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The Irish National Climate Change Strategy: New Laws, Future Policies?

Rónán Kennedy*

1 Introduction

This paper is an overview of climate change law and policy in Ireland. It sketches the background to the international agreements covering climate change emissions. It also gives a brief summary of relevant European legislation. It then looks at the two Irish National Climate Change Strategy documents and summarises the relevant Irish legislation. Finally, it points to some possible developments in national policy in the future, looking particularly at initiatives in Scotland and New Zealand. While climate change policy is wide-ranging, diverse and employs many forms of market and social intervention, the focus here is on legal instruments that relate directly to climate change. The paper concludes that law is only part of an overall mix of policy instruments and tools that must be applied in order to deal with the complex challenge of climate change.

1.1 Climate Change

Climate change, as is now well known, is the result of certain gases which are emitted during industrial or agricultural activity (principally carbon dioxide or CO₂), accumulating in the upper atmosphere and trapping heat from the sun, which would otherwise leave the planet. The consequences of this overall global heating are not entirely clear but the final result is liable to be adverse for human beings and the biosphere which supports them. Issues such as drought, sea level rise and food security are becoming an increasing concern.¹

1.2 Impacts on Ireland

In Ireland, temperatures are likely to rise by 1.25° to 1.5° as a result of climate change. This will have obvious impacts on rainfall, leading to an increased likelihood of both river flooding and drought. Winters and summers will be warmer. Sea levels are likely to rise, which is likely to cause serious difficulties for our major cities, most of which are coastal. The overall impact on agriculture, however, will probably be neutral or even positive.²

2 International Developments

2.1 Background

While scientists were expressing concern regarding global warming from the mid-1980s on, it was not until later in the decade that the international community began to work on the issue. The Intergovernmental Panel on Climate Change ("IPCC") was established in 1988 and in December of 1989

the United Nations General Assembly adopted a resolution calling on states to work on an international convention on the matter. This effort produced the United Nations Framework Convention on Climate Change ("UNFCCC") and the well-known Kyoto Protocol. The former entered into force in 1994, and the latter in 2004, despite an American withdrawal, when Russia was persuaded to ratify.³

The UNFCCC does not impose very strong emission reduction obligations on parties, but the Kyoto Protocol requires that the parties listed in Annex I must reduce their overall emissions of greenhouse gases ("GHGs") by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012. Annex I parties are developed countries; the Protocol does not impose any obligations on developing country purchase, something which is a bone of contention.

2.2 Flexible Mechanisms

The protocol does not simply require a reduction in national emissions but also allows the use of what are known as "flexible mechanisms" as a source of offsets. The most important of these is emissions trading. This is modelled on the successful sulphur dioxide emissions trading pioneered in the United States under the Clean Air Act.

The other two flexible mechanisms are aimed at technology transfer and capacity building in developing countries. The first is known as "Joint Implementation" ("JI"), and allows developed countries to collaborate on projects to reduce overall emissions, either through cleaner technology or developing new carbon sinks. The second is the "Clean Development Mechanism" ("CDM"), whereby a developed country can fund a project in a developing country which will achieve reduced emissions in that latter country. The developed country benefits from the resulting emission reduction credits, which can been used to offset emissions.

2.3 Meetings before 2007

Meetings of the parties to the FCCC took place in Montreal in 2005 and Nairobi in 2006. The process of making progress on an agreement to replace the Kyoto protocol was hampered somewhat by a lack of cooperation from the United States of America, but nonetheless a process of "dialogue on long-term cooperative action to address climate change" began.

2.4 Bali

COP-13/MOP-3 took place in Bali in December 2007. Although this conference struggled with a recalcitrant American attitude, it did agree a "roadmap" for a two-year process of negotiations aiming to lead to international agreement on moving beyond Kyoto in 2009. The parties agreed to provide support, by way of technology, financing and capacity building, for adaptation by developing countries; to operationalize the Adaptation Fund; and to look closely at reducing emissions from deforestation. There was intense media interest, something which may have contributed to the relative success of the conference.⁵

2.5 Poznań

The Fourteenth Conference of the Parties to the United Nations Framework Convention on Climate Change and Fourth Meeting of the Parties to the Kyoto Protocol ("COP-14/MOP-4") took place in Poznań, Poland, in December 2008. With a rapidly-developing worldwide recession as a backdrop, and an American delegation representing an outgoing administration, little concrete progress was made.⁶ Political manoeuvring regarding reduction goals continued. There was disagreement regarding the amount and accessibility of adaptation funds. Negotiations on technology transfer were stuck in an early phase. Attempts were made to improve the transparency and distribution of CDM projects. Efforts to deal with reducing emissions from deforestation and forest degradation became embroiled in controversy regarding the rights of indigenous peoples. This lack of forward movement makes it difficult to be confident that the upcoming meeting in Copenhagen will produce real results.⁷

2.6 Copenhagen

The next conference of the parties to the UNFCCC will take place in Copenhagen in December 2009. Will this produce a comprehensive post-2012 regime? It is too early to tell, and it is likely that the results will not be known until the last minute. However, early indications are not positive. Although there is some forward movement in the preliminary meetings, there remains a great deal of uncertainty about crucial issues such as targets for the Annex I parties, emission reduction obligations for developing countries, support for mitigation and adaption efforts, and governance. As progress on the sticking points is often interconnected, and there are external fora (such as the G8 and the US-sponsored Major Economies Forum) which inform negotiations within the UNFCCC processes, time is running short and there is a great deal of hard work to be done.⁸

3 European Developments

Europe has been making generally steady progress in climate change policy, particularly since the United States has not been taking a leadership role on this issue. However, there is not complete consensus between European Union member states on how policy should develop. Some countries, particularly Poland (which relies heavily on coal as a source of energy and income) are not as enthusiastic as others. Nonetheless, European change policy leads internationally and is a dominant influence on Irish law and policy.

3.1 European Union Emissions Trading Scheme

The European Union Emission Trading Scheme ("EU ETS") is the largest such scheme in the world. It applies to carbon dioxide emissions from a number of high energy industries, including the production and processing of ferrous metals, the mineral industry and pulp and paper plants. The allocation of emissions credits is based on national allocation plans ("NAPs") which are drawn up by national authorities and approved by the Commission. Most of the allowances are distributed free of charge to operators in these industries, something which has been controversial. On April 30 of each year, an

operator must surrender sufficient allowances to cover the verified emissions it has produced or pay a penalty which is now €100 per tonne.

Through the European Linking Directive, ¹⁰ the ETS is linked to the Kyoto flexible mechanisms. The ETS has been recently extended to include aviation, ¹¹ and may apply to further sectors in the future. ¹² It may become the leading such system in the world, with the price of European Union Allowances being quoted as the dominant indicator of the price of global carbon emissions. ¹³

However, the first phase of the ETS had its problems: an over-allocation of allowances led to a collapse in their price to almost zero, but a stricter attitude to allocation by the Commission led to a recovery in the second phase, which has led to some abatement in emissions, with only a limited impact on competitiveness. 14 Overall, the initial difficulties are best seen as a good trial run and a positive learning experience, despite the price volatility, and the success of the scheme in creating a transnational trading system indicates and that more ambitious international initiatives are feasible. 15

The commission is proposing a number of amendments to the EU ETS¹⁶:

- A single European-wide cap on the number of emission allowances, instead of 27 national caps, eliminating the existing National Allocation Plans;
- Harmonised rules for free allocation;
- A more equitable distribution of the right to auction allowances;
- The inclusion of new industries (e.g. aluminium and ammonia producers);
- Permitting member states to exclude small installations.

3.2 Other Significant European Climate Change Legislation

The European Union has also introduced legislation aimed at reducing emissions from cars, through the availability of consumer information on fuel economy and carbon dioxide emissions from new cars¹⁷ and through carbon dioxide emissions monitoring.¹⁸ There is a Directive on the promotion of electricity from renewable energy sources,¹⁹ and on calculating and ensuring minimum standards of energy performance of new buildings and major renovations.²⁰ European law also controls the use of what are known as "F gases",²¹ which are very effective global warming agents, and requires a minimum level of taxes on energy products and electricity.²²

3.3 20/20/20 and Proposed Future Legislation

The EU is committed to reducing its overall emissions to at least 20 per cent below 1990 levels by 2020 and is ready to scale up this reduction to as much as 30 per cent under a new global climate change agreement when other developed countries make comparable efforts. It has also set itself the target of increasing the share of renewables in energy use to 20 per cent by 2020.²³ Collectively, these targets are known as known as "20/20/20".

A number of legislative proposals which deal with climate change and energy policy are also under consideration.

3.3.1 Reducing Emissions from Cars and Light Commercial Vehicles

The European Commission intends to introduce legislation which will require a reduction in carbon dioxide emissions from new cars. It will also encourage Member States to base road tax on emissions.²⁴

3.3.2 Proposed Directive on Carbon Capture and Storage

Carbon capture and storage ("CCS") is a new and somewhat controversial technology which involves injecting carbon dioxide into geological formations. The Commission intends to bring forward a Directive to manage the environmental risks involved and to remove legal barriers to the use of CCS. The directive will also require long-term monitoring of CCS sites.²⁵

3.3.3 Proposed Revisions to Fuel Quality Directive

The European Union has also agreed to amend the Fuel Quality Directive²⁶ to require a reduction in GHGs across the entire fuel production chain by 6 per cent by 2020. This may be increased to 10 per cent by review in 2012.²⁷

3.3.4 Consultation on Revision of Car Labelling Directive

The European Commission has launched a public consultation on revisions to the Car Labelling Directive (1999/94) in the hope of making the information available to consumers about fuel consumption and carbon dioxide emissions from new cars clearer and more consistent. (In Ireland, the Department of Environment, Heritage and Local Government has introduced a labelling scheme that may anticipate many of the elements of the final revised European Directive.)²⁸

4 The Irish National Climate Change Strategy

4.1 Introduction

There seem to have been three stages in the Irish response to climate change: an ambitious first strategy in 2000, a quiet return to "business as usual", and a new national strategy in 2007.²⁹

4.2 National Climate Change Strategy 2000

The National Climate Change Strategy ("NCCS") 2000 proposed a number of policy instruments, such as carbon energy taxation, the use of emissions trading, an intention to end the burning of coal at Moneypoint, and a focus on energy efficiency and construction. The intention was clearly to move away from a "business as usual" policy.

4.3 Back to "Business as Usual"

In the early years of this decade, the government seems to have quietly shifted back to a policy of "business as usual", and in a review of the NCCS

published in 2006, proposals such as a carbon tax and the cessation of coal firing at Moneypoint were explicitly discarded.³⁰

4.4 National Climate Change Strategy 2007

In 2007, a new NCCS was launched.³¹ By sector, the policy measures put forward there were:

- *Energy Supply*: The principal initiatives are the use of renewable sources of electricity generation. The coal-fired station at Moneypoint will remain open.
- *Transport*: Initiatives here include Transport 21,³² car technology improvements, the Mineral Oils Tax Relief II Scheme and biofuels market penetration.
- Residential: Here, there will be improvements to the Building Regulations, along with the introduction of a Building Energy Rating, grants administered under the Greener Homes Scheme, a levy on incandescent lightbulbs, the provision of smart meters and continuing awareness initiatives.
- Industry, commercial and services: Reductions in this sector will principally come from the ETS, the voluntary Large Industry Energy Network, a bioheat support scheme and a Combined Heat and Power support scheme.
- *Agriculture, land-use and forestry*: Here, the principal measures are CAP reform and afforestation.
- *Waste*: Work will be done on the diversion of biodegradable waste from landfill and the improvement of landfill gas capture.
- Public sector: Measures in the public sector include a reduction in greenhouse gas emissions, the exclusive purchase of CFL light bulbs, a multi-tiered strategy for energy savings by the Office of Public Works, carbon offsets for all air travel on Government business and installing biomass heating in schools.
- *Cross-sectoral*: Other measures will include an awareness campaign, tax incentives, the purchase of carbon allowances, new planning guidelines, and funding for research and development.

Any shortfall in emissions reductions will be offset using the Kyoto flexible mechanisms, with an anticipated annual cost of €54 million per annum for the first commitment period.

4.4.1 Management and Oversight of the NCCS

The new Government has created a Cabinet Committee on Climate Change and Energy Security, which is supported by two inter-departmental groups, the Senior Officials Group (which works on meeting emission reduction targets) and the Technical Advisory Steering Group (which provides modelling expertise). There is also an informal Expert Advisory Panel, which is used on an ad hoc basis.

4.4.2 Carbon Budget 2007

Although the NCCS 2007 indicated that the Minister for the Environment would prepare annual Implementation Status Reports, that process has been replaced by the use of "carbon budgets", the first of which was presented by the Minister on December 6, 2007.³³ This summarised progress to date in reducing emissions and announced the changes to motor taxation and building energy efficiency requirements outlined below.

4.4.3 Carbon Budget 2008

The second carbon budget was presented on October 15, 2008.³⁴ This again summarised progress to date, outlined new measures in improving transport energy requirements and funding for demonstration projects in energy efficient buildings. It also indicated a move away from a reliance on purchasing emissions credits through the Kyoto flexible mechanisms.

5 Irish Climate Change Legislation

5.1 Climate Change Legislation as of NCCS 2007

Climate change features in a number of other items of Irish legislation. The following is a brief overview of the principal instruments that were in force when the NCCS 2007 was announced.

5.1.1 Responsible Authorities

With regard to government bodies with responsibility for GHGs, the Sustainable Energy Act 2002 makes it one of the functions of Sustainable Energy Ireland ("SEI") to "promote and assist the reduction of greenhouse gas emissions". Section 5 of the Protection of the Environment Act 2003 amends the Environmental Protection Agency Act 1992 to allow the EPA to regulate the emission of GHGs.

5.1.2 Emissions Trading

The European Communities (Greenhouse Gas Emissions Trading) Regulations 2004 (S.I. No.437 of 2004) implements Directive 2003/87 (the EU ETS). The European Communities (Greenhouse Gas Emissions Trading) (Amendment) Regulations 2005 (S.I. No.706 of 2005), which came into force on November 11, 2005, amend the 2004 Regulations in order to implement the European Linking Directive. 36

The Kyoto Protocol Flexible Mechanisms Regulations 2006 (S.I. No.244 of 2006), which came into force on May 15, 2006, designates the EPA as the Focal Point for approval of projects under the JI or CDM flexible mechanisms of the Kyoto Protocol.³⁷

5.1.3 Energy Performance of Buildings

The European Communities (Energy Performance of Buildings) Regulations 2005 (S.I. No.872 of 2005), which came into force on December 21, 2005, allows the Minister to make building regulations making provision for the conservation of fuel and energy in relation to buildings and regulations to transpose Directive 2002/91.

The Building Regulations (Amendment) Regulations 2005 (S.I. No.873 of 2005), which came into force on July 1, 2006, partly implements the Energy Performance of Buildings Directive (2002/91). The European Communities (Energy Performance Of Buildings) Regulations 2006 (S.I. No.666 of 2006), which came into force on January 1, 2007, partly implements the same directive, requiring that buildings which are offered for sale or letting should have a Building Energy Rating ("BER") certificate.

5.1.4 Carbon Fund Act 2007

The Carbon Fund Act 2007 permits the Minister for the Environment to create a ring-fenced fund (the "Carbon Fund") for the future purchase of emissions credits under the FCCC and the Kyoto Protocol, to be managed by the National Treasury Management Agency.

5.2 Legislation Post-NCCS 2007

5.2.1 Planning and Development Regulations 2007

The Planning and Development Regulations 2007 (S.I. No.83 of 2007), which came into force on February 28, 2007, exempts small installations of certain renewable energy technologies (wind turbines, solar panels and ground heat pump systems) from the requirement to obtain planning permission. (The Minister for Communications, Energy and Natural Resources has announced plans to allow households to sell excess electricity which they generate into the national grid.³⁸)

5.2.2 Building Regulations (Amendment) Regulations 2007

The Building Regulations (Amendment) Regulations 2007 (S.I. No.854 of 2007), which came into force on July 1, 2008, substitutes a new Pt L into the Second Schedule to the Building Regulations 1997 (S.I. No. 497 of 1997), requiring that:

[a] dwelling shall be designed and constructed so as to ensure that the energy performance of the dwelling is such as to limit the amount of energy required for the operation of the dwelling and the amount of CO₂ emissions associated with this energy use insofar as is reasonably practicable.

This requirement applies unless either the planning application was submitted, or a notice of local authority-related development was given, before June 30, 2008 and substantial work is completed before June 30, 2009. The regulations also specify efficiency standards for oil and gas fired boilers. The overall aim is to achieve at least a 40 per cent reduction in energy use and related CO₂ emissions. In the 2008 Carbon Budget, the Minister

indicated that he intends to introduce tighter energy efficiency requirements in 2010.

5.2.3 Planning and Development Regulations 2008

The Planning and Development Regulations 2008 (S.I. No.235 of 2008), which came into force on July 2, 2008, exempts installations of certain renewable energy technologies (Combined Heat and Power systems, wind turbines, solar panels, heat pumps and biomass boilers) for industrial buildings, business premises and agricultural holdings, and in respect of schools, demolition and private roads.

5.2.4 Motor Vehicle (Duties and Licences) (No. 2) Act 2008

The Motor Vehicle (Duties and Licences) (No. 2) Act 2008 implements changes in motor tax, which are now based on vehicle emissions rather than engine size.

5.2.5 Proposed Ban on Incandescent Light Bulbs

The Minister for the Environment proposed a ban on incandescent light bulbs but decided not to proceed with this after the European Commission brought forward a wider plan to ban such bulbs across the Union.³⁹

6 Future Policies

6.1 Policy Context

While in 2006, before the economic downturn, the cost of purchasing emissions credits from the Kyoto flexible mechanisms was estimated at between €180 million and €1 billion for the first commitment period,⁴⁰ the reduction in economic activity has led to a corresponding fall in GHG emissions.⁴¹ It looks likely that Ireland will be able to meet its Kyoto obligations,⁴² particularly as projections for future emissions already seem to be out of date,⁴³ and the Minister for the Environment has instructed that purchases of carbon credits should cease for the time being.⁴⁴

This may lead to less attention being paid to climate change initiatives, particularly given the tightening of government finances. Nonetheless, it is useful to consider what new legal instruments might emerge as Irish climate change policy develops. Some initiatives are already underway, here and abroad, which might lead to changes in Irish law in the future. In addition, there are some more speculative ideas which may not prove feasible (given the domestic economic, regulatory and social context) but are still worth considering. Some developments may take place at the national level, while others may emerge as the local authority level.

6.2 Ideas from Other Jurisdictions

While ideas from other jurisdictions do not always translate well to Ireland, it is useful to look at what is occurring in similar sized countries to our own, if only as a point of comparison.

6.2.1 Binding National Targets: The Climate Change (Scotland) Bill

The Scottish Parliament is currently considering the Climate Change (Scotland) Bill, which in committee stage at present. If passed, it will impose on the Scottish Ministers an obligation to reduce emissions of various GHGs by 80 per cent (of 1990 or 1995 levels, depending on the gas) in 2050 (a date which matches the UK Climate Change Act 2008). Distinct to Scotland is an interim target of a 50 per cent reduction by 2030, and annual targets which are first simply less than the previous year and then from 2020, at least 3 per cent less than the previous year.

There is no enforcement as such, but the Ministers must report to Parliament on an annual basis. They must also produce plans to promote energy efficiency. The Ministers can impose undefined "climate change duties" on public bodies and require them to report on these duties. The Ministers can introduce regulation which will give them powers to require the preparation, compliance with and reporting on plans to waste reduction and disposal, recycling, including the charging for supply of carrier bags.

Similar bills have been introduced here, by private members, in 2005,⁴⁵ 2007,⁴⁶ and 2009.⁴⁷ None have been passed by the Oireachtas. It is unlikely that any such legislation will become law here in the near future, but it would be useful to monitor and learn from the Scottish experience with national, legally-binding emissions reduction targets.

6.2.2 Including Agriculture in Emissions Trading

The EU ETS does not include agriculture and is unlikely to do so in the near future. What, then, can be done to reduce emissions from this significant sector of our economy?

6.2.2.1The New Zealand ETS

The New Zealand Emissions Trading Scheme ("NZ ETS") will include agriculture within the overall cap-and-trade system from 2013. Any domestic initiatives to impose costs on farmers for GHG emissions will probably be strongly opposed by the farming lobby, as has already occurred with the proposed livestock levy here.⁴⁸ Indeed, the recent change of government in New Zealand from the Labour to the National party may lead to changes in that country's climate change policy.⁴⁹

6.2.2.20ffsets for Agriculture

What might be more viable (although less than ideal as a tool to reduce agricultural emissions) would be to allow farmers to obtain offset credits for additional projects that verifiably reduce emissions against a baseline, and then sell those to participants in the EU ETS, essentially subsidising the farming sector to encourage it to begin to cut emissions, as happens in the Chicago Climate Exchange (a voluntary emissions system).⁵⁰

6.3 Local Authorities

With regard to legislative and regulatory changes that will concern local authorities, there are several possibilities.

6.3.1 Change to Building Regulations

Further changes to the building regulations to encourage GHG emission reductions and greater energy efficiency are likely. In the US, the Green Building Council has developed the Leadership in Energy and Environmental Design (LEED) Green Building Rating System, which has been widely adopted and compliance with it is increasingly required in order to obtain a building permit. Local authorities have also begun to adopt more stringent energy codes, such as the International Energy Conservation Code, and require energy-saving features—for example, vegetation, tree shading and solar water heaters.⁵¹ In Ireland, Fingal County Council has introduced more stringent energy efficiency requirements, exceeding the Building Regulations, in several of its Local Area Plans.⁵²

6.3.2 Climate Change Strategies

Local authorities also need to think about what their strategy is for dealing with climate change. The European Climate Menu offers a framework to structure the creation of climate change policies by individual local authorities, 53 while the Scotland and Northern Ireland Forum for Environmental Research has published a "Review of Climate Change Mitigation Tools for Local Authorities". 54 In Ireland, the Department of the Environment is working actively with local authorities to develop climate change strategies; some have already been prepared. 55

Other authorities have included adaption strategies in their development plans, including actions relating to flooding, water supply, coastal management, and drainage. The protection and exploitation of natural resources, through agriculture, fisheries, forestry, maintenance of biological diversity, does not get the same level of attention, and there is not a great deal of concrete policy on adapting transport infrastructure. Overall, there is no overall adaptation strategy or policy body, something which is necessary and which must collaborate on an all-island basis.⁵⁶

6.3.3 Travel Planning and Congestion Charges

Reducing travel times, and thus emissions, should become part of local authority planning, both in terms of development plans and planning decisions.⁵⁷ Congestion charges are likely to be part of such initiatives, particularly in urban areas.⁵⁸

6.3.4 Voluntary/Public-Private Partnerships

Regulatory authorities in the United States have explored public-private partnerships, with poor results, indicating a residual threat of enforcement is probably necessary to ensure compliance.⁵⁹ However, the use of ISO 14000 Environmental Management System ("EMS") standards may have some application as a tool to drive and manage local innovation in dealing with climate change.⁶⁰

6.4 Other Possible Future Policies

Finally, there are a number of other proposals for legal tools that help to reduce emissions.

6.4.1 Carbon Taxes

The *National Climate Change Strategy 2000* included a commitment to introduce a carbon tax, something which was subsequently dropped in the face of strong opposition from the business sector, ⁶¹ and it is not mentioned in the 2007 strategy. Early indications are that the Commission on Taxation will recommend a carbon tax that is pegged to the price of emissions credits. ⁶²

Alternatives to a carbon tax, such as domestic tradable quotas (basically, an electronically-managed carbon rationing system), have been proposed.⁶³ Friends of the Earth Ireland have called for stamp duty rates to be aligned with energy efficiency,⁶⁴ which would be a further greening of the tax system, similar to what has been done with motor tax rates.

6.4.2 "Carbon Impact Assessments"

The government is implementing the use of Regulatory Impact Assessment ("RIA") across the civil service. ⁶⁵ In the future, we may see GHG emissions being included as part of the calculations underlying a RIA. The Scotland and Northern Ireland Forum for Environmental Research has published a report on "Minimising Greenhouse Gas Emissions from Regulated Industry, ⁶⁶ which provides an overview of the interaction between regulation and GHG emissions in those jurisdictions. A similar exercise here would be interesting and useful.

6.4.3 Carbon/Ecological Audits

As companies become more aware of the environment impact of what they do, it may make sense to make reporting on greenhouse gas emissions part of the reporting obligations under company law⁶⁷: an ecological audit to accompany the existing financial audit requirement. Some companies are already doing this on a voluntary basis,⁶⁸ and such a requirement could be included as part of the overall review of company law that will result from the work of the Company Law Review Group.⁶⁹

6.4.4 Other New Environmental Policy Instruments

"New", or second generation, environmental policy instruments have not been widely used in Ireland and it seems that voluntary agreements are perhaps the only ones that will achieve wide political support in this country. The NCCS 2007 does mention voluntary industry schemes, and in addition, public procurement criteria and public awareness campaigns.

Related to the latter item, product labeling (which gives information on the GHG impact of individual items) would bring climate change to the attention of both producers and consumers and should have a positive impact on both production methods and consumption patterns. There have been limited moves in this direction for electrical appliances, housing and new cars; these existing measures could be extended to cover, for example, second-hand cars, and into other markets, such as transport, air travel and computer equipment.

Another policy instrument which has been very successful in altering consumer behaviour is the use of subsidies, such as the Greener

Home/Warmer Home grants offered by Sustainable Energy Ireland for retrofitting energy efficiency features to the existing stock of buildings.⁷¹

7 Conclusion

Climate change results from the emission of gases which are, for now at least, an inevitable consequence of industrial and agricultural activity. This makes reducing these emissions a significant challenge. International negotiations aiming to achieve this have encountered significant difficulties, particularly due to the unhelpful attitude of the United States administration (until recently), and both the scientific and political prognosis for the future is not optimistic.

At the European level, the EU ETS has emerged as the largest such scheme in the world, and a useful and encouraging (although imperfect) experiment in large-scale emissions trading. The EU has also introduced other legislation dealing with energy efficiency and emissions reduction. Irish climate change law and policy has generally followed the European lead.

Despite the economic downturn and indications that we may meet our Kyoto protocol targets without taking additional measures, Ireland should continue to explore new ideas and initiatives—for example, emissions reduction targets which are binding on the national executive; measures to connect agricultural activity with emissions trading; building capacity, skills and knowledge on climate change issues amongst local authorities; and implementing new environmental policy instruments (such as carbon taxes, carbon impact assessments, ecological audits and public awareness campaigns). Of course, these may prove to be politically controversial, but this by itself should not dissuade us from examining them.

We should also bear in mind that at its core, climate change regulation is dealing with the air around us, something which we affect and which affects us every moment which we live, in many different ways. Because of the diverse ways in which we interact with the atmosphere, the solutions to the pressing issue of reducing GHG emissions must be wide-ranging and pervasive. Law is only a part of what must be a broad mix of economic, social and technological policies.

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¹ See Working Group II Contribution to the Intergovernmental Panel on Climate Change Fourth Assessment Report, *Climate Change 2007: Climate Change Impacts, Adaptation and Vulnerability Summary for Policymakers*, available at http://www.ipcc.ch/SPM6avr07.pdf;

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