

BYRNEWALLACE

Forests, fields key to future

From sustainable forestry credits to food emission labelling, the agriculture sector needs legislation now in order to encourage change

RELAND'S RENEWABLE-energy and carbon-emission reduction targets are set with reference to the European Union targets contained in the 20-20-20 strategy document. This requires a 20 per cent reduction in greenhouse gas emissions; 20 per cent improvement in energy efficiency and that 20 per cent of EU energy consumption be from renewable energy sources – all by 2020.

Under directive 2009/28/EC on the promotion of the use of energy from renewable sources, each member state is set individual binding targets that will contribute to the overall goals of the EU. Ireland's overall target is to achieve 16 per cent of its energy needs from renewable sources by 2020.

Ireland's National Renewable Energy Action Plan has set a target of 40 per cent electricity consumption and 12 per cent heat from renewable sources by 2020.

While the bulk of the renewable energy electricity generation will be delivered by onshore and offshore wind, there is also a significant opportunity to promote micro-generation on farms, industrial sites and domestic homes. The regulatory regime will have to be amended so that surplus electricity can be sold to the grid, however, and the renewable energy feed-in tariff will have to be increased to support the entry into this market of smaller users.

One of the first requirements for the new Government is to introduce a cross-party Climate Change Bill that clearly puts Ireland's long-term emission targets into law.

The Government should ensure full stakeholder consultation and a detailed cost-benefit analysis for inclusion of the various non-traded sectors, including agriculture, says David Hourihane, a partner in law firm ByrneWallace, and

part of its Green Economy Group, which was set up to help its clients tackle the challenges and opportunities offered by the green economy.

This would be done "in the context of assessing the ability of each sector to reduce emissions in a cost-effective manner, and taking account of external factors such as global competition for dairy or beef production and the need for sectors to remain cost-competitive", says Hourihane.

"A Climate Change Act would provide a powerful symbol for Ireland of its intention to become a leader in the green economy, including low-carbon sustainable farming. Ireland's low-carbon model for milk and beef production could provide a competitive advantage for the Irish agricultural sector as it competes on the global stage, and the ability to demonstrate, through accepted methodologies and verification, that Irish agriculture is the most environmentally sustainable."

This is an advantage that needs to be recognised, says Ger Bergin, head of climate change and renewable energy with the Irish Farmers' Association (IFA).

"The worst thing about the Climate Change Bill the Green Party tried to bring in was the fact that it would have had a severe impact on agriculture without really addressing the problem," he says. "There is a limit to what agriculture can do to reduce emissions without actually reducing stock and, if we were to reduce stock here in Ireland, it would simply be replaced in other countries. So that would not reduce global emissions at all."

The key issue is efficiency of production, says Bergin. "According to the United Nations, the world will need to produce 70 per cent more food by 2050 with less land and lower emissions. The way to achieve this is by measuring



agriculture by units of emissions per kilo of beef or other product; 92 per cent of Ireland's agriculture is based on permanent grassland, which is a carbon sink in itself. This is a huge natural advantage. The emissions per kilo of Irish beef are just one-third to one-quarter of those of South American beef production."

Emissions labelling on food products is already being pioneered in the UK and this could point the way forward for Irish agriculture to be recognised for its environmentally sustainable properties.

Hourihane points to carbon credits as another area where legislative innovation could assist the agricultural sector. This is the creation of a domestic offset market for carbon credits in Ireland. This would allow projects in the agricultural sector, which produce verifiable emission reductions, to generate carbon credits that could be used by companies towards their emission-reduction targets or sold within a domestic offset market or within the EU under the emissions trading scheme (ETS).

The Forest Carbon Unit proposed by



Coillte is an example of such a project. The Coillte proposal is that increased levels of afforestation and its attendant carbon sequestration value would produce a credit that could either be sold or used to offset emissions.

"Forests are carbon sinks which draw carbon in from the atmosphere," says Coillte innovation director Ciaran Black. "We have very low forest cover in comparison to the rest of Europe and that gives us a big opportunity. However, we are currently only planting about half what is necessary: about 6,000 to 8,000



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hectares annually as opposed to the 15,000 required."

The reasons for this relatively poor performance are in part structural. As an investment, a forest has a very long payback horizon of 40 years or more. This might be within the timescales envisaged by pension schemes – but not investors.

Under current arrangements, there are State grants to incentivise forestry but this doesn't address the timescale issue. The grant scheme sees the State take on the carbon credits associated with the forest. Coillte is proposing an alternative to grants that would see forestry investors instead holding on to the carbon credits, which they could either sell to the Government each year or on the international market under the ETS. This would give the investors an annual income from the forest as well as the ultimate payback at harvest.

"There is a grey legal area around who owns the carbon credits at present and we need clear carbon property rights in law before this can happen," says Black. "We also need a system to make domestic carbon credits tradable internationally. These are not insurmountable obstacles and we hope to engage with the Government again soon to discuss the issues and have the new system in place by 2013."

Valuable contributions towards Ireland's renewables targets can also be made at farm level through the use of innovative technologies such as Duggan Energy's anaerobic digestion units. These units harvest the methane gas from waste such as pig slurry as well as from crops such as maize, grass and miscanthus for use in combined heat and power systems which generate electricity for use on the farm as well as sale back to the grid and heat for use on the farm and district heating schemes.

"The majority of our work at the moment is in Britain and Northern Ireland, where they have the supports in place for technologies like this," says John Butler of Duggan Energy. "At the moment it is not economically feasible in

Ireland. But if the government were to put in place the incentives it would actually end up costing the State nothing as the payback would be there in terms of job creation and carbon credits. The UK government has recognised the potential of the technology; unfortunately that is not the case in Ireland yet."

This sentiment is echoed by Joe O'Carroll, managing director of Imperative Energy, a company that provides combined heat and power units which use forestry thinnings and other crops as their main fuel input.

"We have 32 active projects in the UK and Ireland – mainly in the UK," he says. "A big drive in the UK is the whole carbon economy initiative. With North Sea gas and oil production declining rapidly, they are almost paranoid about energy security and are focusing on sustainable energy and offering very attractive incentives for projects in the area."

To overcome the lack of incentives in Ireland, Imperative Energy offers a design, build, finance and operate model to customers that allows them to simply pay a monthly charge for the energy supplied, with no upfront capital costs.

To make these and other technologies viable in Ireland, David Hourihane says a carbon offset market and clear binding long-term targets for emission reductions are needed.

"These would facilitate financial investment for technologies to deliver on the mitigation potential of agriculture," he says. "It is important that the legislative mechanism adopted does not penalise Irish agriculture resulting in the reduction of the national herd at a time when demand for Irish food exports is increasing and food scarcity is becoming a major global issue; rather, it should stimulate innovation and additional research and development for the Irish agricultural sector, resulting in the private sector, in conjunction with public funding, supporting projects that deliver a competitive advantage to Irish agriculture while enabling the continuing transition to low-carbon production on-farm." ■