Ibec response - National Low Carbon Transition and Mitigation Plan

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Ibec is the largest business representative organisation in Ireland: we speak for over 7000 member companies across a range of industrial, commercial and non-profit sectors. Ibec represents Irish business; home grown, multinational, big and small, spanning every sector of the economy. The organisation and its sector associations strive for business conditions that enable economic growth.

This response was prepared by the Ibec Climate Change working group. The working group includes a cross-section of companies spanning a number of sectors including energy generation, energy supply, food and drink, pharmaceuticals and building materials. It reports to the Energy Policy Committee.

Ibec welcomes the opportunity to input into the development of the National Mitigation Plan (NMP). The Climate Action and Low Carbon Development Bill is based on the principle of enabling "a transition to a low carbon, climate resilient and environmentally sustainable economy". In preparing a national framework to meet our international climate obligations, it must be underpinned by an economically efficient and flexible approach as envisaged by EU legislation.

In contrast to emissions from power generation and large industry, national governments are responsible for emissions reduction in the non-traded sector (agriculture, buildings, transport and waste). Ireland faces unique challenges compared to other Member States due to the low mitigation potential of our substantial agriculture and transport emissions. The overall 2030 non-ETS target will be disaggregated into individual Member State targets along similar lines to the 2020 targets. The European Council conclusions of October 2014 included the commitment to continue and further develop the use of existing flexibility instruments to ensure cost-effective emissions abatement. Therefore countries such as Ireland with challenging non-ETS targets (and low mitigation potential) would achieve it in part by paying for low-carbon investment in other Member States.[1] It is important to keep this mind in devising the NMP - Ireland's existing greenhouse target for 2020 would be very difficult and costly to achieve by domestic action alone but the European Commission always intended that some Member States would underachieve their targets and would acquire excess emission allocations from Member States that overachieve their national targets.

Ibec strongly supports the approach of informing the policy process with ESRI/UCC energy system modelling to determine the least cost pathways to meet our long-term transition objective. This is an important determinant in preserving competitiveness as we work towards meeting our EU and international climate policy obligations. This continued modelling expertise is crucial to inform the policy making process in tandem with new technology development.

This response will focus on measures that need to be considered in pursuing cost-effective greenhouse gas (GHG) mitigation across the four key sectors to be addressed by the NMP - electricity generation, built environment, transport and agriculture.

Electricity Generation

The ambition of "*ensuring that new technologies can be ready for incorporation into Ireland's electricity system"* is not a realistic objective, since Ireland will largely be a renewable electricity technology taker (with perhaps a minor exception in some aspects of the field of ocean energy).

In a similar vein, a focus on "*ensuring that the cost of existing technologies can be lowered"* is equally unrealistic, for the very same reason. Deployment costs in Ireland can only be lowered by reducing the project development costs (including the costs of obtaining planning consent and connecting to the electricity network) and/or reducing the costs of finance. Sustained and explicit Government support for key infrastructure projects, policy guidance on public participation and the publication of a streamlined interdepartmental strategy on infrastructure development is necessary to ensure projects are delivered in a socially acceptable, timely and cost effective manner. The NMP and the sectoral roadmaps supporting its objectives should navigate a clear course of action to overcome such barriers (for example public acceptance, structural, environmental and any other issues).

[1] It was always the Commission's intention that the Effort Sharing Decision would have a redistributive effect. The European Commission Staff Working Document, "Analysis of options beyond 20% GHG emission reductions: Member State results" (SWD 2012/5 final), confirms that Member States that underachieve their targets are assumed to acquire excess emission allocations from Member States that overachieve their target.

Unlike the other sectors subject to roadmaps (agriculture, built environment and transport), the electricity generation sector is already subject to the European Union's Emissions Trading Scheme (EU ETS). All GHG emissions associated with electricity generating units over 20 MW thermal in size are included and are already capped. While reducing the GHG emissions associated with electricity generation will reduce Ireland's overall emissions, it will not contribute to the burden-sharing target associated with GHG emissions in the non-ETS sectors. Ireland's unique emissions profile highlights the sheer scale of the challenge; sufficient flexibility in meeting the non-ETS targets through the optimal rather than minimal purchasing of statistical transfers from other Member States should be pursued.

Electricity has an important role to play in indirect contribution to the non-ETS sectors; especially in the built environment and transport sectors.

Built Environment

The Department's paper indicates that the main focus in the built environment will be on the role of energy efficiency and the use of renewable energy.

While there are considerable energy savings that could be obtained from modifications to both residential and non-residential buildings, particularly the older building stock, many of these will require 'deep retrofits' of the building fabric. Such retrofits will require substantial grant aid or some other form of financial incentive, as the payback periods are too long to be attractive to the individual owners.

This grant aid should be funded from central exchequer sources – e.g. from the proceeds obtained from the auctioning of EU Emission Allowances (EUAs) or carbon taxation revenues[2]– rather than by placing obligations on the energy supply companies. Ibec has been vocal about our reservations regarding this approach. It includes substantial financial incentives to prioritise residential-end users in the so-called Fuel Poverty Sector. The costly penalties for non-compliance are in danger of increasing the cost of energy/electricity for the consumer, and will likely not give effect to the least-cost delivery of the target quantity of energy savings.

If "*oil and solid fuels are largely removed from the energy mix*" associated with heating the built environment, they will have to be replaced by solar thermal, renewable electricity – in the form of heat pumps or modern, efficient storage heating – or by bioenergy, in the form of wood chips, wood pellets, firewood and perhaps biomethane. As outlined in the section on agriculture below, Ireland currently does not have the required policies in place to ensure an adequate supply of indigenous bioenergy. Current policies also work against the move to heat pumps.

Transport

The transport energy infrastructure would require a transformative overhaul in order to facilitate the type of private car fleet and freight envisaged by ESRI/UCC's modelling. It sees a 2050 where the "*private car stock (just fewer than 3 million vehicles) is almost completely electric in 2050 (528 ktoe)"* and "[*f]reight has just under three times the energy demand of private transport at 1,875 ktoe and the main renewable contributions are made by ethanol (781 ktoe) and biogas (725 ktoe).*"[3] The technologies envisaged in the modelling are in different stages of development and require unique policy responses (EU and national) to facilitate the decarbonisation of transport. Any policy decisions must be taken against the backdrop of Ireland's settlement pattern, dispersed population and the difficulties in achieving a modal shift in transport.

Electricity and gas-powered transport have an important role to play in the decarbonisation of the sector. In terms of engine type and efficiency, Ireland is largely a technology taker and ways to unlock carbon savings, such as vehicle efficiency standards, are within the competence of the European Commission (for example EU's emissions target of 95gCO_2/km for new cars by 2020). It is important

[2] Carbon tax revenues reported as €385 million for 2014.

[3] *Technical support on developing low carbon sector roadmaps for Ireland*, ESRI, E4sma, UCC, page 28. December 2013

that Ireland signals, at EU level, the role of such standards in meeting targets at the Member State level.

Natural gas plays a considerable role in both the electricity and heating sectors today and the role could be extended to the transport sector, through the use of either Compressed Natural Gas (CNG) or biomethane.[4] The Finance Bill 2015 set excise duty of €9.36 per megawatt hour to CNG (for the next 8 years). This represents a significant reduction in the excise applied to diesel or petrol. However it is important to note that it needs the infrastructure in place to incentivise its use. Alternative refuelling and further electric vehicle (EV) recharging infrastructure will need to be developed in order to enable the envisaged decarbonisation.

As seen in ESRI/UCC's modelling, considerable scope exists for fossil fuel substitution by biogas and biomethane in the freight and public transport sectors. The production of the biogas and its upgrading to biomethane in large, central facilities, similar to those developed in Sweden, should be promoted. The interim development of CNG or liquefied natural gas (LNG) may serve as a pathway to biomethane deployment.

Meaningful progress on a new National Planning Framework (cognisant of the failures associated with the now defunct National Spatial Strategy) should complement the development of the NMP.

Agriculture

One of the most decisive factors influencing Ireland's ability to meet EU mandated non-ETS targets depends on whether net afforestation LULUCF credits (4.5Mt per annum or 10% of annual emissions) will be included in the carbon mitigation framework at an EU level.

The 2030 framework provides the option to investigate offsetting agricultural emissions through afforestation as soon as technical conditions allow. In October 2014, EU Heads of State asked the European Commission to "*examine the best means of encouraging the sustainable intensification of food production, while optimising the sector's contribution to greenhouse gas mitigation and sequestration, including through afforestation*". The European Commission is in the middle of preparing an Impact Assessment for Land-Use, Land-Use Change and Forestry (LULUCF) and agriculture. This is set to be complete 2016 but there is still no decision on how to treat LULUCF and agriculture.

Therefore the focus on "*pathways to carbon neutrality*", while very worthy, may seem a little ambitious given our prevailing level of GHG emissions compared with carbon sequestration across the agriculture, forestry and land use sectors. Demand for beef and Irish dairy exports is growing due to projected global population increase of 2 billion to 9 billion by 2050. Food Harvest 2020 and the more recent Food Wise 2025 have at their core the production of agricultural materials and value-added products for Ireland to play its role in meeting this growing global demand. This will be achieved mainly through intensification, so the carbon footprint per unit of output is expected to improve as efficiencies advance. In terms of expanding agricultural ambitions, opportunities also lie for the production of a substantial element of Ireland's future energy from its land base.

As an example, the power station at Edenderry used 2.3 PJ of biomass for co-firing with peat in 2014. Of this biomass total, some 54.3% was imported; 41.1% came from the forest sector; and 4.6% came from the agricultural sector in the form of energy crops. There are opportunities for a significant development in indigenous energy supply.

A recent report by SEAI shows that, while the production of indigenous biomass leads to positive macroeconomic and net employment benefits, the importation of biomass for electricity generation may lead to a net loss of jobs in the economy.[5]

[4] The ESRI/UCC report projects freight transport which is not electrified to be fuelled by biogas (725 ktoe) and the remainder supplied by ethanol (781 ktoe) and diesel (208 ktoe).
[5] *A Macroeconomic Analysis of Bioenergy Use to 2020*. Sustainable Energy Authority of Ireland, Dublin. June 2015

The Forestry Programme 2014-2020 has a total planting target of 43,410 hectares for the 6-year period 2015 to 2020, an average of just over 7,000/8,000 hectares per annum. The estimated cost to the state of the afforestation programme since 1990 and out to 2030 is €3.5 billion. As wood fuels are mainly sourced from young forests, a balanced age class structure at national level is a prerequisite for sustained supply. An annual afforestation programme in the region of 15,000 hectares, and preferably considerably more, needs to be implemented for an extended period (two decades) to provide a long-term sustainable supply of wood fuels.

Without a change of approach, and active promotion of the benefits of afforestation, even the modest targets included in the Programme may not be achieved.

Scope also exists to significantly increase the production of biomass from short rotation coppice, without impacting on the output of food, through the intensification of grass-based agriculture. The conversion of 1% of Ireland's 4.3 million hectares of agricultural land to short rotation coppice would result in the production of 955,000 green tonnes per annum (~7 PJ) of biomass for use in co-firing, CHP plants and industrial heating. However, without a restructuring and relaunch of the Bioenergy Scheme that facilitates the planting of energy crops, and its active promotion, this indigenous biomass output is unlikely to be achieved.

Conclusion

Ibec welcomes the focus on cost-effective measures informed by modelling concentrated on delivering least cost pathways of the low carbon transition. The most economically advantageous trajectory might be somewhat more costly when the macroeconomic benefits are factored in. That analysis would require complementary modelling techniques. The cross-departmental co-ordination envisaged by the establishment of the NMP Steering Group and the High Level Technical Group is important to allow the central approach necessary to address our decarbonisation challenge in a cost-efficient manner that maximises Ireland's growth potential.

As discussed in the NESC Secretariat reports, Irish society is not fully engaged with the need for something other than 'business as usual'. This may be partly attributed to the vacuum created by a failure to explain to our people the path that Ireland and the rest of the EU has embarked upon; why it is necessary to follow this route; the long-term benefits of pursuing this pathway and the impacts that can be expected along the way.

The development of a National Low Carbon Transition and Mitigation Plan, and the subsidiary sectoral roadmaps, therefore offer an opportunity for the Government, the energy authorities and agencies, the main energy companies and the business community to outline the overall path that will be followed over the next three to four decades and to highlight the principal benefits that will flow from following this route.

The Climate Change working group is happy to meet with the Department of the Environment, Community and Local Government to discuss any aspect of the submission.

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