

CLIMATE CHANGE MITIGATION

Preparation of Low-Carbon Roadmap for Transport

Issues Paper for Consultation



December 2013

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1. FOREWORD

By Minister, Leo Varadkar

Addressing climate change is one of the major challenges of our generation. There is no doubt that climate change is real and that it is largely caused by human activity. The impact on Ireland is uncertain and there are likely to be benign and malign consequences. Either way, we have international obligations and must contribute to addressing this challenge. History teaches us that the most successful response to the challenges of modernisation and human advancement is found in technology and adaptation. Our response to climate change should not force us to reduce our standard of living or become an impediment to progress and economic growth. But it will require changes to the way we live and where we live. Reducing our dependence on imported fossil fuels will be beneficial in its own right, both in terms of the balance of payments and energy security.



This consultation document is one phase of a process that will seek to put in place a low carbon roadmap for the transport sector between now and 2050. It will form part of an overall national roadmap that will prioritise the key measures to be endorsed by Government.

Developing a roadmap for the transport sector will be challenging. Ireland has one of the most dispersed settlement patterns in the EU. Lack of finance for major infrastructural improvements presents a significant obstacle in achieving the large scale reduction in emissions that could come from a shift to public transport. Cleaner fuels will have to be embraced, adaptations made, mitigation measures implemented and new technologies embraced. We will need to employ many policies and measures, such as land use planning and taxation, to effect this change. Market forces will also play a significant role.

The national roadmap will provide for an integrated approach across sectors as well as a clear-cut set of quantifiable measures that will seek to deliver a cleaner, more efficient, low carbon future for Ireland.

I look forward to the outcome of this consultation phase.

A handwritten signature of Leo Varadkar in black ink. The signature is stylized and cursive, written on a white background.

Leo Varadkar TD

Minister for Transport, Tourism and Sport

By Minister of State, Alan Kelly

An efficient transport system is central to the social and economic viability of any country. Transport facilitates people's connection with each other and moves everything we need as we need it. We are entirely dependent on transport and our preferences within that system are firmly embedded. People will only change if the alternative is better. This is the case when considering transport options from many perspectives including cost, time, accessibility, flexibility, comfort and safety.

We now recognise that current travel and transport trends in Ireland are not sustainable and we need to provide better alternatives for people by 2050. This document seeks your views on how best to achieve that. We ask that you consider the measures needed to help short distance commuters leave the car at home and the measures necessary to better incentivise car owners to choose cleaner fuelled vehicles when next purchasing a new car. We also ask that you consider the steps needed to make our public transport system more responsive to the needs of a low carbon future.



While prioritising the measures to meet our low carbon targets may be difficult, the challenge is made greater by the current economic situation that requires us, in the short to medium term, to adhere to a least-cost measures approach.

Notwithstanding the above, attitudes are changing and people are slowly embracing more sustainable modes of transport. Cycling is increasingly popular and the financial support provided by the Department of Transport, Tourism and Sport in recent years for smarter travel measures is making a difference. Smarter travel considerations are now a key part of infrastructure development across the country and I expect such considerations will be a key feature of this consultation too.

Your engagement in this process is vital so I wish to thank you for your consideration of these issues in advance.



Alan Kelly

Minister for Public and Commuter Transport

2. INTRODUCTION

Context for Development of Roadmap

In order to keep the increase in global temperature below 2 °C (compared to pre-industrial levels), the European Council reconfirmed in February 2011, the EU objective of reducing greenhouse gas (GHG) emissions by 80-95% by 2050 compared to 1990 in developed countries as a whole. Taking into account the necessary efforts from developing countries, this would allow a global reduction of 50% in emissions by 2050. This is in line with the position endorsed by world leaders in the 2009 Copenhagen Accord and the 2010 Cancun Agreements (Decision 1/CP.18). These agreements also include the commitment to deliver long-term low carbon development strategies. To ensure that Ireland can effectively and equitably contribute to the EU objective to reduce GHG emissions by 80-95% compared with 1990 as part of joint global mitigation efforts, it is necessary for Ireland to develop an ambitious low-carbon development strategy.

In this context, the planned Climate Action and Low Carbon Development Bill sets out proposed statutory obligations in relation to the development of a National Low Carbon Roadmap, incorporating sectoral roadmaps. A primary objective of the national roadmap will be to bring a clear and strong focus to both the challenges and the opportunity of transition to a successful low-carbon future, and the importance of a positively focussed and cost-effective national transition agenda. In anticipation of the planned legislation, work has already commenced on the roadmapping process at sectoral and national level.

Against this background, the Secretariat to the National Economic and Social Council (NESC) were engaged to develop a basis for a long-term socio-economic vision to underpin effective national transition to a low-carbon future by 2050. The detailed policy analysis developed by the NESC Secretariat was delivered in 2012 and published by the Minister for the Environment, Community and Local Government. In addition to setting out their vision for a carbon-neutral Ireland and an approach to underpin it, they make a strong case for the national climate challenge to be reframed – moving beyond a sole compliance approach, and re-focussing on a whole-of-government and societal agenda.

Key to Ireland being in a position effectively and equitably to contribute to the overall EU objective and to achieving the reframing recommended by the NESC Secretariat will be the development of a National Low-Carbon Roadmap. The purpose of the roadmapping process will be to set out a pragmatic and holistic approach aimed at pursuing and achieving transition to a low-carbon, climate-resilient and environmentally sustainable economy in the period up to and including 2050. The key sectors are energy (power generation), the built environment, transport and agriculture.

The National Low-Carbon Roadmap will be coordinated by the Department of the Environment, Community and Local Government with substantial input from relevant Departments. In this context, Departments with responsibility for key sectors in the national transition agenda have been tasked with the preparation of draft individual 2050 low-carbon roadmaps, for incorporation into a National Low-Carbon Roadmap, taking account of the EU low-carbon agenda, the policy analysis undertaken by the NESC Secretariat, and such further evaluation of measures as the Departments concerned consider necessary. This will provide an opportunity for the Departments concerned, who are best placed in terms of ownership and understanding of their sectors, to frame the low-carbon vision/objective for their sectors and to undertake the evaluation that is necessary to develop a robust and cost-effective policy platform for delivery of that vision in their area. The National Low-Carbon Roadmap will be completed, following public consultation, in 2014.

Purpose of this Document

The Department of Transport, Tourism and Sport (DTTAS) are now in the process of developing the sectoral low carbon roadmap for the transport sector. In developing this sectoral roadmap, the Department is required to frame a low-carbon vision for the sector and undertake the necessary evaluation in order to develop a robust and cost-effective policy platform for the delivery of that vision.

While there will be a substantial open consultation process on the draft National Low-Carbon Roadmap during 2014, the Department is committed to ensuring that the roadmapping process is inclusive, informed and transparent. For this reason, the Department would like to engage early with stakeholders with a view to inputting stakeholder feedback into the decision making process.

The purpose of this document is therefore to invite written submissions from all interested parties and key stakeholders on the content of this consultation paper. It is hoped that submissions received on foot of this paper will better inform the preparation of the roadmap and will contribute to key policy considerations within the transport sector. Such considerations will include, among others, a continuation of a least cost measures approach, a focus on technology, sustainable land use patterns, alternative fuel options and market susceptibility to measures proposed.

Achieving transport sector emissions reduction requires co-ordinated action across a range of Departments and Government Agencies. The Department of Communications, Energy and Natural Resources lead on the Electric Vehicle area, on the biofuels area, and in terms of the overall target of 10% of transport energy coming from renewable sources by 2020. The Department of Finance are also the key players in terms of motor taxation and vehicle registration tax (along with the Department of Environment, Community and Local Government) as well as Carbon Tax and other Excises. The Department of Environment, Community and Local Government are also key to ensuring that future land use and settlement patterns do not drive ever increasing demand for motorised transport.

Subsequent to the receipt of submissions and feedback from this Issues Paper, DTTAS will be liaising with the above Departments on the various measures proposed with a view to agreeing a cross sectoral approach that prioritises the steps to be taken between now and 2050.

The Department would ask that all submissions be forwarded to lowcarbonroadmapfortransport@dtas.ie by 7 February 2014. In view of the level of interest anticipated, the Department would ask that submissions are kept concise and, where possible, not longer than 1,500 words.

The Department regrets the limitation on submission size but it is proposed, following this phase of consultation, to invite stakeholders to an event to discuss issues arising in the context of the roadmap and to inform participants of progress made early in 2014.

2020 Emissions Targets and Performance Projections

Ireland has demanding targets to meet by 2020 arising from commitments made under EU climate change policy. The '20-20-20' targets were agreed by European Council in 2008 and commit to, by 2020:

- A 20 per cent reduction in overall EU GHG emissions compared to 1990 levels;
- Energy savings of 20 per cent through improved energy efficiency (relative to a benchmark of existing trends); and
- Renewable energy sources to provide 20 per cent of the EU's total energy.

A key distinction in EU policy is between emissions covered by the EU's Emissions Trading Scheme (ETS) and other emissions (non-ETS emissions). The ETS covers the large energy users, including electricity, commercial airlines, cement, and large food, drink and pharmaceutical plants. The target reduction in emissions for the ETS sector (to be achieved by participating companies) is 21% by 2020, calculated on the 2005 base.

All other sectors comprise the non-ETS sectors. These include transport, households, industry (excluding energy-intensive industry), agriculture, and private and public services. In the non-ETS sector (where it is the responsibility of member states to achieve the reduction in emissions), the total EU target is a reduction of 10% by 2020, compared to 2005. The non-ETS transport sector does not include commercial airlines.

This 10% EU target was allocated across member states through the Effort Sharing Decision which gave Ireland a target to achieve a 20% reduction in non-ETS emissions by 2020 relative to 2005 (joint highest target reduction among member states with Denmark and Luxembourg). There are also interim annual targets to be achieved over the 2013 to 2020 period.

Given that 72% of non-ETS emissions were derived from the transport and agriculture in 2012, there will be considerable focus on these sectors between now and 2020. In 2012, transport emissions decreased by 3.5%, which was the fifth consecutive year following significant growth up to 2007. The Environmental Protection Agency predicts that, based on an average annual GNP growth rate of 3.3% for the second half of the decade, transport emissions will show strong growth

over the period to 2020 with a 12- 22% increase on current levels depending on the level of policy implementation. However, given the continuation of subdued economic activity, it is likely that increases in emissions may not reach these levels by 2020.

3. CHALLENGES AND OPPORTUNITIES - Transport

Ireland is facing significant challenges in meeting its EU emissions targets for greenhouse gases under the aforementioned EU Climate and Energy package for 2020 and anticipated longer term targets up to 2050. However, most of the difficulties envisaged will not be exclusive to Ireland.

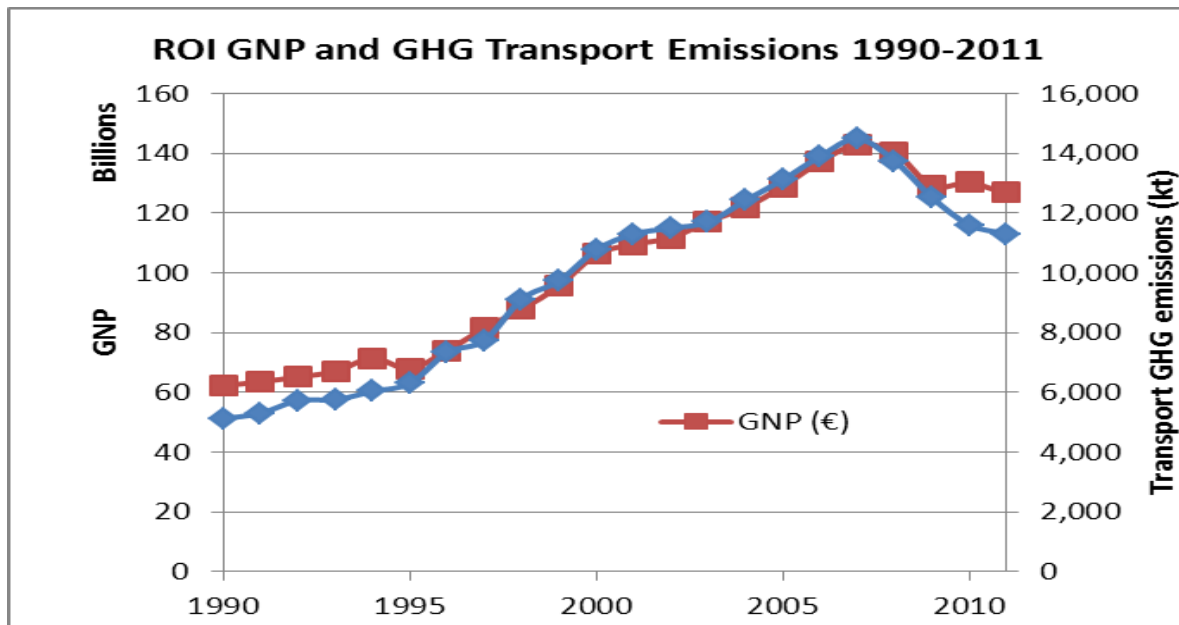
In terms of transport specifically, this sector represented 27% of Ireland's non-ETS emissions in 2011. Combatting such output will require a transformation in the sector – a radical shift that will need to rely on technological innovation and security of alternative fuels supply supported by appropriate policies and widespread behavioural change. A co-ordinated approach will be fundamental to such conversion as many of the key policies, such as land use and spatial planning, falls outside the remit of this Department.

It is important to recognise that transport demand is essentially a derived demand, largely dependent on the level of activity within an economy. Population growth, increased economic outputs and increased affordability of transport all impact to increase demand. Settlement patterns also play a fundamental role in terms of distances travelled and the types of modes which are suited to travel. In a European context, Ireland has a particular challenge in terms of sustainable transport as we are an island nation with a dispersed population and, accordingly, limited numbers of urban settlements that are suited to public transport provision.

Supporting economic growth, both domestically and within our export sectors, has been a key reason for transport investment. Our transport system needs to support economic growth and this will remain a key policy goal for transport. We also need to ensure that the movement of goods can continue to be cost competitive in an international context. Furthermore, it is vital that our transport system can support social inclusion by ensuring access to transport for all the population.

Historically, in Ireland, transport demand and GHG emissions have been closely coupled to trends in economic output. Irish Gross National Product in 2012 has increased by 108% compared to 1990 levels. Similarly, car ownership levels increased by 137% - from around 800,000 cars in 1990 to 1.89 million in 2012. The figure below shows Irish GNP and Transport GHG emissions from 1990 to 2011, and

clearly shows the close coupling between emissions from the transport sector and output from the economy as a whole. The challenge for the transport sector is how to break this coupling, and ensure that economic growth can be supported whilst reducing emissions from the sector.



It must be noted that transport demand in Ireland is completely dominated by the car. In terms of distance travelled, the 2009 National Travel Survey found that car driver accounted for around 71% of total kilometres travelled, followed by car passengers (12%), van/lorry/other (8%), rail (3%), bus (4%) and walking (2%). In other words, public transport, walking and cycling account for only 10% of all km travelled.

It is clear, given the current high levels of car dependency and embedded travel patterns, that progress must be made in modal shift. However, the scale of change necessary to bring about significant reductions in emissions would require unprecedented levels of investment. If we assume that such investment is achievable, Ireland's settlement patterns would continue to act as a limiter on widespread modal shift.

It is likely, therefore, that the main contributor to dramatic reductions in GHG emissions from transport will be improvements in the efficiency of motorised transport – mainly through fuel and vehicle technology and, as Ireland does not have a car manufacturing sector, such innovation is largely outside of our control.

The development of this roadmap will consider, among other things, the imposition of additional costs on travelling to reach a near zero carbon target. It will be necessary to assess the comparative costs, both financial and environmental, of achieving (or not achieving) the targets outlined. It will be necessary to prioritise across sectors those measures that will provide the greatest benefit to cost ratio from a range of perspectives, not least the targets set by the EU. The level of financing required to deliver on ambitious plans will be a fundamental influence on the measures to be undertaken.

However, it must also be recognised that much has to be gained from a low carbon future. There are economic benefits to be achieved by changing the fleet profile of vehicles, by making better fuel efficiency choices and by adopting the use of alternative fuels. Aligned with the 20-20-20 targets in the EU Climate and Energy Package are headline targets for smart, sustainable and inclusive growth, thus reflecting the recognition that tackling the climate and energy challenge contributes to the creation of jobs and the generation of "green" growth and competitiveness.

The European Commission estimate that meeting the 20% renewable energy target could have a net effect of creating around 417,000 additional jobs. Similarly, achieving the 20% energy efficiency improvement by 2020 has been forecast to boost net employment by some 400,000 jobs. In this context, a greener, low carbon future has the potential to provide consequent benefits for Ireland, particularly if the transport sector is responsive and transitions early in the period to 2050.

4. POLICY CONSIDERATIONS

Within the transport sector, policy measures expected to contribute to a low carbon future can largely be categorised under the following headings:

- (i) Engines and Fuels (Efficiencies and Alternatives);
- (ii) Travel Demand;
- (iii) Modal Shift; and
- (iv) Other – Aviation and Maritime

Engines and Fuels (Efficiencies and Alternatives)

The NESC Report, referred to earlier in this document, recognised the centrality of technology development, such as engine improvements, electric vehicles, gas-based vehicles and ICT, in the pursuit of a more sustainable transport sector.

Engine improvements in conventional fossil fuel cars are largely been driven by targets imposed at EU level. In relation to 2020, the EU has introduced an emissions target of 95gCO₂/km for new passenger cars. This represents a significant reduction in CO₂ tailpipe emissions per vehicle km relative to doing nothing by 2020 and each new passenger car will produce substantial savings in fuel costs over the car's lifetime, as compared with the 2015 target, which was 130gCO₂/km. The 2020 target offers a clear and stable legal environment for investment, and will further stimulate innovation by vehicle producers and component suppliers.

Such innovation is also evident among key manufacturers in the development of electric and gas-based vehicles. It is expected that the ambitious low carbon targets set by the EU will open up the market to a range of alternative fuels. However, it is accepted that this reduction will only be achieved where there is a ready supply of alternative fuels that are comparable to oil in terms of price, reliability and performance.

The EU Commission is also concerned by the slow attainment of alternative fuels infrastructure across the EU and considers that this, along with the lack of common technical standards for infrastructure, represents a major obstacle for market penetration. It has, therefore, developed a proposal for a Directive (published in end January 2013) which aims to deliver a build-up of alternative fuels infrastructure so as to facilitate a quicker transition to cleaner transport. The main alternative fuel

options that could replace oil as the primary fuel source for transport (both road and maritime) are identified as electricity; hydrogen; biofuels; and natural gas, in the forms of compressed natural gas (CNG), liquefied natural gas (LNG), or gas-to-liquid (GTL), and liquefied petroleum gas (LPG). Gas based vehicles also provide a natural pathway to biomethane fuelled vehicles.

In order to support such alternative fuels options and on-going innovations in technological development, the range of potential additional measures that could be deployed to narrow the gap between projected emissions and targeted levels are well known. They include further relative incentivisation of the purchase of lower emissions vehicles, an additional biofuel obligation, additional carbon tax, further speed reduction measures and ecodriving schemes. However, many of the aforementioned are not without drawbacks and it is argued that their implementation could lead to a loss of competitiveness and increased cost for commercial enterprises, the public and the State.

Travel Demand

Travel demand is heavily influenced by a number of factors including population size, settlement patterns, vehicles numbers, freight and economic growth. A transport system needs to take account of these factors and needs to be able to react in an efficient way to the variability in demand arising.

Moreover, it is critically important in the context of managing travel demand that land use and transport policies and practices are suitably aligned. This alignment will help to contain urban sprawl, link employment to transport and encourage modal shift to other more sustainable modes of travel, all of which will help to manage demand. The efficiency of any public transport system is directly correlated to population density. Therefore, the full value of investment in transport can only be realised where it is accompanied by reinforcing land use policies and practices.

One option for managing travel demand is the application of 'user pays' or 'polluter pays' principles to the transport sector. This would be expected to result in significant reductions in emissions relative to a business as usual case where there are relatively large upfront costs to vehicle ownership and relatively lower costs associated with vehicle use. The exact level of emissions savings would depend on the type of measures applied, and the extent of users and road types covered by any such measure. Potential negative impacts could include increased transport costs for

businesses, potential to adversely impact on accessibility to transport for specific socio-economic groups and increased costs for personal travel with a particular impact on people living in rural locations.

However, certain travel demand measures in conjunction with effective policies that are integrated across sectors could have a role to play in the more efficient movement of goods and people. Freight, for example, relies on all aspects of transport including air, road, rail, and shipping but equally feeds into urban planning and traffic management in terms of the delivery of goods to businesses in city areas. Any efficiencies in the means by which goods are delivered has the potential to realise significant emissions reductions.



Modal Shift

It is likely that significant behavioural change with regard to personal travel options will be required in order to secure a low carbon future for Ireland. The extent to which people will switch from the car to other modes of travel will depend on viable, reliable and accessible alternatives. Urban planning will also be a significant tool in realising modal shift given the challenges that persist in finding alternatives for rural and/or isolated communities. DTTAS recognises that current transport and travel trends in Ireland are not sustainable and published a national policy document for the sector in 2009 'Smarter Travel, A Sustainable Transport Future: A New Transport Policy for Ireland 2009-2020' (www.smartertravel.ie).

Many of the actions in this document seek to promote and support the use of more sustainable modes of transport such as walking, cycling and the use of public transport. The overall aim of the policy is to reduce distances travelled by private car and to encourage smarter travel. Success will largely depend on the success of related actions to focus population and employment growth in large urban areas,

thereby creating the better conditions for supporting behavioural change. Accordingly, the sustainable transport agenda is entirely co-dependant on sustainable land use and transport planning policies and will be closely aligned to the new National Spatial Strategy currently being prepared by the Department of the Environment, Community and Local Government.

DTTAS supports the aforementioned policy through various measures under the Department's Smarter Travel Initiative. There are three funding programmes currently underway under this Initiative namely, Smarter Travel Areas, Active Travel Towns and the National Cycle Network.

Other Schemes being funded under the Smarter Travel Initiative include Bike Week, Smarter Travel Workplaces/Campus and Dublin City Bikes. A rental scheme similar to Dublin City Bikes is being rolled out to the regional cities of Cork, Galway and Limerick. Additionally, there is the An Taisce Green-Schools Travel programme, which focuses on promoting sustainable travel on the school run. The travel theme is funded by the Department of Transport, Tourism and Sport and supported by the National Transport Authority (NTA).

The NTA (www.nationaltransport.ie) will also have a pivotal role in realising a low carbon future for Ireland given its remit in the implementation and delivery of public transport projects and its work, more generally, in relation to the promotion of public transport as a primary mode of transport. The NTA are currently involved in many public transport projects including the City Centre Re-signalling project, the delivery of the two new rail stations at Hansfield & Oranmore and the removal of Reilly's Level Crossing on the Maynooth line. More high profile is the commencement of work on the cross-city Luas line. This represents a very significant milestone in the creation of a high quality integrated public transport network in Dublin. The project is scheduled to be operational by the end of 2017 and, when completed, will carry 10 million passenger journeys ever year. This type of investment will help to underpin modal shift into the future.

In addition to the implementation of its Public Transport infrastructure Programme for the GDA, the NTA is also charged with devising and implementing projects to enhance people's use of public transport and sustainable travel choices, in line with Government policy. A range of integration measures under the "*Transport for Ireland*" brand have been developed by NTA to promote and integrate public

transport provision in Ireland. The measures include the Real Time Passenger Information system, the “*Leap Card*” integrated ticketing system and the National Journey Planner, which is a door-to-door journey planner that provides service information, directions, and time estimates for all journeys on public transport.

The NTA, like the Department, also supports the development of other sustainable modes such as walking and cycling, which is reflected in the establishment of a 5 year investment framework for each of counties in the GDA for the period 2012 to 2016.

NTA also administers on behalf of the Department, the Accessibility Programme and the development of public transport services in the Regional Cities. Since 1 April 2012, the NTA has also been assigned national responsibility for local and rural transport services integration, including the Rural Transport Programme, in a deliberate effort to put such services in a broader transport context. A restructuring of the Rural Transport Programme was announced in July 2013 which is aimed at protecting the provision of rural transport services into the future by ensuring that services are mainstreamed as subsidised public transport services and better integrated with other transport services.

The NTA, like the Department, also supports the development of other sustainable modes such as walking and cycling, which is reflected in the establishment of a 5 year investment framework for each of counties in the GDA for the period 2012 to 2016.

All of the aforementioned work promotes the greater use of public transport through improved efficiencies, reliability of service and technologies to improve information services to customers thus encouraging smarter travel choices and modal shift for the long-term within the context of the 2050 Roadmap.

DTTAS has responsibility for policy and overall funding in relation to public transport investment. The targets for modal shift in the Smarter Travel policy document were based, in part, on planned investment in public transport infrastructure. Given the challenging economic circumstances of recent years, investment now focuses on protecting previous investment outputs and maximising the efficiency of existing infrastructure. This will be the overall strategy in relation to public transport funding from 2012 to 2016. It is hoped that investment in infrastructure will increase in the longer term and will have more capacity to support and develop a low carbon economy by 2050 but, as before, the levels of investment necessary to bring about

significant reductions in emissions would be unprecedented and would, invariably, be limited by the dispersed nature of our population.



Other - Aviation and Maritime

In relation to the aviation sector, commercial airlines are part of the ETS sector. Great strides have been made in recent years to increase fuel efficiency within this sector and a UK-Ireland Functional Airspace Block (FAB) has been operating highly successfully since it was established in June 2008 and is leading the way in helping Ireland and the UK meet the objectives of the Single European Sky. Since established, it is estimated that the FAB has provided CO₂ savings of 232,000 tonnes and 73,000 tonnes of fuel. The FABs work is on-going and new areas of cooperation are being explored such as free airspace routing (where airlines can select their optimum flight paths) but also enhancement of ascent and descent procedures to reduce fuel burn and resulting CO₂ emissions.

The Department is currently developing a new aviation policy, which will incorporate measures to reduce greenhouse gas emissions (GHG). New aircraft are 70 per cent more fuel efficient than 40 years ago and 20 per cent more efficient than 10 years ago but global demand for aviation is growing at about 5% per year. European airports have voluntarily introduced a carbon monitoring and reduction scheme to minimise the carbon emissions from their operation. Dublin Airport Authority is a participant in that scheme. It is expected that the new aviation policy will be published in 2014.

At EU level, international maritime transport remains the only transport mode not included in the EU's GHG emissions reduction commitment. While the EU has a strong preference for a global approach led by the International Maritime Organization (IMO), as the most appropriate international forum to regulate emissions from shipping, the EU has taken a step towards integrating maritime transport emissions in the EU's GHG reduction policies. In June 2013, a legislative

proposal for a Regulation was published that would seek to implement a system for monitoring, reporting and verification (MRV) of GHG emissions from ships and which is expected to be developed to take account of IMO developments. The proposal is at an early stage in the legislative process, with Member States seeking clarification from the Commission. This will constitute the first step in a gradual approach towards full integration. Another step will be definition of reduction targets for the maritime transport sector which may lead to consideration of possible further measures including market based measures (MBM's). DTTAS will continue to work closely with the lead Department, which is the Department of Environment, Community and Local Government, on these issues.

Ireland is a party to MARPOL, which is the International Convention for the Prevention of Pollution from Ships and attends the Marine Environment Protection Committee of the International Maritime Organization (IMO). MARPOL Annex VI provides for prevention of air pollution from ships and a major revision of Annex VI was agreed at IMO in 2008. It includes a progressive reduction globally in emissions of sulphur oxides (SOx) and nitrous oxides (NOx) NOx and particulate matter and the introduction of emission control areas (ECAs) to reduce emissions of those air pollutants further in designated sea areas. Lower sulphur limits for marine fuels implementation dates were set for 2010, 2012, 2015 and 2020.

In addition, the revised NOx Technical Code 2008 introduced energy efficiency regulation in relation to ships engines. There was also progress on further developing energy-efficiency regulations at the 65th session of the Marine Environmental Protection Committee (MEPC65) at the IMO in May 2013. Additionally, the Committee adopted an MEPC Resolution on Promotion of Technical Co-operation and Transfer of Technology relating to the Improvement of Energy Efficiency of Ships.

All submissions (max 1,500 words) should be forwarded to lowcarbonroadmapfortransport@dttas.ie by 7 February 2014.