

September 2008

**Department of Communications, Energy
and Natural Resources (DCENR)**

- Compliance with Directive 2003/30/EC

***“Report on measures taken to promote the use of biofuels or other
renewable fuels to replace diesel or petrol.***

Compliance with Directive 2003/30/EC (Article 4)”

1. Introduction

DIRECTIVE 2003/30/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8th May 2003 on the promotion of the use of biofuels or other renewable fuels for transport, inter alia, requires Member States to report to the Commission before 1st July each year on specific measures to promote biofuels and biomass, indicative targets for market penetration and current market status of biofuels and biomass.

The fifth report following entry into force of this Directive is now due.

This fifth report sets out Ireland’s position as follows:

- § The measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes;
- § The national resources allocated to the production of biomass for energy uses other than transport;
- § The total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market for the preceding year.

The information provided in this report is **additional** to information provided in Ireland’s 2004, 2005, 2006 and 2007 report to the Commission.

2. Measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes.

Fiscal Measures

Biofuels Mineral Oil Tax Relief Schemes

The 2005 and 2006 Biofuels Mineral Oil Tax Relief Schemes, which run until 2010, have seen over 68m litres of biofuel placed on the Irish market

since the schemes were launched. There were 18 projects awarded excise relief and the projects include operations producing fuels from a number of waste to energy streams (including animal and milk by products and recovered vegetable oil) along with more conventional cereals based projects.

A new biodiesel plant has been constructed as part of the Scheme and commissioning of the plant has recently commenced. The plant will have a 30,000 ton capacity when fully operational. Another successful project under the scheme has seen the number of its petrol stations selling E85 increase to 26 service stations in Ireland.

The Programme for Government underlines our commitment to the sustainable development of an Irish biofuels market. The biofuels Mineral Oil Tax Relief (MOTR) schemes have resulted in biofuels already being mainstreamed in blends of up to 5% at a number of existing petrol and diesel pumps with higher blends being sold to identified vehicle fleets (both bioethanol and biodiesel). Uptake on the use of biofuels has seen a dramatic increase to date since the schemes began.

Vehicle Registration Tax (VRT) Relief for Hybrid Electric/Flexible Fuel Vehicles

In the Finance Act 2008 the 50% VRT relief scheme for series production hybrid electric vehicles and flexible fuel vehicles, which was due to expire on 31 December 2007, was extended in its current form from 1 January 2008 until 30 June 2008, at which point the revised VRT scheme based on CO₂ emissions was implemented.

From 1 July 2008, relief for series production hybrid electric and flexible fuel cars was adjusted to provide a relief of up to €2,500 on the VRT payable, in addition to any benefits accrued under the new VRT CO₂ emission related system (which provides for lower rates of VRT for cars with lower emissions). This relief will apply until 31 December 2010.

Since VRT relief was introduced for a limited range of environmentally sustainable vehicles, there have been 3,167 hybrid vehicles, 2,836 flexible fuel vehicles and 8 electric vehicles registered in Ireland (these figures are at end April 2008).

Series production electric cars (i.e. cars which can be propelled solely by a rechargeable battery) and electric/battery-assisted bicycles have been completely exempted from VRT for a three year period, with effect from 1 January 2008.

Biofuels Obligation

The Department of Communications, Energy and Natural Resources (DCENR) has recently published a consultation paper in relation to the proposed biofuels obligation which is designed to allow all interested stakeholders to submit their views on the proposal. In that context, EU developments on biofuels policy in light of the emerging concerns in relation to sustainability have been fully factored in and will be publicly debated. Specific details of the obligation will be finalised as part of the consultation process. It is proposed to introduce the obligation in 2010. The main objective of the biofuels obligation is to enable Ireland to move progressively towards meeting EU targets for biofuels penetration in a cost-effective way while taking full account of sustainability in line with EU developments.

Agricultural Measures

The Department of Agriculture, Fisheries and Food (DAFF) is implementing the following measures to increase the share of bioenergy derived from the Agriculture and Forestry sector:-

EU Energy Crops Scheme

The EU Energy Crops Scheme provides farmers with an EU premium of €45 per hectare to grow energy crops intended primarily for use in the production of bioenergy. The €45 Premium is payable on a maximum guaranteed area of 2 million hectares per annum across EU Member States. When this threshold is breached, the Premium is reduced proportionately. Some 500 applicants have availed of this grant aid.

National Energy Crop Premium

The National Energy Crop Premium worth €80 per hectare is available over the period 2007-2009 to stimulate production of energy crops. The premium is paid in addition to the EU premium of €45 per hectare, which is available under the EU Energy Crops Scheme. Some 500 applicants have availed of this grant aid.

Bioenergy Scheme

The Bioenergy Scheme was introduced on a pilot basis in February 2007 to provide establishment grants to farmers to grow miscanthus and willow for the production of biomass suitable for use as a renewable source of energy. The Scheme aims to increase the production of willow and miscanthus in Ireland and to encourage alternative land use options. Establishment grants are payments to cover part of the costs of establishing the crops. Eligible costs include those associated with ground preparation, fencing, vegetation control, the purchase of planting stock, planting and first year cutback, and costs associated with other approved operations. Aid is payable on 50% of the approved costs associated with establishing the crop, subject to a maximum payment rate of €1,450 per hectare, with the balance to be invested by the applicant. The Scheme will operate over the period 2007 – 2009. There were 91 applicants grant

aided for almost 700 hectares 2007. A further 146 applicants have received approval to plant in excess of 1,200 hectares in 2008.

AGRI/Energy Research

DAFF supports bioenergy research through its Research Stimulus Fund Programme. The Programme facilitates research that supports sustainable and competitive agricultural production practices and policies and contributes to a scientific research capability in the agriculture sector. To date, some €7 million in funding has been made available for 12 research projects. The Research covers a broad range of bioenergy topics including the suitability of Irish grassland for biofuel production, anaerobic digestion, second-generation technologies and energy crop production.

Transport Measures

The Department of Transport and Marine has indicated that public transport operators, which are the subject of public service obligations (PSO), have been instructed to move to a 5% biodiesel blend in the current fleet immediately with the view to ensuring that all new buses, as part of future fleet replacement, can operate on a 30% blend, subject to technical and logistical constraints. It is expected that the obligation will be implemented in 2009. The Department of Transport and Marine will also continue to look at the technical and economic feasibility of buses and heavy goods vehicles (HGV) operating on 100% pure plant oil (PPO), as well as any potential regulation of engine modification or suitable fuels.

In February 2008 the Department of Transport and Marine launched its 2020 Vision: Sustainable Travel and Transport: Public Consultation Document (<http://www.sustainabletravel.ie>) which sets out the Government's vision for a sustainable transport system by 2020 and seeks to elicit response from stakeholders and the general public on how certain policies and measures could be introduced to reduce discretionary demand for travel and improve energy efficiency. The need for a Sustainable Travel and Transport Action Plan (STTAP) emerged during the preparation of the Energy White Paper *Delivering a Sustainable Energy Future for Ireland* and the revised *National Climate Change Strategy (NCCS) 2007-2012*, when it was recognised that adverse trends in the transport sector in Ireland had to be addressed.

The Department of Transport and Marine is currently analysing responses from the public consultation process and is preparing a final Sustainable Travel and Transport Action Plan (STTAP) for publication before the end of 2008. It is expected that biofuels will play a large part in delivering the Government's commitments under the proposed EU Energy and Climate Change package and supports the Commission proposal to achieve a 10% substitution by 2020. The STTAP will also suggest targets for usage of electric vehicles by 2020.

Research and Development

Potential of Marine Algae/Seaweed

Work is currently underway to determine what the marine environment might contribute to developing the national biofuels capacity. The analysis will include identifying the necessary research, development and demonstration projects to realise any such potential. Sustainable Energy Ireland (SEI), which comes under the aegis of DCENR, is commissioning analysis of the potential of marine algae as a source of biofuels for Ireland. This work will provide a comprehensive basis on which to inform research and development work on the potential use of marine algae for renewable energy. It will also provide data in relation to the biofuels capacity that could potentially be derived from the marine environment.

A tender for the study was recently awarded to a company called BioXL and it is expected that the study will take up to six months to complete. In light of its findings DCENR will be better equipped to quantify the scale of the potential marine resource for biofuels development and to develop a strategy.

3. The national resources allocated to the production of biomass for energy uses other than transport

Renewable Energy Grant Aid Package

The Irish Government's commitment to developing both domestic and commercial scale renewable technologies is ongoing. The Government has committed to a range of measures designed to increase market penetration of renewable energy in the heat sector by setting targets of 5% renewable heating by 2010 and 12% by 2020. This will be supported through programmes such as ReHeat, Combined Heat and Power (CHP) and the Greener Homes Scheme which were reported on in previous reports. These programmes, which provide grants for the installation of renewable heat technologies across a wide range of sectors including the domestic, community, voluntary, public sector, commercial and business sectors, continue to be very successful.

There have been a total of 22,000 applications approved under the Greener Homes Scheme since its launch in March 2006. Biomass technologies represented 14% by volume and 19% by value of these applications. There have been a total of 13,000 installations completed and paid to date representing annual CO₂ savings of 33,000 tonnes.

There have been 415 ReHeat applications received of which 326 are approved. The grants approved break down into 39 Feasibility studies worth almost €137,000 and 287 demonstrations worth over €6.35m. Estimated annual CO₂ emissions reductions arising from the approved ReHeat applications is 59,200 tonnes CO₂/yr. Of the approved ReHeat

projects, 151 worth over €4.96m are biomass boiler projects (representing 52% by volume and 78% by value of approved projects).

There have been 78 CHP applications received of which 56 are approved. The grants approved break down into 14 feasibility studies at a value of over €147,000 and 42 demonstrations worth over €2.5m. Estimated annual CO₂ emissions reductions arising from the approved CHP applications is 10,700 tonnes CO₂/yr.

Separate to the fossil fired CHP projects above, one Biomass / AD CHP unit has been approved for grant support in the amount of €1.38m.

With regard to the CHP Programme, which provides grant support to assist the deployment of small-scale (<1MWe) fossil fired CHP systems, in 2007 it was announced that the Programme will now also provide grant aid for Biomass and Anaerobic Digestion CHP. Already one Biomass / AD CHP unit has been approved for grant support in the amount of €1.38m.

Charles Parsons Awards

The Charles Parsons Awards scheme was announced in December 2006. The awards totalled funding of €20 million for the development of energy research centres. Of the seven projects currently in progress as a result of Charles Parsons's awards, four projects relate to biofuels and/or biomass:

1. Biologically Mediated Sustainable Energy Generation (National University College, Galway)
2. Bioresources Research Centre (BRC) (University College Dublin): The BRC is carrying out research on the utilisation of Bioresources, including the production of biofuel from crops and agri-food industry waste streams.
3. University of Limerick (UL) is examining the utilisation of local bio-resources of chemical energy (bio-fuels).
4. Centre for Sustainable Energy (University of Ulster): Work includes investigating the effects of biomass gases with regard to the performance of fuel cells.

The main activity of the Charles Parson research groups in 2007 was on the recruitment of postgraduate students and senior researchers. As the recruitment process is not yet complete, no substantial results in terms of research output can be expected until at least late 2008 or early 2009.

The Irish Energy Research Council has published an *Energy Research Strategy for Ireland*. The Strategy proposes five strategic lines, one of which is RD&D in Sector Specific Fields, including *Sustainable Bioenergy*.

Further information regarding the Energy Research Strategy can be found on:

<http://www.dcmnr.gov.ie/Energy/Office+of+the+Chief+Technical+Advisor/Irish+Energy+Research+Council.htm>

In May 2008, the Government extended the remit of Science Foundation Ireland (SFI) to embrace sustainable energy research and energy efficient technologies as an additional pillar.

Renewable Energy Feed in Tariff (REFIT)

Details of Ireland's Renewable Electricity Feed in Tariff Programme (REFIT) were included in last years report. At end June 2008 approximately 90 projects had been accepted into REFIT with a combined installed rating of the order of 1500 megawatts. The dominant technology is wind-power. Each project has secured prior planning permission and a connection offer as prior qualifying conditions. A high build rate is therefore expected.

There is now an increasing focus on biomass with REFIT supporting "Biomass" and "Other biomass" under the currently approved REFIT programme. There is also a proposal to award a higher tariff level to biomass Anaerobic Digestion (AD) sourced electricity. The tariffs under REFIT for biomass are:

- Biomass (landfill gas) 7.0 cent per Kilowatt hour.
- Other biomass 7.2 cent per Kilowatt hour.
- Biomass AD 14 cent per Kilowatt hour (proposed, subject to EU state aids clearance)

Bioenergy Working Group

Ireland has established ambitious targets for bioenergy for 2020. Delivering the biomass supply to meet these targets will require the mobilisation of significant additional resources compared to present level. A Bioenergy Working Group (BWG) was established by DCENR in April 2008. The aim of the BWG is to chart the sustainable path to achieve the 2020 bioenergy targets and to develop interventions to help deliver on these targets.

The Bioenergy Working Group will act as a gateway to relevant knowledge and expertise within the member Departments and agencies, commission studies as required and consult with interested parties during the development of a Sustainable Bioenergy Supply Roadmap. In order to be effective, and recognising that bioenergy impacts upon various sectors, including energy, agriculture and environment, it was recognised that it is critical that the development of the roadmap is tackled by a cross sectoral collaboration group. In this regard the group is representative of Government Departments, Government Agencies and relevant

stakeholders. It is anticipated that the group will have a draft roadmap prepared by the end of 2008.

Agricultural Measures

On-farm waste to energy projects

There is potential to supply energy through the use of grass or animal manures as feedstock in anaerobic digestors. Anaerobic Digestion is a proven technology that extracts energy in the form of biogas from organic and farm waste. It can be used to generate heat and/or electricity. Although in general the DAFF does not provide capital funding for alternative energy investment costs on farms, it is doing so in the case of the 'Scheme of Investment Aid for Demonstration On Farm Waste Processing Facilities'. In 2007, ten anaerobic digestion projects were awarded grants of €4m under the Scheme. The maximum investment ceiling was €1 million per project and the applicable grant rate was 40%. The 2007-2013 Rural Development Programme provides for the continuation of a grant scheme for the development of such facilities.

Wood Biomass Harvesting Machinery

Under the Wood Biomass Harvesting Machinery Grant Scheme to support developing enterprises in the wood chip supply sector, which was reported on in last years report, €500,000 in grant aid has already been approved. This aid has stimulated associated investment of some €1.5 million. A further €600,000 is being made available under Phase II of the Scheme, which runs until the end of 2008.

4. Total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market for the preceding year.

The following table illustrates the latest statistics available on transport energy consumption by fuel which shows the % of total road transport fuel consumption that is biofuel.

Year	Biofuel	DERV	Gasoline	Total	Biofuel	DERV	Gasoline
2007	21	1,861	1,665	3,548	0.60%	52.46%	46.93%

Notes

Figures in ktoe

Data is provisional until later in the year

The figures indicate that market penetration of biofuels in 2007 was 0.60% which is a significant increase over the 2006 figure which was 0.09%.