

**Invitation to submit views on the development of**  
**Ireland's first**  
**National Low Carbon Transition & Mitigation Plan**



**Comhshaol, Pobal agus Rialtas Áitiúil**  
Environment, Community and Local Government

## Table of Contents

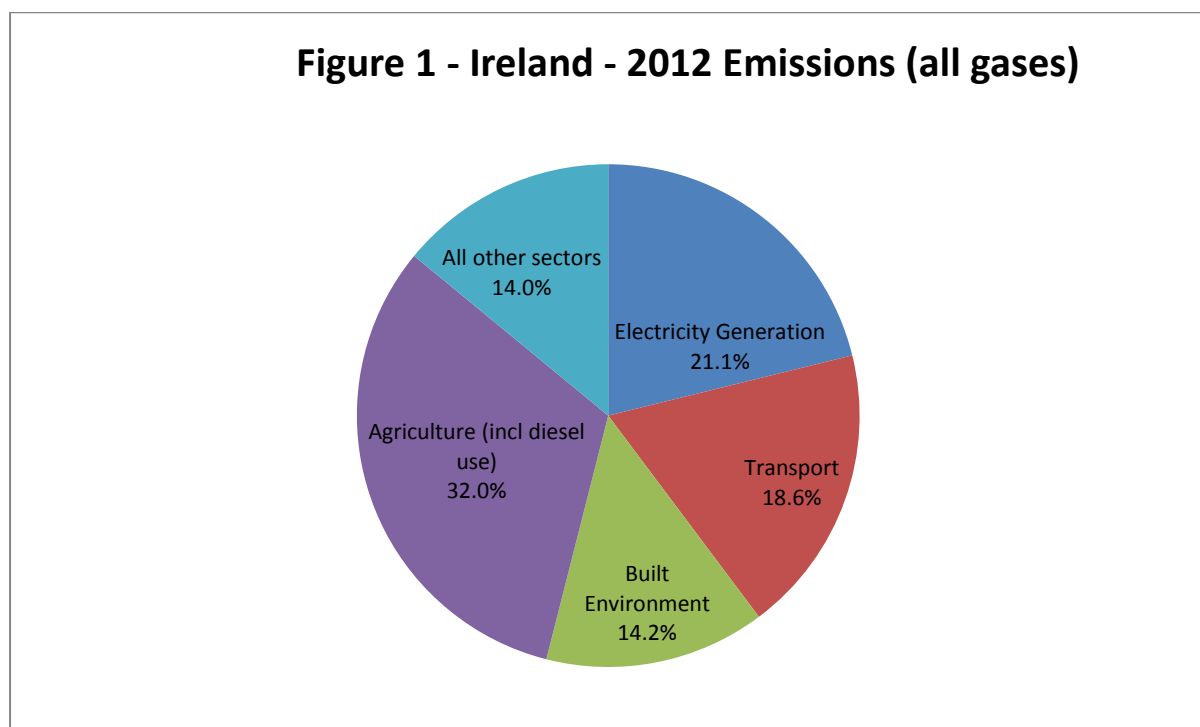
<b>1</b>	<b>Towards a National Mitigation Plan</b>	<b>Page 2</b>
<b>2</b>	<b>Purpose of this Document</b>	<b>Page 4</b>
<b>3</b>	<b>Background</b>	<b>Page 6</b>
<b>4</b>	<b>Provisions in the Climate Action and Low Carbon Development Bill 2015 in relation to the National Mitigation Plan</b>	<b>Page 9</b>
<b>5</b>	<b>Level of ambition to be achieved</b>	<b>Page 10</b>
<b>6</b>	<b>Progress towards compliance with Ireland's greenhouse gas emission reduction targets</b>	<b>Page 11</b>
<b>7</b>	<b>Economic considerations</b>	<b>Page 12</b>
<b>8</b>	<b>National Expert Advisory Council on Climate Change</b>	<b>Page 12</b>
<b>9</b>	<b>Progress to date</b>	<b>Page 14</b>
<b>10</b>	<b>Initial outline of National Mitigation Plan</b>	<b>Page 21</b>
<b>11</b>	<b>Other Useful Sources of information</b>	<b>Page 23</b>

## 1. Towards a National Mitigation Plan

The Climate Action and Low Carbon Development Bill 2015, published in January 2015, sets out proposed statutory provisions requiring the Minister for the Environment, Community and Local Government to make, and submit to Government for approval, a national low carbon transition and mitigation plan, to be referred to as the National Mitigation Plan (NMP).

The NMP will set out Ireland's first statutory low carbon strategy for the period to 2050. A primary objective of the NMP will be to bring a clear and strong focus to both the challenges and the opportunities of transitioning to a low carbon future, and the importance of a positively focussed and cost-effective national transition agenda. The NMP will also track the implementation of measures already underway and identify additional measures in the longer term to reduce greenhouse gas emissions (GHG) and progress the overall national low carbon transition agenda to 2050.

As can be seen in Figure 1 below, almost 86% of Ireland's emissions for all gases in 2012 were accounted for by four key sectors – electricity generation, built environment, transport and agriculture. The first NMP will therefore focus on GHG mitigation in these four sectors.



Source: European Environment Agency

A brief description of the envisaged focus of each sector is set out below in terms of enabling our National transition to a low carbon economy by 2050.

### **Electricity Generation**

The electricity generation sector will focus on addressing emissions associated with the production of electricity. In addition to specific measures to reduce emissions in the sector, envisaged areas of focus include ensuring that new technologies can be ready for incorporation into Ireland's electricity system and that the cost of existing technologies can be lowered. The supporting legal, regulatory and environmental regimes necessary to deliver these technologies will also be considered as will ensuring that the electricity grid infrastructure can keep pace with new renewable energy developments.

### **Built Environment**

The built environment sector will focus on the role of energy efficiency and use of renewable energies, in both residential and non-residential buildings with the aim of reducing emissions and making homes and businesses more comfortable, healthier and cost effective and efficient to run.

### **Transport**

The transport sector will focus on the development of a cost effective policy platform for reducing emissions and increasing energy efficiency across all modes. It is envisaged that matters to be considered will include the role of technology, sustainable land use patterns, modal shift, travel demand, alternative fuel options and the impact of proposed measures on other national policy objectives, such as supporting economic growth.

### **Agriculture**

The agriculture sector will focus on pathways to carbon neutrality and aim to balance the need to reduce emissions with the economic and social objective of promoting the sustainable development of a rural economy. Envisaged area of focus include improving the environmental impact of agriculture through measures in the Rural Development Programme 2014-2020, improving the uptake of mitigation practices by farmers,

increasing the level of forest cover and continuing to undertake further research.

Separate public participatory initiatives have already been initiated by each of the four key sectors concerned. The Departments with responsibility for the four key sectors may also embark on further public engagement in due course. In addition to these proposed initiatives, and in the interests of an inclusive, informed and transparent process, the views of the public are now being sought in the preparation of the NMP.

## **2. Purpose of this document**

The purpose of this document is to inform the public of the context of the NMP, the process by which the NMP is being prepared, the proposed outline structure of the NMP, and to invite early engagement, through written submissions, on Ireland's national transition to a low carbon future. Feedback from this stakeholder engagement will provide valuable input in developing Ireland's first NMP.

In anticipation of enactment of the planned legislation in 2015, work is underway in developing the NMP by the Department of the Environment, Community and Local Government in conjunction with Departments with responsibility for the four key sectors. The four sectors are currently preparing their sectoral mitigation analysis and possible measures, which will be incorporated into the NMP.

It is envisaged that a draft NMP (together with an overall assessment for the purposes of Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA), where deemed necessary) will be published for a substantial period of public consultation in due course.

It is important to note that this document is not a draft NMP and does not discuss, in detail, possibilities for sectoral mitigation measures. More information from a sectoral perspective can be found in the documents relating to the sectoral public participatory initiatives referred to above and contained in the relevant links in Section 11 – Other Useful Sources of Information.

**Responding to this Document**

Written submissions from any interested party to any aspect of this document, or any element of the NMP development process, may be forwarded to: [NationalMitigationPlan@environ.ie](mailto:NationalMitigationPlan@environ.ie)

by Friday 31st July 2015

Please note that it is intended to publish all submissions received on the Department's website. Confidential information should therefore be clearly indicated and, if possible, placed in a separate annex to the main submission. Reasons to have the information treated as confidential must be clearly stated - i.e. simply marking information as confidential will not, of itself, be sufficient.

### **3. Background**

#### **3.1 International context**

Ireland is a Party to both the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which together provide the international legal framework for addressing climate change at a global level. The ultimate objective of the Convention, as set out in Article 2, is the stabilisation of global greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. It goes on to state that such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. Subsequent decisions by the Parties to the UNFCCC refined further this objective by agreeing to restrict average global temperature increase to below less than 2°C compared to pre-industrial levels. According to the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC), to achieve this 2°C objective, global greenhouse gas emissions must be reduced by 40-70% by 2050 compared to 2010 and be zero or below in 2100. Key to achieving this level of emissions reduction will be the preparation and implementation, of low carbon development strategies or plans in line with the Decisions taken by the Parties to the UNFCCC, at the Cancun climate conference in 2010.

2015 will be a pivotal year in terms of the international response to climate change. Parties to the UN Framework Convention on Climate Change are working to conclude a new global agreement in Paris in December. Ireland, through the EU, is playing its part in these negotiations. The October 2014 European Council Conclusions agreed the headline targets for the EU for the period 2021 to 2030 and these form the basis of the EU's intended nationally-determined contribution (INDC) to the new global agreement, which was submitted to the UN Secretariat on 6 March 2015.

#### **3.2 EU context**

In February 2011, the European Council reconfirmed the EU objective of reducing greenhouse gas emissions by 80-95% by 2050 compared to 1990 in developed countries as a whole, in line with the findings of the IPCC Fourth Assessment Report (AR4). In the context of providing a long-term framework to achieve this objective, the European Commission published a

Communication on “A roadmap for moving to a competitive low carbon economy in 2050”, setting out several possible scenarios to meet an 80% reduction in emissions by 2050 compared to 1990. Following on from the Decisions taken at the Cancun climate conference (2010), the EU adopted EU Regulation No. 525/2013 in May 2013, Article 4 of which, requires Member States to prepare low carbon development strategies to contribute, inter alia, to meeting the greenhouse gas emission reduction commitments of Member States under Decision No. 406/2009/EC and achieving long-term emission reductions and enhancements of removals by sinks, in all sectors in line with the Union’s objective. These commitments are to be seen in the context of necessary reductions according to the IPCC AR4 by developed countries as a group, to reduce emissions by 80-95% by 2050 compared to 1990 levels in a cost-effective manner.

While maintaining a focus on the long-term objective to 2050, the more immediate focus is on the period 2015-2020 and planning ahead for the period 2021-2030. In this context, the EU provided the legislative foundation for the 2013-2020 EU climate and energy agenda with the adoption of the EU 2020 Climate and Energy Package by the European Council in December 2008. The high level objectives of the package are to –

- Reduce greenhouse gas emissions by at least 20% compared to 1990 levels – Under the Effort Sharing Decision No. 406/2009/EC (ESD), each Member State has agreed to a binding emission trajectory, for emissions outside the Emissions Trading Scheme (ETS)<sup>1</sup>, for the years 2013-2020;
- Reduce primary energy consumption by 20% compared with projected levels; this is a non-binding target; and
- Achieve a 20% level of EU energy consumption from renewable sources. Under the Directive on Renewable Energy (Directive 2009/28/EC), Ireland must achieve a binding renewables target of 16% of gross final consumption of energy by 2020.

In relation to 2030 climate and energy targets, in October 2014, the European Council endorsed a binding EU target of an at least 40% domestic reduction in greenhouse gas emissions by 2030 compared to 1990 levels and specified that the target will be delivered collectively by the EU in

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<sup>1</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 established a scheme for greenhouse gas emission allowance trading within the Community



the most cost-efficient manner possible, with the reductions in the Emissions Trading Scheme (ETS) and non-ETS sectors amounting to 43% and 30% by 2030 compared to 2005, respectively. While the specific details of the contribution to be made by each Member State remain to be defined, the Council agreed that all Member States will participate in this effort, balancing considerations of fairness and solidarity.

DG Climate Action (European Commission) has initiated two public consultations in relation to the elaboration of elements of the 2030 package, both of which will run from 26 March to 18 June 2015. Please see relevant links below:

- [“Consultation on the preparation of a legislative proposal on the effort of Member States to reduce their greenhouse gas emissions to meet the European Union’s greenhouse gas emission reduction commitment in a 2030 perspective”](#),
- [“Addressing greenhouse gas emissions from agriculture and land use, land use change and forestry \(LULUCF\) in the context of the 2030 EU climate and energy framework”](#)

Further information on both of these consultations is available at:

[http://ec.europa.eu/clima/consultations/articles/0025\\_en.htm](http://ec.europa.eu/clima/consultations/articles/0025_en.htm)

### **3.3 National context**

To ensure that Ireland can effectively and equitably contribute to the EU’s overall objective of reducing greenhouse gas emissions by 80-95% compared with 1990 as part of joint global mitigation efforts, and for the purposes of compliance with EU law, it is necessary to develop a low carbon development strategy for the period to 2050.

Following a comprehensive policy and legislation development programme, a National Policy Position on climate action and low carbon development, was published on 23 April 2014 and the Climate Action and Low Carbon Development Bill 2015 was published on 19 January 2015. In progressing the national low carbon transition agenda, the National Policy Position and the Bill are parallel and complementary pillars. Both documents are available on the Department’s website on the following links:

## **Climate Action and Low Carbon Development National Policy Position Ireland**

<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/PublicationsDocuments/FileDownload,37827,en.pdf>)

## **Climate Action and Low Carbon Development Bill 2015**

<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/RHLegislation/FileDownload,40047,en.pdf>)

The National Policy Position establishes the fundamental national objective of achieving transition to a competitive, low carbon, climate-resilient and environmentally sustainable economy by 2050 and sets out the context for the objective, clarifies the level of greenhouse gas mitigation ambition envisaged, and the proposed process to pursue and achieve the overall objective.

The evolution of climate policy in Ireland will be an iterative process based on the adoption by Government of a series of national plans over the period to 2050. Greenhouse gas mitigation and adaptation to the impacts of climate change are to be addressed in parallel national plans – respectively through National Mitigation Plans and National Climate Change Adaptation Frameworks. The Climate Action and Low Carbon Development Bill 2015 sets out the proposed statutory obligations in relation to the development of these plans.

## **4. Provisions in the Climate Action and Low Carbon Development Bill 2015 in relation to the National Mitigation Plan**

The Climate Action and Low Carbon Development Bill 2015 sets out a national transition objective *to transition to a low carbon, climate resilient and environmentally sustainable economy by the end of the year 2050*. The Bill also states that the Minister for the Environment, Community and Local Government shall make and submit plans to Government for approval to enable the State to pursue and achieve this transition. Ireland's low carbon development

strategy, addressing greenhouse gas mitigation, will be called the National Mitigation Plan (NMP).

As set out in the Bill, it is envisaged that the NMP will:

- Specify the manner in which it is proposed to achieve the national transition objective set out in the Bill;
- Specify the policy measures, that in the opinion of the Government, would be required in order to manage greenhouse gas emissions and the removal of greenhouse gas at a level that is appropriate for furthering the achievement of the national transition objective;
- Take into account any relevant climate-related, existing obligation of the State under EU law or any climate-related international agreement; and
- Specify the sectoral mitigation measures to be adopted by the relevant Ministers to reduce greenhouse gas emissions and to enable the achievement of the national transition objective.

The Bill sets out that the first NMP must be submitted to Government not later than 24 months after enactment. Subsequent NMPs must be submitted to Government not less than once in every 5 year period thereafter.

It is currently envisaged that the legislation will be enacted during the course of 2015.

## **5. Level of ambition to be achieved**

In line with the National Policy Position, the development of the NMP is being guided by a long-term vision of low carbon transition based on:-

- an aggregate reduction in carbon dioxide (CO<sub>2</sub>) emissions of at least 80% (compared to 1990 levels) by 2050 across the electricity generation, built environment and transport sectors; and
- in parallel, an approach to carbon neutrality in the agriculture and land-use sector, including forestry, which does not compromise capacity for sustainable food production.

In aiming to achieve this long-term overarching vision, the NMP will be developed having regard to Ireland's obligations under the ESD and any likely future EU and international obligations that may arise, including from the 2030 climate and energy package.

## **6. Progress toward compliance with Ireland's greenhouse gas emission reduction targets**

Ireland is on course to comply with its greenhouse gas emission reduction target for the purposes of the Kyoto Protocol in the commitment period 2008 to 2012. The Doha Amendment to the Kyoto Protocol, which establishes a second commitment period of the Kyoto Protocol from 2013 to 2020, was agreed in 2012 but has not yet entered into force. Ireland has completed the necessary domestic acceptance procedures in relation to the Doha Amendment and will be in a position to formally accept it in the third quarter of 2015.

For each year between 2013 and 2020, Ireland has a greenhouse gas emission reduction target under the ESD. Under the ESD, EU-wide emissions in the year 2013 should be no more than the average of those same emissions in the years 2008 to 2010. Emissions in those three years were on average 4.5% below emissions in 2005. In the year 2020, the target set for Ireland is that emissions should be 20 per cent below their value in 2005. This is jointly the most demanding 2020 reduction target allocated under the ESD and one shared only by Denmark and Luxembourg. The target for each of the years 2014 through 2019 is on a straight-line trajectory between the targets for 2013 and 2020.

Taking account of methodological changes underpinning the GHG emissions inventories and projections (in line with evolutions in the accounting rules under the Kyoto Protocol second commitment period), the EPA (Environmental Protection Agency) recently published (May 2015) new annual emission limits and projected emissions for 2020 compared to our target. These calculations and projections indicate that Ireland's emissions in 2020 could be in the range of 9-14% below 2005 levels by 2020. However, even in the worst case scenario (i.e., a 9% reduction), Ireland could be very close to meeting its cumulative compliance obligations for the period 2013-2020 (ESD 2009), which on average required a 12% reduction relative to 2005, given over-compliance in the early years.

## **7. Economic considerations**

In addition to the main environmental considerations, there will, and must be, a strong economic dimension to the work that Ireland is carrying out to develop the NMP. Economic considerations will play a crucial role in Ireland's transition to a low carbon, environmentally sustainable economy, as Ireland's finances continue to stabilise and recover.

Ireland must therefore look for opportunities in the low carbon transition process. Maintaining competitiveness will be a key consideration in developing the NMP, with policies set out in the NMP ideally being a spur to sustainable economic growth. This should instil confidence in industry to invest in new technologies to bring about the necessary scale of change required, with the general public also playing their part in this change. Government is aware of the need for early, cost-effective, cost-efficient action and the need to take advantage of environmentally sustainable economic opportunities both in Ireland and further afield. We are therefore very interested in views on where the public and stakeholders see investment opportunities, and challenges, in the low carbon transition process.

## **8. National Expert Advisory Council on Climate Change**

A National Expert Advisory Council on Climate Change (EAC) will be established as per the provisions set out in the Climate Action and Low Carbon Development Bill. A key function of the EAC will be to provide independent advice, and make recommendations, to Government and Ministers in relation to the low carbon transition process and adaptation agenda.

The EAC will comprise a chairperson and between 8 and 10 ordinary members, of whom 4 will be ex officio, ordinary members comprising the Heads of the Environmental Protection Agency (EPA), Economic and Social Research Institute (ESRI), the Agriculture and Food Development Authority (Teagasc) and the Sustainable Energy Authority Ireland (SEAI). The members of the EAC will be appointed by the Government on the nomination of the Minister for the Environment, Community and Local Government and will serve for an initial period of up to five years.

The Bill sets out a clear role for the EAC in the development of the NMP. The envisaged functions of the EAC in this regard, as set out in the Bill, shall be to advise and make recommendations to:

- The Minister for the Environment, Community and Local Government in relation to:
  - the preparation of a National Mitigation Plan; and
  - compliance with any existing obligation of the State under law of the European Union and any international agreement referred to in Section 2 of the Act which relates to the effect of the Act;
- A Minister of the Government, with functions under the Act, in relation to:
  - the submission, to the Minister for the Environment, Community and Local Government, of sectoral mitigation measures to be included in a national mitigation plan;
- Government, in relation to:
  - the approval of a national mitigation plan; and
- Government, the Minister and any other Minister of the Government in respect of any policy proposed for submission for Government approval relating to:
  - the reduction of greenhouse gas emissions

The EAC will also be required to conduct an annual review of progress made during the preceding year in reducing GHG emissions and furthering the low carbon transition process and will prepare and publish an annual report on its findings and recommendations resulting from that review. The EAC may also, either on its own initiative or at the request of the Minister for the Environment, Community and Local Government, undertake periodic reviews of progress made, of the most recent approved National Mitigation Plan, approved national adaptation framework and approved sectoral adaptation plans, and of the implementation of such plans and frameworks.

## **9. Progress to date**

In addition to the publication of the National Policy Position and the Climate Action and Low Carbon Development Bill 2015, the following steps have been taken to date in the development process of the NMP:

### **9.1 Consultations already undertaken**

#### **Consultation on the development of Climate Policy and legislation 2012**

An open consultation was undertaken during 2012 for the purposes of developing climate policy and legislation. The consultation drew an encouraging response, with over 600 submissions received and was a key input into the legislative and policy development process that followed and culminated in the publication of the National Policy Position and the Climate Action and Low Carbon Development Bill 2015. Relevant links are set out in Section 11 – Other Useful Sources of Information.

#### **Stakeholder participatory initiatives in the key sectors**

Departments with responsibility for the four key sectors have already undertaken stakeholder participatory initiatives to input into the decision making process on the policies to be included and prioritised in the respective sectoral mitigation measures. It is envisaged that these Departments will also be taking further initiatives in order to inform and engage the public in respect of further developments of sectoral mitigation measures in their sectors. The links to the initiatives already undertaken are set out in Section 11 – Other Useful Sources of Information.

### **9.2 National Economic and Social Council (NESC) Secretariat Analysis**

During 2012, the NESC Secretariat was asked by Government to –

- Develop of a set of potential policies and measures to close the distance to Ireland's greenhouse gas emission reduction target under Decision 406/2009/EC in the compliance period 2013–2020. The outline of the set of potential policies and measures should include identification and analysis of costs and benefits of major policies, and measures and reference to relevant attitudinal and behavioural factors. This shall draw

on work already completed by Government departments and agencies and other bodies, and address the costs of non-compliance; and

- Develop a basis for a long-term socio-economic vision to underpin effective national transition to a low carbon future by 2050.

The NESC Secretariat delivered an interim and final report in 2012, addressing the above brief. Copies of the reports are available at the following links:

**Towards a New National Climate Policy: Interim Report of the NESC Secretariat (June 2012)**

<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/PublicationsDocuments/FileDownload,31202,en.pdf>

**Ireland and the Climate Change Challenge: Connecting ‘How Much’ with ‘How To’**  
Final Report of the NESC Secretariat to the Department of Environment, Community and Local Government (December 2012)

<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/PublicationsDocuments/FileDownload,32467,en.pdf>

**(A) Key elements of the NESC Secretariat Interim Report**

In accordance with the brief, the interim report identified potential new policy options, in the key areas of built environment, transport and agriculture, which could close the distance to Ireland’s greenhouse gas (GHG) emissions reductions targets under the ESD in the compliance period 2013-2020.

The report also discussed and recommended a reframed, wider approach to tackling the climate challenge to ensure that it becomes a whole-of-government and societal agenda.

The report discussed the following elements and identifies them as being key to a pragmatic climate change strategy:



- Energy Efficiency as a key route to carbon efficiency and a spur to economic recovery;
- Transport as an area of policy entrepreneurship and experimentation;
- Agriculture: Carbon efficiency as a key element in Ireland's food industry future;
- Renewable energy as a step towards a low carbon economy and improved energy security;
- Carbon tax and long-term adaptation of the tax system;
- Buying carbon credits (in supplement to domestic action, and as a route to reform); and
- Building a more effective policy process from the elements that are already available.

### **(B) Key elements of the NESC Secretariat Final Report**

The final report set out a vision for Ireland to become a carbon neutral society by 2050, based on an approach to economic development that is socially and environmentally sustainable.

It set out the following **Five Guiding Principles for Climate Action** which should underpin Ireland's strategy to become a carbon neutral society:

- Economic prosperity, recovery and social development;
- Incremental and permanent decarbonisation;
- Responsibility, integrity and leadership;
- Reform of public institutions and governance; and
- Societal engagement.

It also identified the following **Five Strategic Building Blocks** of transition to a carbon neutral Ireland:

- An energy system built on wind and other renewables, using a smart grid and integrated into a clean EU energy system;
- An energy-efficient society that uses renewable forms of energy for heating;
- A sustainable transport system which serves economic, societal and environmental needs;
- A world-class agri-food sector working within a carbon-neutral system of agriculture, forestry and land use; and
- An approach to resource management that provides a competitive and comparative advantage in international trade and factor flows.

It advises that “our strengths in these areas will help secure the development of the Irish economy, but also position Ireland in the vanguard of efforts to address climate change and work in a resource-constrained world”.

The analysis and recommendations contained in both reports are key considerations in the on-going development of the NMP.

### **9.3 Groups set up to progress Ireland’s low carbon transition**

Two key groups, comprising representatives from key Departments and agencies, have been set up to progress the NMP and the low carbon transition process generally. These are the National Mitigation Plan Steering Group and the High Level Technical Group.

#### **National Mitigation Plan Steering Group**

Development of the NMP is currently being coordinated by a National Steering Group chaired by the Department of the Environment, Community and Local Government and comprised of representatives of relevant Departments<sup>2</sup> concerned. The primary role of the Steering Group is to drive and co-ordinate the development of the NMP by:

- Setting appropriate milestones for tasks associated with the development of the NMP to ensure that the overall statutory deadline will be achieved as a minimum;
- ensuring that there is a consistent approach across sectors on the structure and content of sectoral material to ensure that there will be a coherent NMP;
- providing a forum to exchange views/experiences and address any issues arising in the preparation of the sectoral mitigation measures and the process generally;
- co-ordinating and managing the approach to the SEA/AA processes;
- facilitating discussion on cross-cutting issues; and
- arranging appropriate briefing sessions on matters relevant to the development of the NMP.

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<sup>2</sup> The following key Departments are represented on the National Mitigation Plan Steering Group: D/Agriculture, Food and the Marine, Department of Communications, Energy and Natural Resources, Department of the Environment, Community and Local Government, Department of Public Expenditure and Reform, Department of the Taoiseach and the Department of Transport, Tourism and Sport. Other Departments also attend as necessary.

Separate steering groups have also been set up by the relevant Departments at a sectoral level to develop the specific sectoral mitigation measures and this work is on-going.

### **High Level Technical Group**

A high level technical group, reporting to the Senior Officials' Group to the Cabinet Committee on Economic Infrastructure and Climate Change, is actively engaged in identifying cost-efficient and achievable measures that are reasonable for Ireland to take in terms of bridging the gap to achieving 2020 targets under the ESD, subject to funding being sourced. The Group is also tasked with the identification of a cost-efficient and fair contribution for Ireland to make to overall EU 2030 ambition, with particular reference to the identification of a trajectory from now to 2030. The group is comprised of experts from a cross-section of relevant Government Departments and State Agencies<sup>3</sup> as well as representation from academic institutions. It is intended that the work from this group will also inform Sectoral Action Plans in the NMP.

### **9.4 UCC/ESRI Guidance**

During 2013, the Department of the Environment, Community and Local Government commissioned the Economic and Social Research Institute (ESRI) and the Environmental Research Unit of University College Cork (UCC) to provide technical advice and guidance on the development of a low carbon roadmap for Ireland with the aim of achieving transition to a low carbon, climate resilient and environmentally sustainable economy in the period up to and including the year 2050. The project focused on energy supply and energy end-use in Ireland, i.e. Ireland's energy system. Energy use in Ireland, (transport, power generation, and energy consumption in industry and the built environment), currently accounts for approximately two-thirds of Ireland's greenhouse gas emissions, with the bulk of the remainder (approximately 30%) accounted for by agriculture.

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<sup>3</sup> The Departments/Agencies represented on the High Level Technical Group include: D/Agriculture, Food and the Marine, Department of Communications, Energy and Natural Resources, Department Environment, Community and Local Government, Department of Finance, Department of Foreign Affairs, Department of Jobs, Enterprise and Innovation, Department of Public Expenditure and Reform, Department of the Taoiseach and the Department of Transport, Tourism and Sport., EPA, ESRI, NTMA, and Teagasc.

The UCC/ESRI work focussed on delivering least cost pathways to two possible interpretations of the long-term transition objective. These were 80% and 95% reductions of the aggregated carbon dioxide emissions for three of the key sectors specified in the National Policy Position, i.e. electricity generation, transport and built environment sectors. The analysis also included the creation of a long-term “business as usual” pathway (assuming no further policy actions) in order to enable comparisons between options and to help quantify the scale of the transition required. All scenarios focussed on the period to 2050, building on the EPA’s ‘with measures’<sup>4</sup> projections that cover the period to 2020.

It is important to note that the analysis (December 2013), while presenting least cost pathways under each scenario, did not address which specific measures would deliver the transition nor how measures would be funded. It is also very important to note that the purpose of this analysis is to inform further policy development at a particular point in time and does not constitute Government policy in any way at this point. The modelling approach has certain strengths and weaknesses and these are detailed in the report.

The report illustrates how Ireland’s energy system would need to evolve over the period to 2050 in order to be consistent with moving to a minus 80% or minus 95% reduction by 2050. Types of outputs available from the analysis relate to fuels which will be used and the types of technologies that are compatible with these fuels. The ESRI were asked to develop the long-term economic scenarios which help to model how the demand for energy related services will develop over time. The main basis for these scenarios in the medium term was the Recovery Scenario of the Medium Term Review as published in 2013. This scenario represented the strongest energy demand forecast for the economy at that time. Full details of the economic assumptions are available in Appendix A of the report.

The Report highlights some of the most significant sectoral changes arising from the 80% decarbonisation pathway including the following:

- by 2050, electricity supplies a higher proportion of overall energy and power generation is significantly dependent on renewable energy resources;

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<sup>4</sup> A “with measures” projection attempts to forecast what future emissions will be in the event that no further measures are implemented to reduce emissions beyond those already in place and funded as at a particular cut-off date. In this analysis, the With Measures scenario referred to was based on those measures in place at the end of 2011.

- natural gas continues to play a role in power generation but this is dependent on carbon capture and storage technologies being available;
- energy consumption in buildings is significantly lower than today (arising from energy efficiency improvements) and oil and solid fuels are largely removed from the energy mix meeting this demand; and
- energy demand in transport is somewhat lower than today, despite growing levels of transport activity and renewable fuels and electric vehicles will satisfy much of that demand.

These sectoral changes represent only a snapshot of the various changes that would be implied from the analysis carried out. A much more detailed elaboration can be found at:

<http://www.environ.ie/en/Publications/Environment/ClimateChange/FileDownload,41727,en.pdf>

## **9.5 Strategic Environmental Assessment/Appropriate Assessment**

As part of the development process of the NMP, and following discussions with the relevant Departments, a Strategic Environmental Assessment (SEA) is to be carried out on the NMP. A copy of the *Screening document on the requirement to carry out a Strategic Environmental Assessment* is available at

<http://www.environ.ie/en/Publications/Environment/ClimateChange/FileDownload,41728,en.pdf>

which sets out the basis for determining the need to undertake an SEA on the National Mitigation Plan.

The objectives of the SEA process are to provide for a high level of protection of the environment and to promote sustainable development by contributing to the integration of environmental considerations into the preparation and adoption of specified Plans and Programmes. The SEA process for the NMP is therefore intended to ensure that environmental concerns are adequately integrated into the decision-making and implementation process at both sectoral and national level. It will also focus on the cumulative effects of proposed actions in the four key sectors and the potential local and transboundary environmental effects that may arise following implementation of the NMP.

A screening process will also be necessary to determine if Appropriate Assessment (AA), under the EU Habitats Directive, is necessary. The key role of the AA (if deemed necessary following a screening exercise) is to provide an impact assessment of the implications the National Mitigation Plan may have on conservation objectives of Natura 2000 sites and the development, as necessary, of appropriate mitigation measures.

Consultants are being engaged to undertake both the SEA and AA processes. It is expected that the SEA/AA work will begin in June 2015, and will of course involve a full consultation process.

## **10. Initial outline of NMP**

This section sets out an initial outline of information and analysis which may be included in the first statutory NMP. It is not an exhaustive or definitive list but simply outlines how the NMP might be structured.

The NMP will include:

- contextual material, at an international, EU and national level, that sets the scene for the development and implementation of national climate policy in Ireland. This may include material on:
  - the long-term climate challenge for Ireland
  - assessment of the current situation, including emissions profile
  - progress to date
  - economic considerations
  - the foundation for an ambitious national climate policy to 2050;
- four distinct sections addressing the four key sectors in the low carbon transition process ( electricity generation, built environment, transport and agriculture) to include:
  - contextual sectoral material to include emissions profiles
  - planned high level objectives/vision for each sector to 2050

- Sectoral Action Plans, presenting mitigation actions to meet the 2020 target and the actions required to mobilise further mitigation actions necessary to achieve the 2030 target and identification of high level objectives beyond this date
- material on costs and financing of mitigation actions
- material on proposed research and development actions;
- material on the cumulative effects of action at a sectoral level and what this means at a national level in terms of meeting our overall objectives and targets;
- material on the role of behavioural change in the low carbon transition process;
- environmental, technical and economic analysis, including methodologies, assumptions and sensitivity analysis; and
- details on the mechanisms in place to measure, report and verify progress, particularly to meet the requirements of Regulation (EU) No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions, for reporting in the Annual Transition Statement, provided for in the Bill and for reporting other climate change related information.

## **11. Other Useful Sources of Information**

**A discussion document on the potential for Greenhouse Gas (GHG) mitigation within the Agriculture and Forestry sector 2015**

<http://agriculture.gov.ie/media/migration/ruralenvironment/climatechange/ghgmitigation/AgriSectorMitigationPlanPublicConsult120215.pdf>

**Climate Policy Development Consultation 2012 - Total Survey Results and Summary**

<http://www.environ.ie/en/Publications/Environment/ClimateChange/FileDownload,30997,en.pdf>

**Climate Policy Development Consultation 2012 Key points**

<http://www.environ.ie/en/Publications/Environment/ClimateChange/FileDownload,30980,en.doc>

**DG Clima**

[http://ec.europa.eu/clima/index\\_en.htm](http://ec.europa.eu/clima/index_en.htm)

**Electricity Generation Low Carbon Roadmap - Public Consultation Document 2013**

<http://www.dcenr.gov.ie/Energy/Energy+Efficiency+and+Affordability+Division/Low+Carbon+Roadmap.htm>

**Environmental Protection Agency**

<http://www.epa.ie/climate>

**European Commission: A Roadmap for moving to a competitive low carbon economy in 2050 (March 2011)**

[http://eur-lex.europa.eu/resource.html?uri=cellar:5db26ecc-ba4e-4de2-ae08-dba649109d18.0002.03/DOC\\_2&format=PDF](http://eur-lex.europa.eu/resource.html?uri=cellar:5db26ecc-ba4e-4de2-ae08-dba649109d18.0002.03/DOC_2&format=PDF)



**Global Alliance on Climate Smart Agriculture**

<http://www.fao.org/climate-smart-agriculture/en/>

**Low Carbon Built Environment Consultation 2014**

<http://www.environ.ie/en/Environment/Atmosphere/ClimateChange/News/MainBody,37851,en.htm>

**Low Carbon Roadmap for the Transport Sector Consultation 2014**

<http://www.dttas.ie/features/english/low-carbon-roadmap-transport-sector-0>

**NESC Secretariat – Climate Challenge - Background Papers**

<http://www.nesc.ie/en/publications/publications/nesc-secretariat-papers/irelands-climate-change-challenge-background-papers>

**United Nations Framework Convention on Climate Change**

<https://unfccc.int/2860.php>