

Public Consultation on the Biofuels Obligation Scheme
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Introduction

As set out in the Energy Policy Framework, the Bioenergy Action Plan and the Programme for Government, the Government intends to introduce a biofuels obligation to ensure that a certain percentage of the transport fuel used in the state by 2010 consists of biofuels. Such an obligation scheme will be a key component in achieving a 10% penetration of renewable energy in transport by 2020, to which the Government has committed under the proposed new EU Renewable energy and climate change packages, set out by the European Commission in January this year. This type of regulatory mechanism is increasingly being adopted across the EU and generally supplants earlier and more direct means of supporting biofuels, such as excise tax relief schemes. The biofuel obligation scheme should allow for a gradual uptake of these new fuel supplies and will adopt the new sustainability criteria which will come with the new binding EU targets. While other forms of renewable energy will play an important role in transport by 2020, it is expected that biofuels will retain a substantial role, and that successively higher obligations rates will be required to deliver that overarching 10% target.

In a time of unprecedented high and volatile oil prices, concerns about a peak in global oil production and a global focus on climate change, renewable energy derived liquid fuels have a vital role to play. Biofuel production provides an alternative liquid fuel supply for the running of essential agricultural, public transport and industrial machinery in the event of a disruption in the supply of conventional fuels. It can turn what would otherwise be waste materials into valuable energy products and provides economic opportunities for Irish agriculture new technology industries.

However, five years after the European Union agreed on the Biofuels Directive, there are growing concerns about the role biofuels may play in contributing to rising food prices, accelerating deforestation and doubts about the climate change benefits of some such fuels. In particular, there remain serious concerns about the use of what are generally termed ‘first generation’ biofuels. These concerns relate to issues of sustainability and life-cycle greenhouse gas reductions as well as to potential impacts

on food production and, perhaps most importantly of all, the potential indirect land use change implications.

The challenge before Government therefore, is to form policies that ensure that key energy policy goals are met, without compromising other sectors. Biofuels can make a real and positive contribution in the fight against global climate change, and can help deal with pressing security of supply concerns. The obligation set out in this paper is proposed as the primary means of facilitating the sustainable development of biofuels in Ireland.

This public consultation paper sets out the main issues facing national biofuels policy in the coming years, and requests public comment on each of these, ranging from the most appropriate level of an obligation to the manner in which it should be implemented. However views are invited and would be welcome on all or any aspect of this paper. Views or comments on the proposed obligation can be sent via email or post to the addresses below.

How to Respond

Responses can be sent to BiofuelsObligation@dcenr.gov.ie or by post to;

Biofuels Obligation Consultation,

Department of Communications, Energy and Natural Resources,

29-31 Adelaide Rd,

Dublin 2

The introduction of this obligation will not require individual motorists to alter their vehicles in any way. Motor manufacturers have agreed that blends of fuels (both Petrol and Diesel) of up to 5% biofuels can be used without any modification, and with no effect on warranties or maintenance schedules. Future increases in the percentage of biofuel blended in fuels on general sale will only take place as vehicle manufacturers certify their vehicles to run on higher blends of biofuels.

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Part I Biofuels: Context and Recent Events

In the past decade, biofuels have gone from being a fringe concern to a central platform of global energy policy. They have been proposed as a partial solution to a triumvirate of problems facing developed market economies in that they can be used to address GHG emissions from transport fuels, to provide an alternative market for agricultural products, and to reduce dependence on imported hydrocarbons, which are often sourced from politically unstable regions of the planet. Substantial support programmes for biofuels began to appear across OECD countries during the 1990s, with overall context being provided by the introduction of general targets such as that in the 2003 European Union Biofuels Directive.

Since that time, developments in international commodities markets have caused much concern over the nature and direction of biofuels policy, and the unintended effects it may be having on food prices, on food security and on vulnerable ecosystems. Moreover, evidence began to emerge that the carbon emissions reductions from biofuels may be less than anticipated, and in some cases may actually be negative; that is to say that some biofuels may actually result in a net increase in Greenhouse Gas emissions in the short or medium term. These developments have led to much public concern around these issues, and in particular the effects that biofuels policies in the developed world may be having on people and societies in the developing world.

This section sets out a summary of recent market developments and the various sustainability issues are then parsed briefly.

Biofuels and International Markets

In the Biofuels Directive (2003/30/EC), biofuels are broadly defined as “liquid or gaseous fuel for transport produced from biomass”. The most common of these fuels are Biodiesel (usually made from natural oils, either of vegetal or animal extraction) or Bioethanol (usually made from natural sugars or starches, such as those found in wheat, maize or sugar cane). The two main sources of these materials at present are from agricultural products, mainly arable crops like wheat, oilseed rape, maize or

sugar beet, and waste products, like tallow or recovered cooking oil (RCO). All of these are generally known as ‘first generation biofuels’.

There has been substantial investment and interest in so called ‘second generation’ biofuels, which use a variety of techniques to convert other materials into fuels. These materials include a range of biomass materials, including wood, straw, biodegradable domestic waste or even paper. These fuels are expected to have very significantly better sustainability characteristics than some first generation fuels, due to the fact that many of them are either waste products from farming, industrial processes or domestic dwellings or they can be grown on land unsuitable for arable crops. Importantly, these technologies often seek to use the entire plant, rather than certain elements of it, and have lower inputs in terms of fertilisers, with typically higher yields. The recent Royal Society Report suggests that “*biofuels from lignocellulose material are likely to show a twofold or more improvement in average abatement potential when compared with biofuels derived from food crops¹*”. This also means that upward pressure on food prices would be significantly less. However, despite considerable interest, commercially viable second generation fuels are not expected to be available before 2015.

For the most part, the effects which have caused most concern are related to the increased demand due to the use of agricultural commodities (although not entirely²). Importantly, biofuels are currently not generally viable competitors to fossil fuels (at least when produced in the northern hemisphere), and so require state support policies. It is these support policies, and the effects they have had in creating additional demand for internationally traded soft commodities that have attracted the most criticism. This demand has led, in part at least, to higher global prices for commodities with consequent effects on food security, particularly in the developing world. While there is some disagreement as to the precise contribution made by biofuels support policies, there is general unanimity that there has been at least some upward effect on prices. To give a metric of the extent of price rises, the International Monetary Fund (IMF) index of internationally traded food commodities prices increased 130 percent between January 2002 to June 2008 and 56 percent from

¹ <http://royalsociety.org/displaypagedoc.asp?id=28632>

² <http://www.dft.gov.uk/pgr/roads/environment/rtfo/tallow/tallowfinalreport.pdf>

January 2007 to June 2008. While divining the actual quantitative effect of biofuels production is clearly beyond the requirements of this paper, it is important to set out an outline account of what has occurred in the recent past.

The main reason it is so difficult to ascertain the precise effect of biofuels production is that measures to increase output coincided with a number of other international developments. Firstly, and most importantly, there has been a marked and sustained increase in demand for certain commodities from within the developing world, particularly India and China, but also from some African countries, as an increased pace of economic growth in these economies facilitated demand for certain food products like white bread, meat and dairy products. Secondly, drought in some major food producing regions (like Australia) led to reductions in supply in 2006 and 2007. Equally, increases in input costs, particularly oil, but also steel, fertilisers, pesticides and seed also helped drive up costs. Lastly, changes in agricultural policies in developed market economies in the period from the mid 1990s led to a reduction in reserves of these commodities and a slow down in investment in production due to a removal of certain price supports. Moreover, the reaction of some producing countries (such as Argentina and the Ukraine), in introducing export taxes, exacerbated the supply situation. A report³ prepared by the European Commission's DG Agriculture stresses these broader reasons underlying recent price rises, and states that "*Reasons for current price pressures are unambiguous and have been reiterated on multiple occasions: a combination of steadily increasing demand and lagging supply or production shortfall, exacerbated by short-term economic and policy factors*". The OECD-FAO Agricultural Outlook 2007-2016 makes the point that high commodity prices "*are, in large measure, due to factors of a temporary nature, such as drought related supply shortfalls, and low stocks*".

However, while markets could factor in some of these developments, supports for biofuels amounted to a significant structural shift in commodities markets, bolstering demand for grains and oilseeds in general (at a time when prices were rising in any case) but specifically targeting certain important commodities. Moreover, this structural change had complex and differentiated consequences that have proven very

³ http://ec.europa.eu/agriculture/analysis/tradepol/worldmarkets/high_prices_en.pdf

difficult to model or predict, and which in turn have had some unforeseen consequences. The Gallagher report points out that “*Since 2000, global bioethanol supply has doubled to over 40 billion litres in 2007 and is projected to grow by a further 20% in 2008*” and that “*Global bioethanol production is dominated by Brazilian sugar cane and US maize*”. More specifically, US maize production has increased from around 11 million tonnes (mt) in 1995 to a forecast 95mt in 2008, supporting an increase in ethanol production from 5bn litres in 1995 to 40bn litres – in 2006 55mt of maize was used to make ethanol, and the proportion of the US maize harvest used for biofuel purposes is forecast to rise, from one fifth to almost a third by 2013.

The EU Commission has pointed out that “*There are strong indications that current EU biofuel production has little impact on current global food prices, as biofuels use less than 1 per cent of EU cereal production*” and that “*The main source of the increased production of biofuels is the US market. The proactive policy pursued by the US may have had a noticeable impact on the maize market*”. As set out in greater detail below, the knock on effect of this state supported increase in maize production has been the displacement of other cereal crops, such as soya, wheat or sorghum, often to countries outside of the OECD, and an increase in the price of these commodities.

The OECD-FAO⁴ noted that “*while smaller than the increase in food and feed use, biofuel demand is the largest source of new demand in decades and a strong factor underpinning the upward shift in agricultural commodity prices.*” In short, policy support for biofuels has had an impact on prices for commodities, but the extent of the impact is still debated and is likely to vary widely, depending on the location and the structure of local markets. The general demand increases have been an important factor, but the roles played by certain commodities, most notably by maize, have been particularly critical in driving a sequence of supply and demand interactions in related products.

⁴ <http://www.oecd.org/dataoecd/44/18/40713249.pdf>

There is however considerable capacity to increase production on a global scale in a relatively short period of time to counteract shortfalls in supply, and in the longer term it is highly likely that production will expand to meet demand increases, of whatever source. For example, the EU wheat harvest for 2008 is expected to increase by 49 million tonnes, a 19% increase on 2007. In the long term, analysis by the European Commission suggests that yield increases could result in an extra 34 million tonnes of cereals in the EU each year by 2020. Moreover, cereal prices are beginning to fall and there are now concerns that the dramatic increase in world cereal production in 2008 coupled with increased imports from Eastern Europe (Ukraine) may collapse cereal prices in the EU. The critical point is this; it is clear that there is sufficient land available to meet likely demand increases out to 2020 at least, and sharp increases in commodity prices can be avoided if markets are fully informed of policy developments, and if demand increases can be modulated so as to reflect the ability of the market to respond. In practical terms, this means that if the rate of increase in biofuels penetration is progressive and signalled in advance, there should be little further impact on food prices. Equally, of course, the facility to place any such increases on hold must be retained, in case of external shocks to agricultural producers, such as weather difficulties.

Sustainability Concerns

Leaving aside the impacts of increased biofuels production on markets for commodities for a moment, there are a number of other sustainability issues that can potentially be impacted on by biofuels production. Taken simply, these relate to land rights, habitat and ecosystem protection, and direct and indirect land use change. In addition, there are profound linkages between each of these and the overarching issue of reducing the overall greenhouse gas emissions from transport fuels. Analysis of each of these is generally complicated by the fact that increases in demand for soft commodities are not just a consequence of biofuels production, but also of general increases in demand for certain products, and of general shifts in agricultural policy over the past decade.

Habitat and Ecosystem Preservation

The clearing of forest or other land for agricultural production is obviously not a recent development. In the case of biofuels however, where one of the central aims of

policy has been to reduce net GHG emissions, this is patently counter productive, even before the ecological or other environmental consequences are considered.

There has been significant evidence of widespread destruction of rain forest in parts of Asia, Africa and South America for the planting of energy crops. Leaving aside the emissions consequences for the moment (see below), this can have a number of detrimental effects on the landscape, on ecology, and on the long term ability of the landscape to support human life. Soil preservation, water quality and existing food supply chains are often threatened by this destruction, and existing species of flora and fauna removed. Moreover, there are often severe consequences for the longer term stability and productivity of the land due to the removal of indigenous species and the opening up of the land to erosion in periods of high rainfall, or in the absence of rainfall (the dustbowl scenario).

Landuse change

The simple fact of the matter is that increased demand for commodities, from whatever source, can lead to changes in land use. This change, as set out above, can entail the outright destruction of forestry or other habitats and their replacement with energy crops. It can also entail the replacement of farmed grassland with arable crops. Each of these changes results in a direct and immediate net increase in the GHG emissions from production. However more difficult to analyse is indirect landuse change, whereby crops are grown on cleared land (forest or grassland) to replace crops displaced by those intended for energy use. In some cases this is an international phenomenon, and results in the replacement crops being grown thousands of kilometres away from where the product was originally sourced. This indirect effect can have very substantial effects on the emissions ‘footprint’ of the biofuel. For example, Searchinger et al⁵ have shown *“that corn (maize) based ethanol, instead of producing a 20% savings, nearly doubles greenhouse emissions over 30 years and increases greenhouse gases for 167 years.* This displacement has linkages across national borders. The Gallagher Report noted that *“The expansion of soy production in South and Latin America has also been highlighted as a consequence of US farmers’ increasing production of maize (and reducing production*

⁵ “Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change”, *Science* 29 February 2008:

of soy) to meet US bioethanol targets". More specifically, the OECD/International Transport Forum Round Table report "Biofuels – Linking Support to Performance" showed that it was not biofuels (sugarcane or maize) themselves that were directly replacing rainforest for the most part, but activities displaced from arable land in the south-east and north east of Brazil by biofuel production. Moreover, the authors were able to link increased arable production (mainly soya) of 3.9 million hectares during 2001-2004 in the Amazon region to a further internal displacement of existing cattle raising enterprises, and ensuing destruction of rainforest. Of course, general increases in demand for agricultural products played a role in the process, but the specific displacement of soya production from the American Midwest is the key policy actor at play, and can be clearly linked to the very strong supports given for domestic bioethanol production within the US.

There is a concern in some quarters that a sudden and dramatic increase in local or regionalised demand for commodities, as a consequence of public policy interventions elsewhere could precipitate a pattern of systematic removal of access to land, or of ownership rights to land, either by government or by private actor. This type of outcome is obviously more likely in developing countries that lack robust legal and enforceable property rights, or where title is not regularly confirmed. This is also dealt with in the sustainability criteria regime.

Emissions

Theoretically, using biofuels as a replacement for fossil fuels results in a reduction in GHG emissions due to the fact that the carbon dioxide released following combustion has been stored in the source plant by photosynthesis. This is known as the closed carbon cycle. However different biofuels have different net GHG emissions. Some, such as those made from waste products like tallow or used cooking oil (UCO), result in very significant savings. Others, generally those that are produced directly from crops, offer lower savings once the energy use associated with actually growing and processing the crop is taken into account (including cultivating the land, and providing fertiliser and pesticides)⁶.

⁶ The Royal Society Report suggests that "biofuels from cereals, straw, beet and rapeseed are likely to reduce GHG emissions, though the estimated contribution varies over a wide range, from 10 to 80% (averaging about 50%) depending on crop, cropping practice and processing technologies.

As set out above, the previous land use also has to be considered; ploughing grassland for arable production involves a serious loss of carbon dioxide previously sequestered in the soil. The displacement effect outlined above is also implicated in this; turning forestry or grassland over to arable production displaced by biofuel production results in a net GHG increase just as tangible as if biofuel crops themselves were being grown. It should be pointed out however that most biofuels do result in emissions savings, and that these savings are generally highly significant. Moreover, the sustainability criteria regime under discussion within the European Union is designed in such a way as to facilitate and encourage more efficient and sustainable biofuels, and to actively and progressively discourage the production of less sustainable biofuels. These criteria, discussed in greater detail below, will be fully integrated into the Biofuels Obligation when they become active.

Energy Security

The third pillar driving policy support for biofuels production across the developed world has been the promise of a degree of independence from energy products imported from politically unstable parts of the world. However, because biofuels generally cannot yet compete on a cost basis with fossil fuels, state support is required to stimulate supply. Moreover, the fact that many biofuels require substantial amounts of energy to grow, transport and process means that increasing energy prices do not render them viable in a directly progressive or linear fashion.

Also, the historical development of agricultural policy within Ireland and the EU has led to a situation where farmers are not able to compete on a cost basis with producers elsewhere. Given that the agricultural feedstocks for biofuels are internationally traded commodities, it is not practical (or possible, under WTO rules) to favour domestic production. In any case, doing so would merely expose the consumer to paying higher prices for fuel due to the cost of domestic production, and in the short term, higher prices for food also. The key question in this instance is around the appropriate price that should be paid for a modicum of energy security, both in terms of higher food prices, direct cost to the tax payer (in terms of revenue foregone) and environmental costs in terms of land use change, GHG emissions or lost habitat.

There is an argument for having at least a residual biofuels production capacity in the state. This would be invaluable in the unlikely event of a severe supply shortage, whereby this fuel supply could be used to keep critical services operational. Current biofuels technologies, such as Pure Plant Oil, do offer a way of growing some element of our fuel needs within Ireland, and have been supported under the Mineral Oil Tax Relief schemes as such.

It is clear that it would be extremely difficult to meet any significant proportion of Ireland's current transport fuel needs from indigenous resources using current technology, not least due to the relatively small amount of land suited for arable production in the state. However, there are a number of technologies, both under development and in the very early stage of deployment elsewhere, which may prove useful in this regard in the near future. Biogas produced from waste, both municipal and industrial, seems to offer significant potential, as does biogas produced from the anaerobic digestion of grass and other farm products. Similarly, the development of 'second generation' technologies using materials not used in the food chain may provide suitable new supply lines.

Conclusion

When taken together with the unanticipated downstream effects and the commercial self interest of those involved, it is clear that policy developments in this arena need to be approached with extreme care, and by treating the claims of various sectoral interests seeking to influence the policy process with appropriate deliberation. The challenge before Government is to derive a set of state supports and controls that encourage and facilitate the most efficient use of resources in bringing biofuels to market, while providing sufficient confidence in the market to encourage investment in second generation fuels, and in more efficient first generation processes.

II International and EU Context

To date, the single most important instrument affecting Biofuels policy in Ireland is the 2003 EU Biofuels Directive (2003/30/EC) “... on the promotion of the use of biofuels or other renewable fuels for transport⁷”. Article 3 of that Directive sets indicative (non binding) targets for the penetration of biofuels in transport, including “5,75 %, calculated on the basis of energy content, of all petrol and diesel for transport purposes ... by 31 December 2010.”

This type of measure became relatively common across the OECD however, with many countries setting similar such targets. Canada, for example, set a target of 5% in petrol and 2% in diesel, along with a \$345m Cdn fund to support developments. As already discussed, in 2005 the United States introduced an ‘Ethanol Mandate’, which includes an escalator clause beginning at 4 billion gallons in 2006, moving to 8 billion gallons in 2012, and 36 billion gallons by 2022. Within the EU, the primary policy tools used to encourage use of biofuels were excise relief schemes; in some cases these were specific to certain projects, in others they were blanket exemptions.

However a series of significant developments in EU Energy policy began when the European Council of March 2006 called for a ‘Strategic European Energy Review’. This was presented by the Commission on the 10 January 2007. As part of the Review, the Renewable Energy Road Map set out a long term vision for renewable energy sources in the EU. It proposed that the EU establish a binding target of 20% for renewable energy's share of energy consumption in the EU by 2020, and a binding 10% target for the share of renewable energy in transport petrol and diesel.

This approach was confirmed by the European Parliament when it called on the Commission to present, by the end of 2007, a proposal for a renewable energy legislative framework in its Resolution on the Roadmap for Renewable Energy in Europe (in September 2007). The Resolution also referred to the importance of setting targets for the shares of renewable energy sources at EU and Member State level. Furthermore, the Brussels European Council of March 2007 (Council Document 7224/07) reaffirmed the commitment to the development of renewable energy

⁷ http://ec.europa.eu/energy/res/legislation/doc/biofuels/en_final.pdf

resources in the EU and invited the Commission to submit its proposal for a new comprehensive Directive on the use of renewable resources.

On the publication of this draft directive (as part of the Renewable Energy and Climate Change Package) the European Commission noted that *“although the majority of biofuels currently consumed in the EU are produced in a sustainable manner, the concerns are legitimate and need to be addressed. The Directive therefore sets out stringent environmental sustainability criteria to ensure that biofuels that are to count towards the European targets are sustainable and that they are not in conflict with our overall environmental goals. This means that they must achieve at least a minimum level of greenhouse gas savings and respect a number of requirements related to biodiversity. Among other things, this will prevent the use of land with high biodiversity value, such as natural forests and protected areas, being used for the production of raw materials for biofuels”*. Accordingly, when published on 23rd January 2008, the draft Renewable Energy Directive contained a set of sustainability criteria.

The sustainability criteria regime is designed around a single conceptual core; that unless fuels are sourced according to a set of criteria, they cannot be counted towards EU targets. The first criterion is that of GHG reductions over the lifecycle of the fuel compared with its fossil fuel equivalent. The figure included in the original document was 35%. Recent revisions have seen the addition of a ‘second step’, whereby that threshold value would increase at a specified date in the future.

The second set of criteria is aimed at protecting lands with high carbon stock, or of specific biodiversity value in terms of habitat or ecosystem preservation. The Sustainability Regime also requires that any feedstocks produced within the EU must be grown under the Cross Compliance rules governing agricultural production.

The last criterion is around the social conditions that must be met. The initial draft required that the Commission report to Parliament and Council every two years as to impacts of EU Biofuels use on social sustainability both within Community and in third countries.

The essential aim of these criteria, aside from their explicit role in preventing a number of unfortunate consequences, is to incentivise and encourage more efficient and sustainable production and use of biofuels, and to support investment in cleaner and more sustainable types of transport fuels.

Along with broader targets for renewable energy penetration by 2020, the draft Directive also sets a target of 10% renewable energy in transport by 2020. It is expected that developments of battery or fuel cell technologies will provide other forms of energy for transport, and that these will play a progressively larger role towards meeting the 2020 target. However it is also expected that biofuels will retain a substantial role at that point, and that a series of increases in the obligation rate will be required to deliver that overarching 10% target.

III Biofuels in Ireland

As already mentioned, there has been historically little interest in biofuels in Ireland. For a variety of reasons, including the relatively small arable sector and the limited amounts of land suitable for intensive cereal production, the sector was extremely underdeveloped in the 1990s. A number of state bodies, most notably Teagasc, conducted a series of trial programmes throughout this period however, mainly around the technology involved in refining and using biodiesel in road transport.

Since that time, the state has evolved a suite of supports for biofuels. Importantly, the pace of these developments, while rapid, has not been such so as to create a nascent industry entirely dependent on state supports for its continued existence. The emphasis has been on the progressive development of the sector in Ireland, with a view to economic and environmental sustainability from the outset. Moreover, because of the rate of developments in technology in the sector and the danger of becoming 'locked in' to a technology with a short obsolescence horizon, there was a general reticence to commitment wholly to any particular type of biofuel technology until greater clarity became available. The current set of supports for biofuels is as follows.

Department of Communications, Energy and Natural Resources Schemes

Mineral Oil Tax Relief Schemes

The MOTR schemes were designed as interim measures to accelerate the level of biofuels in the fuel mix, in advance of the introduction of a biofuels obligation. In total, €205 million of Excise Relief was granted to 18 companies following a competitive process. The schemes have resulted in biofuels being mainstreamed in blends of up to 5% at a very large number of existing petrol and diesel pumps, with higher blends being sold to identified vehicle fleets. Uptake on the use of biofuels has seen a dramatic increase to date since the schemes began.

Department of Agriculture, Fisheries and Food Schemes.

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.

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.

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.

AGRI/Energy Research

D/Agriculture, Fisheries and Food 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. 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.

Department of 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 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

There are a number of support programmes currently in place to investigate sustainable biofuels. These are as follows.

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 around this.

Charles Parson's 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, Science Foundation Ireland (SFI) adopted an additional pillar in the area of sustainable energy research and energy efficient technologies.

Enterprise Ireland

Enterprise Ireland recently published a study they had commissioned on bio-refining opportunities in Ireland. The aim of this study was to provide an independent assessment of the potential opportunities and issues for bio-refining in Ireland. A review of different bio-refining technologies and a review of biomass feedstock availability have together allowed the identification of technologies appropriate (or potentially appropriate) for use with Irish feedstocks. The study provides a framework to guide the future development of this sector in Ireland and highlights areas in which Ireland could gain a competitive advantage over other countries.

Policy Background

The Government White Paper on Energy, *'Delivering a Sustainable Energy Future for Ireland'* sets out the actions and targets to underpin security of supply, sustainability of use and supply, and the competitiveness of energy markets. Among the Strategic Goals set out in the White Paper are a number relating to transport, including;

- Addressing climate change by reducing energy related greenhouse gas emissions
- Accelerating the growth of renewable energy sources
- Promoting the sustainable use of energy in transport
- Delivering an integrated approach to the sustainable development and use of bioenergy resources

Among the actions set out in the White Paper to achieve these goals is a commitment to move to a Biofuels Obligation by 2009 with a target of 5.75% market penetration by 2010, and to meet the 10% renewable energy in transport target by 2020. The Government decision to introduce a Biofuels Obligation was informed by a number of studies, not least the 2004 "Liquid Biofuels Strategy Study for Ireland"⁸. Similar obligations are being introduced in a number of other Member States, due to a requirement set out in the 2003 EU Biofuels Directive. This is being accompanied by a general move away from Excise Relief Schemes, as the sector across Europe becomes more robust and capable.

⁸ <http://www.sei.ie/uploadedfiles/InfoCentre/LiquidbiofuelFull.pdf>

While the manner in which this Obligation is proposed to be introduced and operated is dealt with in detail in the second part of this document, there remains one central issue to be parsed, the most appropriate level of the obligation. The indicative targets set out in the Biofuels Directive in 2003 were for a biofuels penetration, on an energy basis, of 5.75%. This is equivalent to approximately 8% by volume. It is clear that very few, if any Member States will meet this target. It is generally accepted that the penetration level reached will be of the order of 3-4%. While there have been serious logistical and practical problems with reaching the mandated levels of biofuels penetration, there has also been a very substantial political and public reassessment of the wisdom (and indeed morality) of continuing to push for higher penetrations of biofuels in the context of some of the alleged effects of these. This reconsideration has been driven by the compelling evidence, some of which is set out above, that biofuels seem to be having an impact on food prices, and that the introduction of mandated levels of certain biofuels have had a series of disaggregated impacts on food prices around the world. That these consequences are due to a general rise in commodities prices is not in doubt, however there can also be no disputing the fact that biofuels have played at least some role in this process.

Against this must be placed the pressing challenges of climate change, and particularly in an Irish context, the need for at least a degree of energy security. Irish targets and commitments with regard to climate change and GHG emissions reductions are generally conditioned by EU developments. In this, the draft Renewable Energy Directive, published in January 2008 is fundamental. It sets a target of 10% renewable energy in transport by 2020. While it is expected that technological developments will provide other forms of energy for transport, and that these will play a progressively larger role towards meeting the 2020 target of 10% renewables in transport, it is also expected that biofuels will retain a substantial role at that point, and the initial rate will need to be sequentially increased to deliver a significant proportion of that overarching 10% target.

Critically, it is fundamentally impossible to predict the contribution that may eventuate from other sources of renewable energy in transport by 2020. While great strides are being made with regard to a range of technologies, from Hybrid Electric Vehicles (HEV), to Plug in Hybrids (PEHVs), to pure Electric Vehicles (EVs), there is no guarantee or certainty that these vehicles (or the appropriate infrastructure) will be available on the market in sufficient numbers by 2020 to make a very substantial difference to the overall figures. Alternatively, given that a number of mainstream manufacturers have plans to introduce further electric vehicles into their model ranges as early as 2010, it could well be that a significant proportion of the 10% target will be comprised of Electric Vehicles. Because of this uncertainty, it is not proposed to set out a strict long term trajectory of increases in the rate at which the Biofuels Obligation is to be set. Equally, of course, the availability of biofuels from sustainable sources will be an important constraining factor on any progressive increases in penetration rate. Instead, the primary legislation proposed will allow the Minister responsible set the appropriate rate by secondary legislation, thus facilitating a flexible and appropriate response.

The structure of the biofuels market, operating between the food and fuel markets as it does, is such that stability of expectations and of policy responses is critical however. If people and businesses are going to invest in making more sustainable and efficient biofuels, they need to be assured of a stable policy environment within which to operate. The challenge therefore is to construct an Obligation scheme which is robust in terms of its approach to sustainability and flexible in terms of what may be necessary in terms of meeting related targets, but which is stable enough to meet the needs of those who must operate and live by it.

The remainder of this paper sets out the manner in which it is proposed to introduce such an obligation and sets out the key consultation questions arising, not least the most appropriate initial penetration level for the obligation.

IV The Biofuels Obligation Scheme

As set out above, the Government is committed to introducing a Biofuels Obligation Scheme by the end of 2009 in order to facilitate greater use of biofuels in Ireland. The obligation will be set at an initial rate and increased gradually through time as supply and technology allows, ensuring that Ireland meets its 2020 targets with regard to renewable energy in transport. Ireland is taking an active role in designing sustainability criteria at an EU level. The obligation, when introduced, will contain stringent sustainability criteria which will ensure that biofuels used in Ireland will not have adverse effects on society or the environment where they were produced, and will be fully consistent with EU sustainability and GHG criteria currently being developed. We will closely monitor international best-practise and be diligent in designing an appropriate, cost-effective, sustainable and equitable mechanism for achieving our goals.

The inclusion of biofuels in transport fuel use will result in the displacement of significant quantities of diesel and petrol. The level of the Obligation will be increased incrementally to ensure that biofuels play an appropriate role in ensuring that the 10% renewable energy in Transport targets are met by 2020, in line with EU policy developments with regard to the biofuel blends accepted by motor manufacturers. In a similar manner to other EU Member States, the Biofuels Obligation Scheme will build on the success of the Mineral Oil Tax Relief scheme (MOTR) in encouraging greater market penetration by biofuels.

Setting clear and established targets will provide market players with long term certainty. This certainty will allow the sector to plan and invest with a clear perspective on likely market conditions and demand. Importantly, these conditions also encourage the development of second generation biofuels, which are expected to have significantly enhanced sustainability characteristics. This approach is entirely consistent with the Sustainability Criteria regime currently being negotiated on foot of the Commission proposals in the Renewable Energy Directive. The Sustainability Criteria are structured in such a way as to facilitate and encourage both greater efficiency and sustainability in first generation biofuels (which mainly use arable

crops as a feedstock), and to drive investment and progress on second generation biofuels (which are expected to use non food crops as a feedstock).

Importantly, the figures referred to throughout this proposal refer to overall market penetration of biofuels, rather than the specific blending level at the pumps. While there will be amounts of biofuels blended with the mineral petrol or diesel sold on garage forecourts, this will not require any modification be made to road vehicles. Normal unmodified vehicles can currently tolerate blends of up to 5% (called E5 for petrol and B5 for diesel); the remainder of the overall market penetration will be made up by smaller numbers of vehicles (either in private ownership or so called 'captive fleets') running on higher blends, such as 85% Ethanol (called 'E85') or Pure Plant Oil (called PPO) or high blends of biodiesel which can be used in some vehicles without modification. It is likely that higher blends of biodiesel will be authorised for use without modification by manufacturers in due course.

The Obligation Level

Perhaps the most important element of the proposed obligation scheme is the level at which it is to be set, initially and into the future. As set out in the Programme for Government, the initial level for the Obligation Scheme was to be 5.75%. However, for a number of reasons as set out elsewhere in this document, there are real questions as to the wisdom of moving directly to that target. Instead, the suggested initial penetration level is 4% (by volume) in 2010, moving to 6% in 2012 if certain criteria were to be met. These criteria would include market developments and the reports of the EU Commission on the operation of the sustainability criteria regime.

For reference, the practical effects of these different rates are as follows. A penetration rate of 4% by 2010 (by volume) would result in approximately 220 million litres of biofuels being placed on the market in Ireland in that year. A penetration rate of 5% by 2010 would result in approximately 316 million litres of biofuels being placed on the market, a difference of 96 million litres. Given the small size of the Irish market, it is practically impossible to determine any effect these different rates would have, if any, on global markets for commodities. Any final decision on the penetration rate will have to bear in mind the fact that higher rates will generally involve a greater greenhouse gas savings, but will be accompanied by

marginally higher fuel prices, as suppliers pass the additional cost of larger quantities of biofuels on to consumers.

Obligated Parties

The obligation will apply to suppliers of petrol and auto-diesel. It will apply at the point at which excise duty is normally applied to Irish transport fuels. Obligated suppliers will be required to apply to the scheme Administrator for a BOS account and provide details of their fuel sales (across the duty point) on a regular basis. The obligation therefore is not on individual consumers.

In practice this means that those suppliers who own fuels *at the point at which that fuel crosses the fuel duty point* will be obligated. A supplier who buys fuel after it passes the excise duty point in order to *re-sell* it in the Irish market would not be directly obligated in respect of that fuel, however it is expected that the cost of meeting the obligation will be passed on by the Warehousekeeper. This situation arises frequently as a result of the “pooling and sharing” arrangements that exist between Ireland’s major transport fuel suppliers.

The obligation would operate as follows. If, for example, a batch of fossil fuel leaves Company A’s import bonded warehouse in Dublin en route to a forecourt operated by Company A, it will be Company A which pays the duty on that fuel and Company A which acquires the obligation in respect of it. If however a similar batch of fuel is “lifted” by Company B from the mineral oil tax warehouse owned by Company A in Dublin en route to a forecourt owned by Company B, it will still be Company A that pays the duty on that fuel and it will be Company A, as the supplier, which acquires the obligation in respect of it.

This approach will give very clear lines of traceability and accountability, and will result in a lesser number of suppliers being subject to an obligation by removing any obligation from a number of smaller suppliers of fossil-based transport fuels. It is important to note that this approach is different from some other obligation schemes, such as that in the UK for example, which places the obligation on the supplier

(‘Company B’ in the above example). A different scheme is proposed in Ireland due to the different structure of the market, with only one refinery in operation, and with much of the road fuels imported directly into port terminals often owned by one supplier and selling on to a large number of other retailers.

The percentage of biofuels penetration will be calculated on the basis of the fossil based component of the final blend. The Scheme will not differentiate between different fuels, or set separate targets for individual fuels. Suppliers can meet their obligations by any mix of biofuels so long as they comply with the Sustainability Criteria. This goal is to be achieved by applying the obligation as a percentage of each obligated supplier’s annual mineral petrol and diesel sales.

The Government believes that this will provide a useful incentive for obligated suppliers to either:

- supply a certain amount of niche, high blend biofuel products, or
- purchase BOS certificates from non-obligated suppliers, or obligated suppliers with excess certificates.

Going beyond 2010 it is the Government’s intention to progressively increase the level of the obligation in a manner consistent with the pace of developments within the rest of the EU to ensure the delivery of the 2020 10% target. The rate and pace of this increase will be determined following a review of the operation of the BOS in 2012 and EU policy developments and experience in other Member States.

Eligible Fuels

It is likely that the principal biofuels in the near term (to 2010) will include biodiesel, bioethanol and pure plant oil. It is however the intention that the BOS should include all renewable transport fuels as envisaged by the Biofuels Directive (2003/30/EC), namely all “liquid or gaseous fuel for transport produced from biomass”.

Biogas will be treated as a renewable transport fuel for the purposes of the obligation, and will be eligible for BOS certificates. The Government will continue to monitor

the development of new renewable fuels, and will add these to the obligation where relevant. It is possible that second generation biofuels will be double incentivised also.

Aviation and Marine Bunker Fuel are excluded from the obligation.

Role of the Administrator

The Biofuels Obligation Scheme (BOS) will require an administrative body (“the Administrator”) to ensure that obligated suppliers comply with their obligation under the scheme and to apply the appropriate levies in cases where there is non-compliance. This is likely to involve the issuing of certificates, monitoring the trading of these and the application and processing of penalties. It will also involve an information gathering role and some responsibilities around the Sustainability Criteria. In accordance with the conditions set in this consultation document, each obligated supplier will be required to report to the Administrator on the manner in which they are meeting the obligation.

A key dimension of the scheme will be designing the most appropriate structure - existing or new - in which the obligation could be established and subsequently administered. The size and nature of the Irish market, along with public service efficiency imperatives are such that it is not proposed to establish a new State Agency to administer the BOS. It is considered preferable to confer responsibility on an existing agency, ideally one already operating in the Transport Fuels arena⁹.

It is considered that a likely Administrator of the obligation in Ireland could be *The National Oil Reserves Agency (NORA)*. NORA is currently responsible for ensuring that Ireland complies with its EU and international requirements for emergency oil supplies. The agency is funded by a levy on fuel, which it collects from oil suppliers. It also enters into contracts with oil suppliers for the purposes of leasing oil storage. The transport fuels industry currently makes returns to the Department of Communications, Energy and Natural Resources. The levy applicable to individual

⁹ In the UK for example, a new non-Departmental Public Body is being established to serve as the Administrator. This body, the Renewable Fuels Agency (RFA), has approximately 10 full-time staff and a small Board of Directors, and will be funded initially by the UK Department of Transport.

companies is calculated by NORA based on these figures and NORA charges those companies accordingly. The cost of administering the Obligation could be met by central government funds or by an expansion of the extant NORA levy.

The Role of Certificates

Both obligated suppliers and other suppliers of renewable fuels may apply for certificates in respect of the renewable fuels which have been placed on the Irish transport fuels market. A BOS certificate will be awarded for the supply of one litre of renewable fuel (or the energy equivalent other fuels, such as biogas), as defined above, providing that the following conditions have been met:

- the biofuel complies with the definition of “eligible fuels”;
- the biofuel has been placed on the Irish transport fuels market;
- The supply of the biofuel has been reported to the Administrator in the required format and by the required date;
- The supplier is registered with the Administrator.

The Administrator will have the power to ask for evidence to support all of the conditions above. If the Administrator deems that the evidence does not support the information provided, it will have the power to reject the application for certificates for some or all of the fuel in a submission. The Administrator will also have the power to revoke a certificate that has been issued if the information and/or evidence on which the certificate was issued is subsequently found to be false.

BOS Certificates may then be traded amongst suppliers or other persons who have a BOS account. This means that, for example, obligated suppliers who have not been able to fully meet their obligation by supplying renewable fuels themselves can purchase certificates from other suppliers or from traders who have registered with the Administrator. The aim of such a mechanism is to encourage the development of biofuels use at concentrations higher than the 5% limit that most current engine technology can safely use. The obvious potential beneficiaries of such a regime are those suppliers putting fuels like E85 (85% bioethanol), Pure Plant Oil or biodiesel in blends above 5% on the market. The certificate trading mechanism would incentivise

their production of biofuels by providing them with Certificates for fuel placed on the Irish market, certificates that mainstream suppliers would require in order to meet their obligations under the BOS.

Operation of the Obligation

Registration

All suppliers of transportation fuels to the Irish market will be required to register with the BOS Scheme Administrator, providing organisation details as indicated on a template supplied by the Administrator. The Administrator will assign a unique identification number to each registered supplier.

Reporting

All registered suppliers will be required to provide monthly reports. These reports will include details of the sales volumes (litres) of petrol and diesel for the month. Each monthly report will be submitted not later than the 28th day of the following month. Alternatively, the supplier may provide a once off letter of authorisation to Customs & Excise, permitting the transfer of data from Customs & Excise to the Administrator. The Administrator will have the power to require suppliers to provide evidence of the reported volumes as appropriate.

Biofuels Sales Reporting

All registered suppliers of biofuels to the Irish market will be required to provide monthly reports. These reports will include details of the sales volumes (litres) of biofuels for the month, indicating the type of biofuel (ethanol, biodiesel, etc.), the corresponding quantity and any additional information required by the Administrator. Each monthly report will be submitted not later than the 28th day of the following month. The supplier may provide a once off letter of authorisation to Customs & Excise, permitting the transfer of data from Customs & Excise to the Administrator. The Administrator will have the power to require suppliers to provide evidence of the reported volumes as appropriate.

Award of BOS certificates

Based on the quantities of biofuels reported, each supplier will be awarded a quantity of BOS certificates. A BOS certificate will be awarded for the supply of each litre (or energy equivalent) of biofuel, providing that the following conditions have been met:

- the biofuel complies with the definition of “eligible fuels”;
- the biofuel has been placed on the Irish transport fuels market;
- The supply of the biofuel has been reported to the Administrator in the required format and by the required date;
- The supplier is registered with the Administrator.

The Administrator will have the power to ask for evidence to support all of the conditions above. If the Administrator deems that the evidence does not support the information provided, it has the power not to award certificates for some or all of the biofuel in a supplier’s report. The Administrator will also have the power to revoke a certificate that has been awarded if the information and/or evidence on which the certificate was awarded is subsequently found to be false.

The Administrator will maintain an updated account for each supplier. Certificates may be traded between registered suppliers as, for example, in the case where supplier A has a surplus of certificates and supplier B has a shortage of certificates. Each trade must be reported in writing to the Administrator, providing details of the seller, buyer and number of certificates traded.

Annual Calculation of Obligation

Based on the fossil fuel sales in each report the Administrator will calculate the number of certificates required for compliance and maintain an updated account for each supplier.

Annual Supplier compliance with Obligation

Compliance will be assessed by means of the following system. By the 31st January (for example) following the year for which compliance is being assessed, the Administrator will provide a provisional account to each supplier, indicating the number of certificates that must be surrendered to comply with the BOS and the number of certificates in the supplier’s account. Each supplier has until (for example)

the 28th February to reconcile any differences between the supplier's records and those of the Administrator, at which point a final account for the year will be issued.

A supplier who has a shortfall in the number of certificates will be required to pay a non-compliance levy, calculated on the basis of the number of certificates short multiplied by the established amount per certificate.

Annual Closure of compliance with Obligation

Compliance with the Biofuels Obligation Scheme for a given year, including payment of any levy due, will be completed (for example) by the 31st March in the following year.

Levy Rate

A levy system will be introduced to penalise those suppliers who fail to meet their obligation. The Administrator will be empowered to levy this charge on obligated parties on the basis of any shortfall by volume in meeting the obligation.

The Department is proposing a levy of 40 cents per litre.

IV Key Consultation Questions

Although respondents may chose to respond on any aspect of the proposed scheme, the key questions to be addressed through this consultation process are set out below.

1. At what level should the Obligation be set?

The Biofuels Directive sets out a Reference value of 5.75% market penetration of Biofuels by 31st December 2010. There is some flexibility with regard to these targets - the UK have set a target of 5% by volume (3.5% by energy) from 2010, although there are indications that this may change. This must also be borne in mind, given that the Irish market for transport fuel is closely linked to the UK market. An obligation set at the originally proposed level of 5.75% by energy would be a valuable incentive to producers of biofuels, but would increase the risk of downstream effects on food markets. A much lower penetration would result in a very poor incentive for investment, and make the task of ramping up penetration at a later stage in the obligation much more difficult. Instead, this paper suggests an initial penetration rate of 4% (by volume) in 2010, moving to 6% in 2012, depending on market developments and sustainability in the interim. Is this an appropriate course of action?

2. Is the definition of an Obligated Party correct?

As set out in the text, the definition of an Obligated Party in this case will be that those who currently act as Bonded Warehouse keepers for fuels crossing the duty point will acquire the obligation in respect of fuel that passes through their warehouse. This is suggested in order to reduce the administrative burden on industry, shorten lines of communication and to deliver greater efficiencies to the consumer. As explained this is a slightly different arrangement to that in effect in other Member States, and is suggested here due to the characteristics and structure of the Irish fuel market. Is this the most appropriate approach?

3. Should there be a De Minimis level?

Some Member States, including the UK, include a ‘De Minimis’ provision in their obligation, whereby those companies who pay duty on small volumes of fossil fuels are exempt from their equivalent obligation. It is not suggested to include such a feature in the scheme here for reasons of administrative simplicity, controllability and the fact that the structure of the fuels market in Ireland is substantially different to that in other Member States. Is there a case to be made for setting such a minimum level in Ireland?

4. Should multi annual banking of certificates be allowed?

In some Member States, obligated parties are permitted to ‘bank’ certificates in a given year, for use the following year. This allows parties to reduce their exposure to risk in terms of the price they may have to pay for certificates or for fuels themselves, by giving them the option of not purchasing were the market to be exceptionally strong in any given year. Such an approach could be problematic in Ireland due to the lack of certainty that this may introduce in terms of meeting the obligation level and overall market liquidity. Should the carrying over of Certificates from one year to the next be facilitated?

5. Incentivisation for Second Generation Biofuels and Biogas?

It is clear that both so called “second generation biofuels” and biogas based biofuels have significant advantages in an Irish context, both in terms of Greenhouse gas emissions and local availability as outlined in the proposed new EU Directive. The option exists to provide an incentive for investment in these fuels in Ireland through providing a greater ratio of certificates to volume. It would have the downstream effect of reducing the overall market penetration of biofuels however (due to a deflationary effect on the price of certificates). Should such incentives be included in the Obligation Scheme?

6. The Levy System.

A levy system will be required to penalise those suppliers who fail to meet their obligation. Logically, this charge will have to be greater in value than the market price for certificates. The Department is proposing setting a Levy of 40 cents per litre. Is this appropriate?