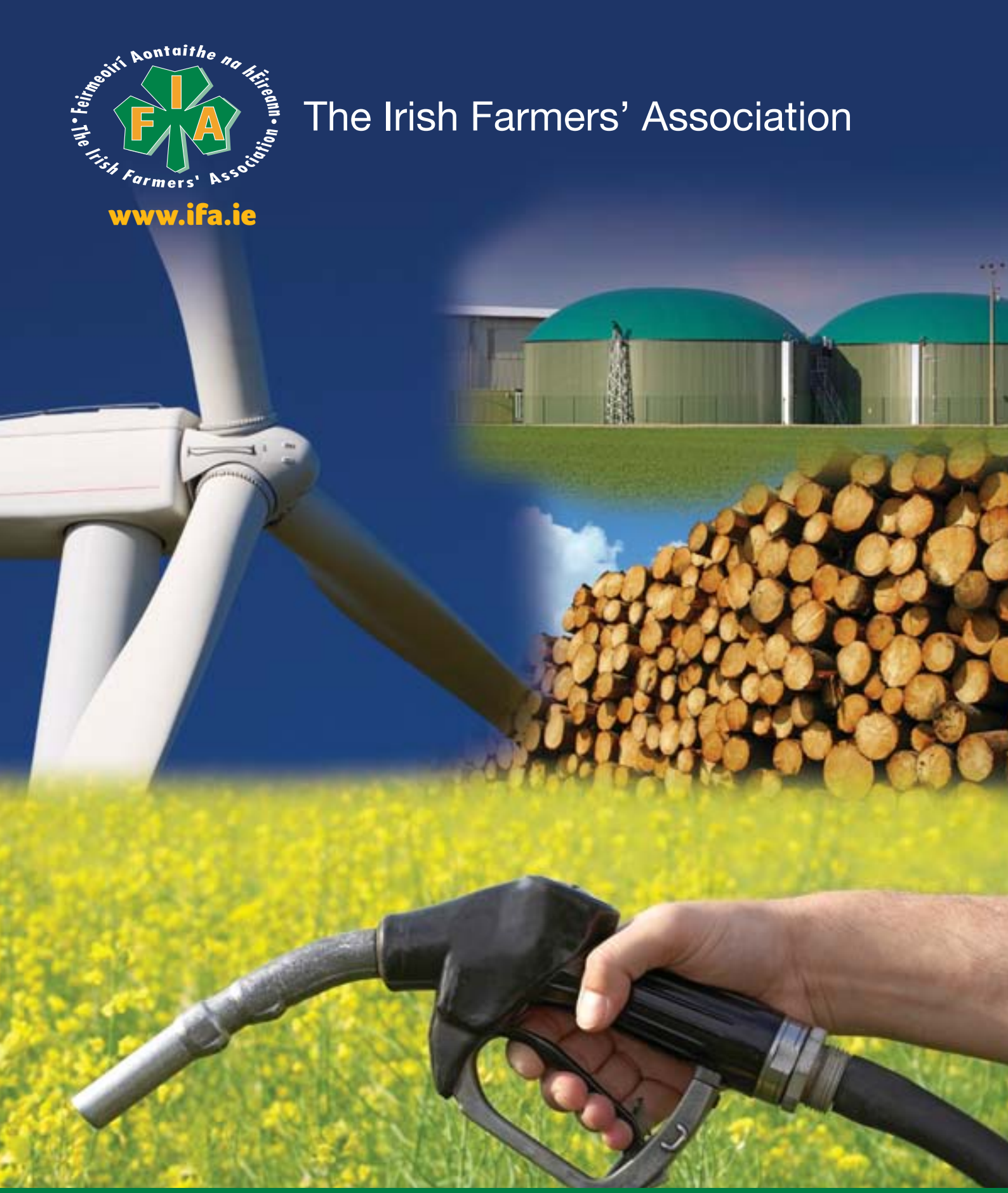

Harnessing the Potential of

Ireland's Agriculture & Forestry

FOR RENEWABLE ENERGY PRODUCTION & GREENHOUSE GAS EMISSIONS REDUCTION

January 2009

Foreword

Environmental policy continues to evolve and place new compliance challenges on farmers. The international climate change discussions in Poznan, Poland and the follow-up discussions in Copenhagen in December 2009 will endeavour to provide a roadmap for climate change policy beyond 2012.

IFA recognises these environmental challenges and the potential opportunities that exist. The Association's Climate Change Working Group has specifically examined the scale of the challenge and the sustainable opportunities that exist. In addition to this, our Renewable Energy Working Group has identified opportunities for agriculture to meet the renewable energy targets established in the Department of Communications, Energy and Natural Resources White Paper on Energy.

In publishing this policy document the Association is convinced that the entrepreneurial spirit of the farming community to harness the potential of Ireland's agriculture and forestry, for renewable energy production and greenhouse gas emissions reduction, is willing and ready to respond. Agriculture and forestry can combine to generate thousands of sustainable green-collar jobs in rural Ireland. The measures proposed in this document provide the opportunity to significantly reduce the economy's over dependence on imported finite fossil fuels, through on-farm micro-energy generation. Ireland's forestry sector can be rejuvenated and its potential carbon-sink can be realised. The opportunities from carbon sequestering renewable energy crops can also be achieved.

A stimulus package is required to achieve the full extent of the opportunity from the agriculture and forestry sector. This package must introduce measures including an increase in the REFIT tariff, the introduction of net metering, public sector buildings renewable usage obligations, the removal of the forestry-replanting obligation, an increase in the current national energy payment for energy crop production and further investment in research and development.

IFA has every confidence that the delivery of this stimulus package will make a worthwhile contribution to both the agriculture sector and the national economy in meeting the challenges faced by the emissions reduction and renewable energy targets.

Padraig Walshe
President

Sean O' Leary
Climate Change Working Group
Chairman

Agriculture and Forestry Can Play a Key Environmental Role

In addition to coping with the current economic downturn, Ireland is also facing a significant challenge in meeting environmental commitments on renewable energy generation and greenhouse gas (GHG) emission reductions. Under current EU proposals[1], 16% of all energy consumed in Ireland must come from renewable sources by 2020. In addition, under the Kyoto protocol[2], reductions in GHG emissions are required by 2012. Ireland has a target of 62.8 $MtCO_2e$[3] emissions by 2012, with further reductions required by 2020. In 2007, Ireland's renewable energy use was approximately 3.3% , while emissions were 69.2 Mt, or 13% above the 2012 target.

The agriculture and forestry communities in Ireland play a key role in managing the environment and, as custodians of the land, are committed to undertaking production in a sustainable manner. Through the effective utilisation and management of the natural resources available, the agriculture and forestry sector has a significant and positive contribution to make towards the achievement of Ireland's targets for renewable energy and GHG emissions reductions. The sector has particular potential for the generation of renewable energy. Managed correctly, renewable energy production will not adversely affect food security, or cause volatility in food prices[4].

IFA proposes that, in order to maximise the contribution that the sector can make, support structures must be put in place, which will facilitate and encourage renewable energy production and behaviour that will lead to emission reductions. In addition, a number of overarching issues must be resolved in order to create an equitable policy environment within which the contribution of agriculture and forestry is accurately measured and recognised.

Emissions Accounting Methodology Discriminates Against the Agriculture and Forestry Sector

The GHG emissions accounting methodology developed by the Inter-Governmental Panel on Climate Change (IPCC) and accepted by the Irish Government contains a number of anomalies, which unfairly discriminate against the agriculture and forestry sector and diminish their contribution. In order that the sector can make most effective use of the resources available to it and to create an equitable policy environment within which to do so, the following issues must be resolved:

- **The Energy and Transport sectors currently benefit from significant GHG emission reductions for emissions actually reduced from the Agriculture sector.**

1 *Climate action and renewable energy package,* EU Commission, January 2008

2 International agreement linked to the United Nations Framework Convention on Climate Change, which sets binding targets for industrialised countries for reducing greenhouse gas (GHG) emissions

3 $MtCO_2e$ is the unit of measurement used for greenhouse gas emissions. It is equivalent to one million tonnes (mega-tonne) of Carbon-Dioxide equivalent, which measures all the greenhouse gases.

4 *Public Consultation on Biofuels Obligation Scheme,* DCENR, September 2008

The agriculture and forestry sector has the potential to significantly reduce emissions through the production of renewable energy. However, under the current GHG emissions accounting methodology, the agriculture and forestry sector will not receive the carbon credit associated with these reductions. Instead the reductions achieved will be counted as a credit for the traded energy sector. This reduces the incentive for the agriculture and forestry sector to develop and grow renewable energy production capacity.

IFA proposes that the positive contribution from the agriculture and forestry sector to the reduction of emissions must be counted as part of the overall net contribution of the agriculture sector to emission reductions and not attributed to the energy and transport sectors.

- **Agriculture does not receive the Carbon Credit for Carbon sequestration**

The forestry and grassland sector in Ireland provides a range of opportunities to directly offset increases in GHG emissions. Forests, hedgerows and grassland all act as a carbon sink, contributing to the removal of greenhouse gases from the atmosphere. In 2007, it is estimated that forest sinks alone accounted for a reduction of emissions of 1.36 Mt CO_2e. 80% of forests planted since 1990 in Ireland are privately owned and therefore account for the majority of these emission reductions.

Currently carbon credits from carbon sinks are not attributed to agriculture. Ireland has the highest level of carbon sequestering permanent pastures in Europe, which when combined with the opportunity to expand the forestry cover can promote a substantial national carbon sink.

Ireland has only 10% forest cover, compared with a European average of 30%. If farmers are to be responsible for the sector reaching a critical mass and maximising its potential for carbon sequestration, forest sinks must be included as part of the measurement of emission reductions in the agriculture sector. In addition, the inclusion of forest sinks will contribute indirectly to emission reductions in the energy sector, through the production of wood biomass.

IFA proposes that the CO_2 emission reductions achieved through natural carbon sinks, such as forests and grassland, must be included in the overall measurement of the contribution of the agriculture and forestry sector to emission reductions.

- **Displacing Irish Beef Production with Less Environmentally Sustainable International Production.**

Irish beef production is predominately based on a grass diet, which results in the production of some of the most environmentally sustainable beef internationally. A downward pressure on the national herd, to achieve greater emissions reductions, would result in a fall in Irish food production, at a time of increased global food demand.

In addition to the damaging effect that this would have on the Irish economy, these actions would result in carbon leakage[5], due to substitute food production being undertaken overseas. There is strong evidence that any reduction in beef production by Ireland would lead to increased production by South American countries, resulting in further destruction of the Amazonian rainforest. The impact on carbon emissions would be enormous, both through the massive carbon release in the burning of the rainforests and the irreversible loss of a vital carbon sink. In any case such beef production would then incur significant air miles in terms of increased food imports to the EU.

Overall, in a global context, a reduction in Irish beef production would greatly increase the carbon footprint of the substitute product.

IFA submits that the pursuit of a policy of reducing herd numbers, to achieve greater emission reductions would be a simplistic and counter productive measure. Such a policy would negatively affect EU food supply and damage the Irish agri-food sector and rural economy. It would also cause a significant overall global increase in emissions through the production and subsequent import into the EU of substitute beef from cleared rainforest areas.

Sustainable Investment in Energy security and Emission Reductions

The agriculture and forestry sectors are key to the bio-economy. These sectors have the capacity to increase production of renewable energy and alternative fuel sources, and in doing so contribute to a reduction in emissions for the electricity, heat and transport sectors. In order to exploit fully the potential of these sectors, the following supporting policies must be implemented:

- **Renewable Electricity – On-farm micro-generation**

The Planning regulations must be amended to:

- Allow landowners to put up more that one wind-tower with a density of no greater than 1 per hectare with a maximum of 10 wind turbines;
- Allow towers of up to 18 metres provided they are 50 metres from other dwellings (excluding the farmer's dwelling) and primary and secondary roads (up to 38 metres if distance is 100m);
- Allow at least 35 kWh (36 kWh in France) of solar PV on the roof of existing buildings, where 1 kWh is about 7m^2; and
- Introduce a simplified planning application process for suitable anaerobic digestion facilities.

A targeted REFIT[6] tariff must be introduced for micro energy of 22c per kWh, to allow for an acceptable return on investment in micro-generation.

5 An increase in carbon dioxide emissions in one country due to an emission reduction by a second country

6 Renewable Energy Feed In Tariff

The introduction of a stimulus package in the form of a double capital allowance tax relief up to a maximum investment of €50,000 in micro energy for any individual, with taxation relief sought on 6,000 units over 3 years.

The introduction of smart and net metering technologies to allow for measurement of all on farm electricity production and supply of renewable electricity to the national grid.

The introduction of cost-sharing between individuals and ESB for preliminary desktop survey on feasibility of grid connection;

The removal of the application fee for grid connection for proposed renewable energy projects of 1MWe or less.

The amendment of the "gate" system as operated by the Commissioner for Energy Regulation (CER).

The provision of 100% grant-aid to establish 8 wind micro energy units, 4 micro solar units and 2 small anaerobic units on farms across the country, to enhance the education and research of micro energy development in Ireland.

- **Renewable Heat**

The creation of new market opportunities and sufficient scale of demand in biomass supply at local level by expanding the Heat Fuel Conversion Programme beyond the Office of Public Works (OPW) to include all public buildings.

Recommit to the Growing for the Future targets for afforestation, with a minimum annual afforestation programme of 10,000 ha for a sustainable supply of biomass.

The removal of the replanting obligation (with safeguards), which acts as a deterrent to farmers considering forestry.

The introduction of an Environmental Services Payment of €250 ha for conifers forests and a 30% supplement for broadleaf to reward farmers for the multiple environmental services provided by the forest and stimulate resurgence in the afforestation programme.

The provision of an annual budget of €10 million to Forest Road Scheme to construct the necessary infrastructural network to access the biomass resource. Inadequate funding is impeding development.

The amendment of the BioEnergy Scheme (BES) to allow capital allowances on establishment costs of perennial Bioenergy crops such as willow and miscanthus.

The amendment of the REPS[7] 10 ha limit for payments on energy crops.

The development of a Biomass Mobilisation Programme, to support the technical development of the supply chain. Bioenergy is a new market and requires investment in infrastructure, specialised equipment and training to create a viable market. An integrated programme of funding is needed to create confidence in the supply chain in the following areas:

- Biomass Drying/Storage Scheme;
- Biomass Mechanisation Scheme;
- Bioenergy Business and Technical Training; and
- Regionally coordinated and supported Farm Based Energy Enterprises.

The use of Public Service Procurement to provide a market to incentivise biomass production for co-firing in Ireland's 3 peat-burning plants.

The provision of finance to fund on farm research, regarding real time and cost in the logistics of production and transport of biomass from sources to conversion plants to end users (from farm-to-power).

- **Renewable Transport**

An increase in the current national energy payment top up for energy crops from €80 to €125/ha, to compensate for EU Commissions' decision to abolish the energy crop payment of €45/ha.

The introduction of a use-or-lose clause for recipients of MOTR[8] excise relief on biofuels and re-allocate to companies capable of producing indigenous transport biofuels

The introduction of targeted MOTR schemes in the pure plant vegetable oil (PPO) sector, which is the most carbon efficient method of producing transport biofuels in the EU.

The provision of incentives to the HGV sector to facilitate the switch over to PPO.

In the medium term it is anticipated that transport bio-fuels will be predominately commercially produced from cellulose, using 2nd and 3rd generation technologies using enzymes or other bio-refined processes. It is critical that at an industry using 1st generation technologies is built in order to allow a seamless move to newer technologies when they become commercially viable.

7 Rural Environment Protection Scheme
8 Mineral Oil Tax Relief

Role of Research in Reducing Emissions

Significant progress has been made over the past number of years in Ireland in reducing greenhouse emissions from agriculture. Methane emissions per litre of milk produced have declined by 12% since 1990. The implementation of research findings contributing to emissions reduction include:

- Reduction in nitrogen fertiliser use through improved nutrient management;
- Efficient rearing of cattle, leading to earlier slaughter and lower lifetime greenhouse gas emissions; and
- Advances in production technologies, particularly in animal feed, leading to reductions in methane emissions.

IFA submits that the potential of knowledge, science and technology to achieving emission reductions in agriculture should be maximised. The current research programme of Teagasc should be strongly supported by Government. In addition Teagasc, together with other research institutions in Ireland, should be given a mandate to ensure that research findings in relation to agriculture and the environment, which are developed across the world are transmitted to Ireland and verified under Irish production conditions. The outcomes of this research must be communicated to the farming community in a prompt and efficient manner.

Notes

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