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Feabhra 2022

Joint Committee on Environment and Climate Action

Report on the proposed Carbon Budgets

February 2022

Membership of the Joint Committee on Environment and Climate Action



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Green Party

Cathaoirleach's Foreword



The purpose of this report is to consider the Carbon Budgets. A carbon budget represents the total amount of emissions that may be emitted in the State during a five-year period, measured in tonnes of carbon dioxide equivalent. Under the Climate Action and Low Carbon Development Acts 2015 to 2021 Dáil Éireann may refer a carbon budget programme to a joint committee for consideration, which shall consider the carbon budget and provide a report in writing containing its recommendations within two months from the date it is presented to Dáil Éireann. The Carbon Budgets were referred to this Committee on 7th December and we were required to report back to Dáil Éireann by 7th February. In order for the Committee to consider the Budgets we held a series of meetings at which we heard from many relevant stakeholders to inform our work. This is a very important piece of work being undertaken by the Committee as it is the first in a series of Carbon Budgets to be agreed in order to ensure that Ireland meets its ambitious target of being a carbon neutral economy by 2050 and it is one that the Committee is taking very seriously.

A handwritten signature in cursive script, reading "Brian Leddin".

Brian Leddin T.D.

Cathaoirleach

Joint Committee on Environment and Climate Action

February 2021

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Introduction

The new Programme for Government published in June 2020 committed to the ambitious target of 51% reduction in emissions by 2030 (approximately 7% per year). The [Climate Action and Low Carbon Development \(Amendment\) Bill 2021 \(the Act\)](#) was published in March 2021 and sets out the framework for Ireland's transition to net zero emissions by 2050, making the Government legally accountable for this target. The Bill was signed into law on the 23 July 2021.¹

On 25 October 2021, the Climate Change Advisory Council, in accordance with the Act, submitted its proposed carbon budgets to the Minister for Environment, Climate and Communications who laid the carbon budgets before Dáil Éireann on 6 December 2021. On the 7 December 2021, the carbon budgets were referred by Dáil Éireann to the Joint Committee on Environment and Climate Action for consideration with a report back date of 7 February 2022. The Oireachtas will then adopt the budgets as proposed or revise them on the basis of the recommendations within this report.

Stakeholder Engagements

The Committee held a series of engagements with stakeholders which provided evidence from a broad perspective. These engagements took place as follows:

| Date | Stakeholder |
|-----------------|---|
| 11 January 2022 | Members of the Committee, Climate Change Advisory Council |
| 12 January 2022 | Professor John Sweeney, Professor Barry McMullen Professor Kevin Anderson |

¹ <https://www.gov.ie/en/press-release/9336b-irelands-ambitious-climate-act-signed-into-law/>

Mr. Paul Price

13 January 2022

National Economic and Social Council (NESC)

Ian Talbot, Chambers Ireland

Macdara Doyle, The Irish Congress of Trade Unions

David Joyce, The Irish Congress of Trade Unions

Dr Seán Healy, CEO, Social Justice Ireland

Ms Michelle Murphy, Research & Policy Analyst, Social Justice Ireland

The Environmental Pillar

Irish Farmers Association

18 January 2022

Mr Conor Ó Raghallaigh, Head of Climate Action, Department of the Taoiseach

Mr Brian Carroll, Assistant Secretary, Department of the Environment, Climate and Communications

Caoimhin O Ciaruain, Principal Officer, Department of Transport

Aoife O'Grady, Principal Officer, Department of Transport

Andrea Lennon, Principal Officer, Department of Transport

In considering the proposed budgets, the Committee focused engagements with stakeholders on the following areas:

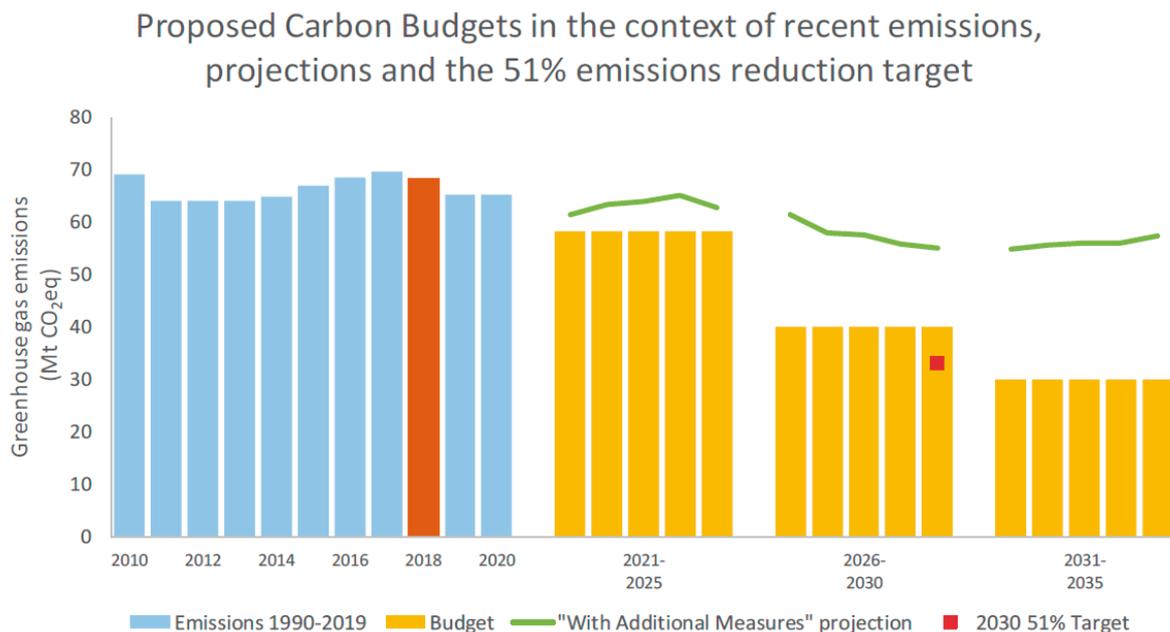
- ❖ the processes/approach taken by the Climate Change Advisory Council in forming the budgets in order to meet the obligations under the Act;
- ❖ the scientific basis for the budgets;
- ❖ how the budgets intersect with the Climate Action Plan;
- ❖ whether the carbon budgets meet the requirements under the Act, insofar as it:
 - is consistent with the national climate objective;
 - provides for a reduction in GHG emissions of 51% by 2030;
 - is consistent with Art 2 of the UNFCCC;
 - takes account of GHG inventory; relevant scientific advice; International best practice; need to maximise employment; and has regard to climate justice.
- ❖ the implementation and delivery of the carbon budgets and achievement of sectoral targets and ranges.

Summary of proposed Carbon Budgets

Under the Act, the Climate Change Advisory Council (CCAC) is mandated to propose carbon budgets to cover three sequential five-year periods, the third being a provisional budget. The proposed carbon budgets must provide for a reduction of 51% of greenhouse gas emissions by 2030 relative to 2018. The proposed carbon budgets “set Ireland on a pathway consistent with the achievement of climate neutrality by 2050 with opportunities to achieve improvements in climate resilience and environmental sustainability and protect and enhance biodiversity”. They are set out as follows:

- **2021-2025:** 295 Mt CO₂ eq. an average of -4.8% for the first budget period.
- **2026-2030:** 200 Mt CO₂ eq. an average of -8.3% for the second budget period.
- **2031-2035:** 151 Mt CO₂ eq. an average of -3.5% for the third provisional budget.

Figure 1: proposed Carbon Budgets ²



² [Technical Report on Carbon Budgets, Climate Change Advisory Council](#)

Figure 2: an indicative future emissions trajectory that delivers the proposed carbon budgets³

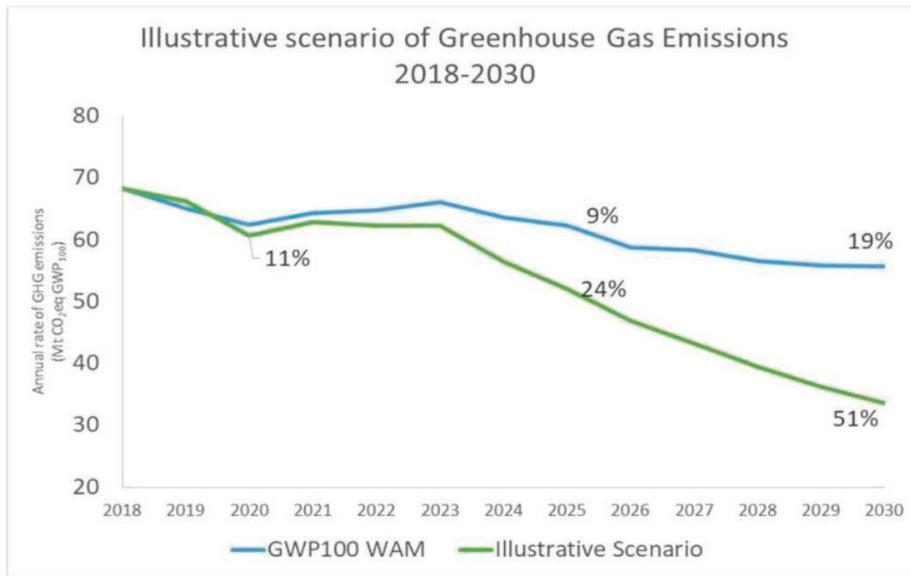


Figure 2 Total greenhouse gas emissions 2018 - 2030 in illustrative scenario that meets carbon budgets. Also shown are EPA 'with additional measures' projection for comparison

³ Opening Statement, Climate Change Advisory Council, Appendix #.

Committee consideration of the proposed Carbon Budgets

1. In approaching its consideration of the proposed carbon budgets, the Committee heard from the Climate Change Advisory Council and members of its expert Carbon Budget Committee (CBC), academics, representatives from various sectoral groups and representatives from several Government departments and the Local Government Management Agency.
2. While there were some differences in opinion amongst stakeholders regarding the proposed carbon budgets as to whether they should be more ambitious, it was made abundantly clear that the Committee should approve the budgets without delay in order to move the implementation of policy forward. The Committee agreed that in spite of some differing opinions as set out in the body of this report, stakeholders share the one main climate ambition including recognising the need for immediate and significant change to make the transition to a carbon neutral economy.

Process and approach to producing the proposed carbon budgets

3. Under its mandate set out in the Act, the CCAC established a Committee on Carbon Budgets, a group of experts who were tasked with providing recommendations for Carbon Budgets for the periods 2021-25, 2026-2030 and 2031-35. The Committee noted that there are several factors underpinning the proposed carbon budgets including Ireland's obligations under the Act to achieve a 51% reduction in greenhouse gas emissions by 2030, alignment with EU policy, the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, as well as economic and societal implications.
4. Chairperson Marie Donnelly, CCAC highlighted that it was important that the proposed carbon budgets meet the temperature objectives and goals required of Ireland within the Paris Agreement, this being a temperature below 1.5°. Professor Brian Ó Gallachóir highlighted that the Carbon Budgets Committee

(CBC) conducted both “top-down” and “bottom-up” exercises which explored the global carbon budget and Ireland’s contribution to the Paris Agreement and how to incorporate that into Ireland’s national carbon budgets and to explore the implications of different sectoral pathways on Ireland.

5. The CBC highlighted “modelling research capacity in energy and agricultural land use that was made available by UCC, Teagasc and UL” that the CBC analysed in order to inform the proposed carbon budgets which were then proposed by the Council. Such modelling, along with a process of sectoral engagement, allowed the CBC to consider a range of scenarios along with the speed and scale of change required and the potential costs associated with delivering the targets at an earlier or later date as well as the economic and social implications. The Committee acknowledged the significant challenge presented to the CBC in establishing the most appropriate mitigation pathway that is also consistent with the legislated level of ambition.
6. The CBC highlighted that a continued support and capacity for modelling and research is essential to ensure that future carbon budgets can be informed by data with fewer information gaps. Dr Hannah Daly stated that more data around society and industry would be welcome including information on the co-benefits resulting from climate mitigation measures such as employment development as well as loss. Continued research and modelling would also allow further examination of how ambitious the third carbon budget period can be, what emission reduction areas can be sustained or grown.
7. In addition, Dr Styles highlighted that while modelling can and has informed the proposed budgets, the process is ongoing, and it is likely that the models will be revised and updated over time as technology develops. Stating that the proposed budgets represent the “optimum balance between their various obligations under the Act”, the CBC highlighted that the budgets are designed to provide a feasible pathway to meeting the 2030 emissions reduction target with the least impact on society.

Achievability of the carbon budgets

8. The majority of stakeholders agreed that while the proposed carbon budgets represent the most feasible pathway to meeting the emissions reduction target of 51% by 2030, this task will be extremely challenging. Several stakeholders highlighted a significant gap between official and political declarations and the implementation of policy to reflect these declarations in practice. Given the time lag between policy implementation and emission reductions, substantial interventions are now needed immediately across all sectors of the economy with several stakeholders cautioning that 2022 represents the second year of the first carbon budget.
9. Noting the delays with the implementation of measures in the 2019 Climate Action Plan, the Committee acknowledged the need for urgent and sustained transformation across all sectors in order to meet the climate ambition as set out in legislation and in the proposed budgets. The Committee also noted that while the proposed carbon budgets provide pathways to decarbonisation, ascertaining how to balance the transformation on a sectoral basis remains a policy issue and that it will be important to examine how various sectors interact with each other as time goes on and measures are put in place. Members agreed that regular engagement with sectors to ensure progress is being made will be essential.
10. Some Members of the Committee highlighted that the implementation of climate measures had hitherto been lacking and questioned whether the carbon budgets are ambitious enough, particularly with regard to the targets for the first carbon budget. Several stakeholders also cautioned that the carbon budgets are “backloaded” which runs the risk of placing a significant burden on the second carbon budget for the period 2026-2030 where the percentage reductions are ramped up. However, Prof Ó Gallachóir stated that the proposed budgets represent the second most ambitious emissions reduction target in the world and one that is achievable.
11. Professor Sweeney also highlighted the time and action already lost from the first carbon budget with sectoral and national ceilings due to be incorporated

only at the end of 2022, the second year of the first budget. Members of the CBC highlighted that the longer lead-in time of the initial carbon budget is to allow for infrastructure and other development which will ensure an easier reductions path for the second carbon budget. The Committee agreed that while ambition can always be greater, the carbon budgets as proposed are a challenging but feasible pathway to achieving the reduction in emissions required.

12. Some Members expressed concern that the proposed budgets do not equate to Ireland's fair share with regard to the Paris Agreement and questioned the methodology and calculations used for the budgets presented. The Committee also noted some stakeholder concerns with the lack of adjustments made for international aviation and shipping which leads to some consistency issues with the Paris Agreement in light of Ireland's industry around aviation and shipping.
13. The Environmental Pillar highlighted that in terms of the global carbon budget, wealthier countries like Ireland should be doing more at an earlier stage than others. However, while it can be acknowledged that a 51% reduction by 2030 is not Ireland's fair share in terms of the Paris Agreement, it is likely to be the highest reduction possible and that action cannot be delayed. In light of this, Mr Oisín Coughlan stated that the Government should become an advocate at EU level for the strongest climate action measures, increase Ireland's contributions to climate finance to help poor countries adapt to the impacts of climate change and not exempt or give special treatment to any sector from playing a part in reducing Ireland's emissions.

Implementation of the carbon budgets

14. Stakeholders highlighted that while the approval of the carbon budgets and the development of the sectoral ceilings are steps forward in Ireland's climate action, it is essential to recognise that the delivery of the targets associated with these ambitions are legally binding upon the State. The Committee noted the view that successive Governments had failed to act on the climate crisis and that this has resulted in an even more challenging climate emergency.

15. Mr Ian Talbot, Chambers Ireland referred to decades of poorly planned communities without any integrated transport networks and unnecessary delays in the roll out of offshore renewable energy. Mr Talbot highlighted that the approval of the proposed carbon budgets will no longer allow such administrative delays to occur and will ensure that more immediate action is taken on a more cohesive level than before. Members acknowledged the challenge that brings for policy makers however justified the urgency may be and agreed with the general stakeholder view that leadership is urgently needed to engage with society and expedite the implementation of policy to meet the targets of the carbon budgets.
16. While stakeholders criticised the lack of integrated approach from Government Departments over recent years, Members noted the role of the climate action unit in the Department of the Taoiseach which was established to ensure a whole-of-government response to the climate crisis and for oversight of the implementation of climate policy. The Departments with responsibility for actions within the Climate Action Plan report progress to the unit every quarter. Mr Conor Ó Raghallaigh, Head of the Climate Action Unit stated that the current focus is to increase implementation and delivery of climate action. Members noted that climate action units have been set up in most Departments and that initiatives are being taken to ensure that each unit has the capacity to focus on the demands of the climate action plan.
17. Stakeholders made it abundantly clear that the implementation of policy and mitigation measures must be immediate if Ireland is to meet its legislative ambitions. It was highlighted that major systemic changes are necessary across society to meet the level of transformation that will provide the required reduction of emissions and that an integrated model of change across sectors would provide new systems for sustainable economic and sectoral growth in the future.
18. While opinions differed in a number of areas, such as whether the proposed carbon budgets go far enough, the Committee agreed that immediate action and implementation of policy is the most important outcome and noted that

the approval of the carbon budgets will allow the sectoral ceilings to be developed and approved and the policy implementation to commence.

19. Members noted the significant challenges ahead in delivering the carbon budgets and acknowledged that all sectors will be required to meet their individual targets in order for the main target of 51% reductions by 2030 to be achieved. Members agreed that clear, succinct policy and a ramping up of the implementation of that policy will be needed in most sectors. The CCAC highlighted that such an approach resulted in the successful reduction of emissions in the electricity sector between 2005 and 2020, where demand grew by around 18% but emissions associated with electricity generation decreased by 46%.
20. Stakeholders highlighted that in order to achieve the targets required under the Act, the Government must implement the incentives needed to make the changes required. NESC outlined that since certain activities and sectors will be heavily impacted compared to others, the development of strong just transition policy will ensure that no individual group is disproportionately affected by climate mitigation measures. While some sectors will be easier than others, no sector will be without its challenges.
21. Dr David Styles, University of Limerick, highlighted that meeting emissions targets for the Land Use, Land Use Change and Forestry (LULUCF) sector by 2030 will be a significant challenge due, in part, to emissions from agricultural production and peat extraction as well as low planting rates in forestry which is resulting in a decline in the carbon sink. Major barriers around obtaining licenses for forestry due to slow administration, as well as labour barriers for establishing and thinning forests were also highlighted.
22. Stakeholders highlighted EPA research data relating to the LULUCF sector reporting showed a loss of 3.8% area of scrub, hedgerows, natural and semi natural woodlands, our most ecologically valuable forestry, between 2012 and 2017 which is linked to the expansion of dairy farming to increase the grassland. A result of this is a current projected doubling of emissions in the

land use sector by 2030, highlighting the urgency and scale of integrated activity change needed across sectors. The Committee noted that it must be recognised that the obligation to reduce total emissions by 51% is a collective target that will only be met if all sectors hit the more demanding end of their reduction targets.

23. Dr Styles stated that activity change around land use such as forest planting and rewetting will begin to compete with agriculture over time and the future policy decisions around trade-offs across sectors will be a challenge. Dr Styles further highlighted that while activity change in forestry may not contribute as much to the current carbon budget due to the lead-time associated with planting, it is important to note that in the long-term and future carbon budgets, it will, and such contributions should be reviewed as time progresses.
24. Stakeholders agreed that there is a space for leadership in climate action at all levels of society. Members highlighted the need for all politicians to recognise what is required to achieve the ambitions of the Act and take a more proactive approach to communicating with wider society the measures that are and will be needed to achieve the transition to zero emissions and stay on the trajectory of the proposed carbon budgets.
25. Mr Brian Carroll, Department of the Environment, Climate and Communications highlighted that the carbon budgets will be followed by sectoral emissions ceilings which will place legal obligations on Ministers who are responsible for specific sectors. The Committee noted that the legally binding nature of this has significantly changed the approach to climate action from a Departmental viewpoint. In addition, Departments will be responsible for ensuring they remain within their sectoral ceilings while being accountable to the Oireachtas and Committees. Mr Carroll echoed the views of previous stakeholders with regard to the need for robust structures to enable national dialogue and active local engagement so that all sections of society can feed into policymaking.

26. Mr Paddy Mahon, CCMA highlighted the climate action measures being undertaken by local authorities and the Committee noted the requirement for local authorities to prepare their own climate action plans containing mitigation and adaptation measures at least once every five years. In addition, Mr Mahon highlighted that local government will play a significant role in engaging with local communities and businesses and co-ordinating a local response to climate change.
27. Department representatives stated that there will be a major role for Public Participation Networks (PPNs) through local authorities which will enhance action at a local level to develop more sustainable communities. The Committee noted that community development plans are currently being reviewed to ensure climate action responses are appropriately set out. Furthermore, recently launched peatlands community engagement schemes, operated by the National Parks and Wildlife Service, encourage locally led conservation efforts. The Committee agreed that such schemes will be fundamental to meeting the targets of the proposed carbon budgets.
28. The Committee also agreed that while the changes required will be politically and policy led, it is essential to further engage with sectors and civil society to drive the changes in behaviour that are needed on an individual level as well as on a sectoral and Government level. Mr Ian Talbot, Chambers Ireland highlighted the importance of ensuring the business community is informed of what changes they will be facing so that they can adapt as necessary and referred to the changes made to shipping routes in a very short time period following Brexit in early 2021.
29. Mr Macdara Doyle, Irish Congress of Trade Unions emphasised that engagement with sectors has, thus far, not been adequate and the Members noted that the approval of the carbon budgets should prompt increased engagement at all levels. The Committee noted a number of European examples where work is underway to assist sectors in the transformation and noted that in Scotland, a national just transition commission was set up in

2019 involving all relevant stakeholders that delivered a roadmap for the Scottish Administration in March 2021.

30. Mr David Joyce, ICTU, stated that while a just transition commission should be in place in Ireland by mid-2023, this should be expedited given the urgency of the challenge faced. The Committee acknowledged that without proper engagement on a continuous basis, it will not be possible to understand the economic and social consequences of the transition and minimise them.
31. Mr Talbot highlighted that it is hugely important for the State to provide sustainable alternatives to those currently in use in wider society, such as alternative energy sources. If environmentally sustainable alternatives are not provided efficiently, the carbon budgets will not be successful in providing the pathway for the change required. Members agreed that the transition also provides for opportunity for employment and innovation within businesses, particularly with the potential to draw down funds from the EU Green Deal.
32. Mr Rushe, IFA, highlighted that there are considerable opportunities for the agriculture sector to diversify and improve their incomes while delivering on climate targets. While some stakeholders highlighted the challenge for the agriculture sector, the Committee noted that there is scope for early action in the first carbon budget such as reducing the use of chemical nitrogen fertilisers. Ireland is the only country in the EU that does not tax nitrogen fertiliser use. The IFA stated that farmers are committed to making the changes required to farming practices, but Government support and engagement is necessary.
33. As the only sector that can sequester carbon dioxide, Mr Rushe stated that while the opportunity is there, improved engagement with the sector and all sectors is vital to empower and support smaller businesses to reap the co-benefits of the transition to a carbon neutral economy.
34. The CBC also emphasised opportunities arising in various sectors as a result of the carbon budgets whereby certain sectors will be required to upskill or even manufacture products (for example, heat pumps) in Ireland as the

economy transitions. The Committee agreed that such opportunities should be considered in the development of policies and implemented at pace where there is clear potential.

Recommendations of the Committee

1. The Committee recommends that the Carbon Budgets as proposed by the Climate Change Advisory Council be adopted by the Houses.
2. The Committee recommends that, notwithstanding the final decision of the Minister with regard to the carbon budgets as proposed, that there be an ongoing review of the backloading of the budgets.
3. The Committee recommends that while finalising or revising the carbon budgets, and subsequent sectoral allocations, the Government immediately prepare measures to ensure a *Just Transition* across all sectors of society ensuring that those who have benefited most from, and are most responsible for, emissions bear the greatest burden.
4. The Committee recommends that further work on incorporating equity, climate justice and fair share should be undertaken and inform the budget of 2030-2035 and should also inform any future review of the 2025-2030 budget.
5. The Committee recommends that as far as practicable, any additional reductions in the MtCO₂eq to 2030 which the Minister may propose as part of his final Carbon Budgets should be concentrated within the first budget period in order to address the backloading in the initial proposals.
6. The Committee recommends that an urgent report on the deficiency of existing sectoral policy tools relative to the policy range set by the CCAC be drawn up by the Delivery Unit covering each sector.
7. The Committee recommends that each Department set out a monitoring process for key indicators which would allow quarterly comparison of performance versus predicted on their carbon budget constraints.
8. The Committee recommends that a detailed schedule of the consultation plans at local and National level be set out for 2022 and become a regular element of planning and reporting.

9. The Committee recommends that a profile of what each sector will look like in 2030 be prepared to demonstrate the method of working of the sector underpinning sustainability at that point, showing the opportunities which will have opened up, and the new skills which will be required, and the adaptations which will have been undertaken.
10. The Committee recommends that where measures are put in place which are designed to discourage or reduce damaging activities of any sort, that those monies be ring fenced and initiatives delivered from the use of these funds be clearly branded as such.
11. The Committee recommends that the Circular Economy Strategy be integrated into the planning and reporting mechanisms of the Climate Budgets, so that the climate impact of sectors can be viewed in the context of the environmental impact throughout the entire supply chain of the sector.
12. The Committee recommends that the Climate Mandate for each public body be published at the earliest date, and each such body displays prominently in its public offices the key commitments which it is making.
13. The Committee recommends that a major effort is undertaken by the Government and all departments to communicate the reasons for climate action to the public and the importance of early action.
14. The Committee recommends that the Government outlines extensive plans for public participation and effective citizen and stakeholder consultation at the earliest opportunity.
15. The Committee recommends that reliable methodologies are urgently developed to assess the carbon impact of statutory plans, strategy and policy documents for use at all decision points and that the application of those methodologies are appropriately resourced.
16. The Committee recommends that all national and local Government policy, strategy and statutory documents are aligned with the legally binding target of

51% reduction in greenhouse gas emissions by 2030 and the legally binding national climate objective of achieving net zero emissions no later than 2050.

17. The Committee recommends that the Government should develop a suite of national and sectoral emergency and contingency options which could be adopted to correct any deviation from carbon budget paths if legally binding targets are not being achieved.
18. The Committee recommends requesting that the agriculture model be made publicly available in the same manner as the Energy TIMs model.
19. The Committee recommends that the Minister ensures sufficient funding and support is provided to CCAC and partners to enable continued development and integration of appropriate models to assist with future budgetary processes.
20. The Committee has previously noted the importance of avoiding ambiguous or unclear language in relation to climate obligations, we therefore note that the legal obligation to propose budgets which are “consistent” with key obligations implies a higher and clearer standard than the phrase “broadly consistent” as used by the CCAC. In developing the final budgets, the Minister should aim for ‘consistent’ as required under section 3(3) of the legislation.
21. The Committee agrees with the statement that “it is no longer enough to do our best, we must do what is necessary” and believes that the Carbon Budgets and Sectoral Ceilings should reflect that spirit of urgency and ambition.
22. The Committee recommends the review and revision of assessment tools and appropriate mechanisms to have greater regard for climate justice.
23. As it is likely that the first carbon budget may still fall short of ‘fair share’ principles, the Committee recommends that it be accompanied by specific additional measures in terms of climate funding, beyond existing commitments. It is however important in the development of future budgets,

that climate funding should not be regarded as an adequate substitute for appropriate effort sharing and ambition in emission reduction targets.

24. The Committee suggests measures be taken to plan for the appropriate assessment or inclusion of shipping and aviation emissions in future proposed Carbon Budgets.
25. Witnesses noted that early action on climate yields a greater return and significant up front public investment is needed now to ensure emission reductions in the future. The Committee recommends that appropriate advantage be taken of current favourable macroeconomic factors such as state access to low or zero interest financing and the suspension of fiscal constraints, in order to deliver necessary public investment in accelerated action and a fast and fair transition, particularly in national development planning.
26. The Committee recommends that a risk analysis and economic and environmental cost-benefit analysis be conducted in relation to the backloading between the first two budgets, particularly in relation to the achievement of the 51% target by 2030.
27. One of the primary justifications given for the backloading of budgets is the investment and lead in time needed to introduce or scale up new emission reduction measures, however the Committee would note that while waiting for future positive initiatives, plans should also be made for possible earlier emission reductions and it is vital that very significant immediate, or even temporary measures are also taken within the next 18 months.
28. Particularly in sectors such as Agriculture where there is some scientific and practical uncertainty around initiatives for reduction in the second budget, the precautionary principle should apply and earlier action may need to be taken on policies which aggravate emissions such as the derogation from the nitrates directive or herd expansion.

29. The Committee notes stakeholder evidence that “the most sustainable building is the one that already exists” and recommends early action to deliver emission reductions in the first budget period by activating vacant properties, retrofitting and minimising unnecessary demolition, while also planning for longer term emission reductions through strong environmental standards as part of the NDP and Housing For All.
30. The Committee recommends that given the challenges and urgency of achieving the necessary emission reductions as set out in the final carbon budgets, it is important that the ‘precautionary principle’⁴ be reflected and applied in relation to policies or activities which risk adding new or additional pressure to the carbon budget space.
31. Given the substantial backloading into the second carbon budget, the Committee notes there will be little if any space for carryover from the first carbon budget, particularly given the hard legal target of 51% emission reductions by 2030, which should preclude any carryover into the third budget period.
32. Sectoral ceilings which comply with the Carbon Budgets should be treated as a minimum and each Department or Sector should also be encouraged in greater ambition where possible, in order to ease pressure on future budgets.
33. The Committee believes that 2024 is too late for the publication of a “roadmap” for an exit from the 2.4 billion currently spent on fossil fuel subsidies. The Roadmap should be published in 2022 and steps taken in 2023. The wind down of these subsidies should reflect anti-poverty and social equity policies and funds saved should be redirected into climate action and just transition.
34. The calculation of Carbon Budgets should not reflect assumptions based on future scientific or technological innovation which is hypothetical, untested or unproven.

⁴ [Article 191 of the Treaty on the Functioning of the European Union](#)

35. Preparations should be made for a more robust reflection of Scope 3 emissions within the third and future Carbon Budgets. Developments in this area might perhaps also be considered if there is any future review of the second Carbon Budget.

36. The Committee notes that peatlands have a crucial early role to play in relation to the Carbon Budgets, when rewet or restored they can sequester carbon but when degraded they are a source of emission. The Committee recommends that immediate action on this within the first budget period is possible and necessary.

Appendix 1 – Terms of Reference

Functions of the Committee – derived from Standing Orders [DSO 95; SSO 71]

- (1) The Select Committee shall consider and, unless otherwise provided for in these Standing Orders or by order, to report to the Dáil on any matter relating to —
 - (a) legislation, policy, governance, expenditure and administration of—
 - (i) a Government Department, and
 - (ii) State bodies within the responsibility of such Department, and
 - (b) the performance of a non-State body in relation to an agreement for the provision of services that it has entered into with any such Government Department or State body.
- (2) The Select Committee appointed pursuant to this Standing Order shall also consider such other matters which—
 - (a) stand referred to the Committee by virtue of these Standing Orders or statute law, or
 - (b) shall be referred to the Committee by order of the Dáil.
- (3) The principal purpose of Committee consideration of matters of policy, governance, expenditure and administration under paragraph (1) shall be—
 - (a) for the accountability of the relevant Minister or Minister of State, and
 - (b) to assess the performance of the relevant Government Department or of a State body within the responsibility of the relevant Department, in delivering public services while achieving intended outcomes, including value for money.
- (4) The Select Committee appointed pursuant to this Standing Order shall not consider any matter relating to accounts audited by, or reports of, the Comptroller and Auditor General unless the Committee of Public Accounts—
 - (a) consents to such consideration, or
 - (b) has reported on such accounts or reports.
- (5) The Select Committee appointed pursuant to this Standing Order may be joined with a Select Committee appointed by Seanad Éireann to be and act as a Joint Committee for the purposes of paragraph (1) and such other purposes as may be specified in these Standing Orders or by order of the Dáil: provided that the Joint Committee shall not consider—

- (a) the Committee Stage of a Bill,
 - (b) Estimates for Public Services, or
 - (c) a proposal contained in a motion for the approval of an international agreement involving a charge upon public funds referred to the Committee by order of the Dáil.
- (6) Any report that the Joint Committee proposes to make shall, on adoption by the Joint Committee, be made to both Houses of the Oireachtas.
- (7) The Chairman of the Select Committee appointed pursuant to this Standing Order shall also be Chairman of the Joint Committee.
- (8) Where the Select Committee proposes to consider—
- (a) EU draft legislative acts standing referred to the Select Committee under Standing Order 133, including the compliance of such acts with the principle of subsidiarity,
 - (b) other proposals for EU legislation and related policy issues, including programmes and guidelines prepared by the European Commission as a basis of possible legislative action,
 - (c) non-legislative documents published by any EU institution in relation to EU policy matters, or
 - (d) matters listed for consideration on the agenda for meetings of the relevant Council (of Ministers) of the European Union and the outcome of such meetings,
- the following may be notified accordingly and shall have the right to attend and take part in such consideration without having a right to move motions or amendments or the right to vote:
- (i) members of the European Parliament elected from constituencies in Ireland,
 - (ii) members of the Irish delegation to the Parliamentary Assembly of the Council of Europe, and
 - (iii) at the invitation of the Committee, other members of the European Parliament.
- (9) The Select Committee appointed pursuant to this Standing Order may, in respect of any Ombudsman charged with oversight of public services within the policy remit of the relevant Department consider—
- (a) such motions relating to the appointment of an Ombudsman as may be referred to the Committee, and
 - (b) such Ombudsman reports laid before either or both Houses of the Oireachtas as the Committee may select: Provided that the provisions

of Standing Order 130 apply where the Select Committee has not considered the Ombudsman report, or a portion or portions thereof, within two months (excluding Christmas, Easter or summer recess periods) of the report being laid before either or both Houses of the Oireachtas.

b. Scope and Context of Activities of Committees (as derived from Standing Orders) [DSO 94; SSO 70]

- (1) It shall be an instruction to each Select Committee that—
- (a) it may only consider such matters, engage in such activities, exercise such powers and discharge such functions as are specifically authorised under its orders of reference and under Standing Orders;
 - (b) such matters, activities, powers and functions shall be relevant to, and shall arise only in the context of, the preparation of a report to the Dáil;
 - (c) it shall not consider any matter which is being considered, or of which notice has been given of a proposal to consider, by the Joint Committee on Public Petitions in the exercise of its functions under Standing Order 125(1)1; and
 - (d) it shall refrain from inquiring into in public session or publishing confidential information regarding any matter if so requested, for stated reasons given in writing, by—
 - (i) a member of the Government or a Minister of State, or
 - (ii) the principal office-holder of a State body within the responsibility of a Government Department or
 - (iii) the principal office-holder of a non-State body which is partly funded by the State,

Provided that the Committee may appeal any such request made to the Ceann Comhairle, whose decision shall be final.

- (2) It shall be an instruction to all Select Committees to which Bills are referred that they shall ensure that not more than two Select Committees shall meet to consider a Bill on any given day, unless the Dáil, after due notice to the Business Committee by a Chairman of one of the Select Committees concerned, waives this instruction.

Appendix 2 – Proceedings of the Committee

Joint Committee on Environment and Climate Action

1. The Joint Committee met in private session on Tuesday 25 January 2022, Wednesday 26 January 2022, Thursday 27 January 2022 and Tuesday 01 February 2022.

2. Members Present

The following Members were present:

Deputies Richard Bruton, Réada Cronin, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Darren O'Rourke, Christopher O'Sullivan, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Timmy Dooley, Alice-Mary Higgins, John McGahon, Pauline O'Reilly.

3. Proceedings of the Committee

The Committee proceeded to consider proposed recommendations to the draft report.

(i) The question is that we do not reopen the discussion on the body of the draft report:

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O'Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O'Reilly.

Against: Deputies Réada Cronin, Darren O'Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

The question was declared carried accordingly.

(ii) The question is that the divisions on the Draft Report be taken in Private Session:

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O'Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O'Reilly.

Against: Deputies Réada Cronin, Darren O'Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

The question was declared carried accordingly.

(iii) Deputy Richard Bruton moved recommendation 1:

“The Committee recommends that the Carbon Budgets as proposed by the CCAC be adopted by the Houses.”

Question put, division demanded.

The Committee divided: Tá, 11; Níl,3.

For: Deputies Richard Bruton, Réada Cronin, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Darren O’Rourke, Christopher O’Sullivan

Senators Lynn Boylan, Timmy Dooley, John McGahon, Pauline O’Reilly

Against: Deputies Bríd Smith, Jennifer Whitmore.

Senator Alice-Mary Higgins

The question was declared carried accordingly.

[The following recommendations fell: 2, 3, 5, 7, 10, 11, 13, 14 and 15.*](#)

(iv) Deputy Jennifer Whitmore moved recommendation 4:

“The Committee recommends that, notwithstanding the final decision of the Minister with regard to the carbon budgets as proposed, that there be an ongoing review of the backloading of the budgets.”

Agreed.

(v) Deputy Bríd Smith moved recommendation 6:

“The Committee recommends that the approach of the CCAC to carbon budgets be revised to take full cognisance of the legal requirements upon it under the Climate Act, UNFCCC and Paris Agreement.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl,8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan

Senators Timmy Dooley, John McGahon, Pauline O’Reilly

The question was declared negated accordingly.

(vi) Deputy Bríd Smith moved recommendation 8:

“The Committee recommends that while finalising or revising the carbon budgets, and subsequent sectoral allocations, the government immediately prepare measures to ensure a Just Transition across all sectors of society ensuring that those who have benefited most from, and are most responsible for, emissions bare the greatest burden.”

Question put, division demanded.

The Committee divided: Tá, 14; Níl, 0.

For: Deputies Richard Bruton, Réada Cronin, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Darren O’Rourke, Christopher O’Sullivan, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Timmy Dooley, Alice-Mary Higgins, John McGahon, Pauline O’Reilly.

Against:

The question was declared carried accordingly.

(vii) Senator Alice Mary Higgins moved recommendation 9:

“The Committee recommends that further work on incorporating equity, climate justice and fair share should be undertaken and inform the budget of 2030-2035 and should also inform any future review of the 2025-2030 budget.”

Agreed.

(viii) Senator Alice Mary Higgins moved recommendation 12:

“The Committee recommends that as far as practicable, any additional reductions in the MtCO₂eq to 2030 which the Minister may propose as part of his final Carbon Budgets should be concentrated within the first budget period in order to address the Backloading in the initial proposals.”

Agreed.

(ix) Deputy Richard Bruton moved recommendation 16:

“The Committee recommends that an urgent report on the deficiency of existing sectoral policy tools relative to the policy range set by the CCAC be drawn up by the Delivery Unit covering each sector.”

Agreed.

(x) Deputy Richard Bruton moved recommendation 17:

“The Committee recommends that each Department set out a monitoring process for key indicators which would allow quarterly comparison of performance versus predicted on their carbon budget constraints.”

Agreed.

(xi) Deputy Richard Bruton moved recommendation 18:

“The Committee recommends that a detailed schedule of the consultation plans at local and National level be set out for 2022 and become a regular element of planning and reporting.”

Agreed.

(xii) Deputy Richard Bruton moved recommendation 19:

“The Committee recommends that each Department would prepare a list of contingency measures which could be adopted to correct deviation from the five year budgets.”

Withdrawn by leave.

(xiii) Deputy Richard Bruton moved recommendation 20:

“The Committee recommends that a profile of what each sector will look like in 2030 be prepared to demonstrate the method of working of the sector underpinning sustainability at that point, showing the opportunities which will have opened up, and the new skills which will be required, and the adaptations which will have been undertaken.”

Agreed.

(xiv) Deputy Richard Bruton moved recommendation 21:

“The Committee recommends that where measures are put in place which are designed to discourage or reduce damaging activities of any sort, that those monies be ring fenced and initiatives delivered from the use of these funds be clearly branded as such.”

Agreed.

(xv) Deputy Richard Bruton moved recommendation 22:

“The Committee recommends that the Circular Economy Strategy be integrated into the planning and reporting mechanisms of the Climate Budgets, so that the climate impact of sectors can be viewed in the context of the environmental impact throughout the entire supply chain of the sector.”

Agreed.

(xvi) Deputy Richard Bruton moved recommendation 23:

“The Committee recommends that the Climate Mandate for each public body be published at the earliest date, and each such body displays prominently in its public offices the key commitments which it is making.”

Agreed.

(xvii) Deputy Brian Leddin moved recommendation 24:

“The Committee recommends that a major effort is undertaken by the government and all departments to communicate the reasons for climate action to the public and the importance of early action.”

Agreed.

(xviii) Deputy Brian Leddin moved recommendation 25:

“The Committee recommends that the government outlines extensive plans for public participation and effective citizen and stakeholder consultation at the earliest opportunity.”

Agreed.

(xix) Deputy Brian Leddin moved recommendation 26:

“The Committee recommends that reliable methodologies are urgently developed to assess the carbon impact of statutory plans, strategy and policy documents for use at all decision points and that the application of those methodologies are appropriately resourced.”

Agreed.

(xx) Deputy Brian Leddin moved recommendation 27:

“The Committee recommends that all national and local government policy, strategy and statutory documents are aligned with the legally binding target of 51% reduction in greenhouse gas emissions by 2030 and the legally binding national climate objective of achieving net zero emissions no later than 2050.”

Agreed.

(xxi) Deputy Brian Leddin moved recommendation 28:

“The Committee recommends that the Government should develop a suite of national and sectoral emergency and contingency options which could be adopted to correct any deviation from carbon budget paths if legally binding targets are not being achieved.”

Agreed.

(xxii) Deputy Jennifer Whitmore moved recommendation 29:

“The Committee recommends requesting that the agriculture model be made publicly available in the same manner as the Energy TIMs model.”

Agreed.

(xxiii) Deputy Jennifer Whitmore moved recommendation 30:

“The Committee recommends that the Minister ensures sufficient funding and support is provided to CCAC and partners to enable continued development and integration of appropriate models to assist with future budgetary processes.”

Agreed.

(xxiv) Senator Alice Mary Higgins moved recommendation 31:

“Global temperature changes are the overarching cause and measure of climate action, yet the Committee are concerned that the potential impact of the Carbon Budgets in respect of global temperatures seems to have received less robust attention than other parts of the process. Specifically, the Committee do not believe that what the CCAC has described as only “a minimal” assessment of consistency with the Paris Agreement, is not an adequate approach.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negatived accordingly.

(xxv) Senator Alice Mary Higgins moved recommendation 32:

“The Committee has previously noted the importance of avoiding ambiguous or unclear language in relation to climate obligations, we therefore note that the legal obligation to propose budgets which are “consistent” with key obligations implies a higher and clearer standard than the phrase “broadly consistent” as used by the CCAC. In developing the final budgets, the Minister should aim for ‘consistent’ as required under section 3(3) of the legislation.”

Agreed.

(xxvi) Senator Alice Mary Higgins moved recommendation 33:

“The Committee are concerned that the ‘Paris Test’ developed by the CCAC is not an adequate or appropriate tool to assess the consistency of proposed Carbon Budgets with Articles 2 and 4(1) Paris Agreement the Paris Test as required under the act. The core assumptions on which this ‘Paris Test’ is based i.e. identical starting point and identical trajectories for all countries are directly at odds with the Article 2(2) of the Paris Agreement and the obligations “to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. Such assumptions, and the specific disregard of ‘feasibility’ are also

concerning in relation to any assessment of Article 2(1) on temperature. The Committee therefore recommend that this approach be re-examined and reconsidered in future reports by the CCAC. The Committee also strongly recommend that when finalising the first two Carbon Budgets, the Minister employ other supplementary tools, such as those used by the UNEP, in order to assess and ensure consistency with the Paris Agreement as required under Section 3(3) of the legislation.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negatived accordingly.

(xxvii) Senator Alice Mary Higgins moved recommendation 34:

“The Committee agree with the statement that “it is no longer enough to do our best, we must do what is necessary” and believe that the Carbon Budgets and Sectoral Ceilings should reflect that spirit of urgency and ambition.”

Agreed.

(xxviii) Senator Alice Mary Higgins moved recommendation 36:

“Equity and Climate Justice

“The Committee does not agree with the CCAC’s statement in their technical report that in relation to “appropriate contribution”, “any such determination has implicit or explicit implications around climate justice, historical responsibility, equity and equality. It is not the job of the Council or the Carbon Budget Committee to make such value judgements”. It is an obligation of the CCAC under s.6A(9)(a) of the Climate Act) to carry out its functions in a manner consistent with implementation of the Paris Agreement “to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances” and they are also required under that Act to “have regard” to “climate justice”.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O'Reilly.

The question was declared negatived accordingly.

(xxix) Senator Alice Mary Higgins moved recommendation 37:

"The Committee recommends the review and revision of assessment tools and appropriate mechanisms to have greater regard for climate justice."

Agreed.

(xxx) Senator Alice Mary Higgins moved recommendation 38:

"The Committee note that the CCAC do not claim to have considered whether the carbon budgets represent a 'fair share' of global emission reductions, but have instead left that to the next political stage of the process, while some scientific and stakeholder witnesses to the Committee were clear that the first two budgets as proposed fall far very short of a 'fair share'. The Committee therefore recommend that the Minister make every effort to consider climate justice and seek greater consistency with equity principles when finalising or reviewing the carbon budgets."

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O'Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O'Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O'Reilly.

The question was declared negatived accordingly.

(xxxi) Senator Alice Mary Higgins moved recommendation 39:

"As it is likely that the first carbon budget may still fall short of 'fair share' principles, the Committee recommend that it be accompanied by specific additional measures in terms of climate funding, beyond existing commitments. It is however important in the development of future budgets, that climate funding should not be regarded as an adequate substitute for appropriate effort sharing and ambition in emission reduction targets."

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O'Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O'Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Christopher O’Sullivan, Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xxxii) Senator Alice Mary Higgins moved recommendation 40:

“The Committee recommends that, given that the carbon budgets as proposed are not grounded in a detailed consideration of equity or climate justice, the Minister should look to strengthen consideration of those factors when finalising or reviewing carbon budgets and should also set our supplementary climate justice measures, beyond existing commitments, in areas like climate funding.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negated accordingly.

(xxxiii) Senator Alice Mary Higgins moved recommendation 41:

“The Committee suggests measures be taken to plan for the appropriate assessment or inclusion of shipping and aviation emissions in future proposed Carbon Budgets.”

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Christopher O’Sullivan, Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xxxiv) Senator Alice Mary Higgins moved recommendation 42:

“The Committee suggests measures be taken to plan for the appropriate assessment or inclusion of shipping and aviation emissions in future proposed Carbon Budgets.”

Question put and decided in the negative.

(xxxv) Senator Alice Mary Higgins moved recommendation 43:

“Witnesses noted that early action on climate yields a greater return and significant up front public investment is needed now to ensure emission reductions in the future. The Committee recommend that appropriate advantage be taken of current favourable macroeconomic factors such as state access to low or zero interest financing and the suspension of fiscal constraints, in order to deliver necessary public investment in accelerated action and a fast and fair transition, particularly in national development planning.”

Agreed.

(xxxvi) Senator Alice Mary Higgins moved recommendation 44:

“The Committee recommend that a risk analysis and economic and environmental cost-benefit analysis be conducted in relation to the backloading between the first two budgets, particularly in relation to the achievement of the 51% target by 2030.”

Agreed.

(xxxvii) Senator Alice Mary Higgins moved recommendation 45:

““One of the primary justifications given for the backloading of budgets is the investment and lead in time needed to introduce or scale up new emission reduction measures, however the Committee would note that while waiting for future positive initiatives, plans should also be made for possible earlier emission reductions and it is vital that very significant immediate, or even temporary measures are also taken within the next 18 months.”

Question put and agreed.

(xxxviii) Senator Alice Mary Higgins moved recommendation 46:

“Particularly in sectors such as Agriculture where there is some scientific and practical uncertainty around initiatives for reduction in the second budget, the precautionary principle should apply and earlier action may need to be taken on policies which aggravate emissions such as the derogation from the nitrates directive or herd expansion.”

Question put, division demanded.

The Committee divided: Tá, 8; Níl,6.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Christopher O’Sullivan, Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xxxix) Senator Alice Mary Higgins moved recommendation 47:

“The Committee notes stakeholder evidence that “the most sustainable building is the one that already exists” and recommends early action to deliver emission reductions in the first budget period by activating vacant properties, retrofitting and minimising unnecessary demolition, while also planning for longer term emission reductions through strong environmental standards as part of the NDP and Housing For All.”

Agreed.

(xl) Senator Alice Mary Higgins moved recommendation 48:

“The Committee recommends that given the challenges and urgency of achieving the necessary emission reductions as set out in the final carbon budgets, it is important that the ‘precautionary principle’ be reflected and applied in relation to policies or activities which risk adding new or additional pressure to the carbon budget space.”

Agreed.

(xli) Senator Alice Mary Higgins moved recommendation 49:

“Given the substantial backloading into the second carbon budget, the Committee note there will be little if any space for carryover from the first carbon budget, particularly given the hard legal target of 51% emission reductions by 2030, which should preclude any carryover into the third budget period.”

Question put, division demanded.

The Committee divided: Tá, 9; Níl, 5.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O’Rourke, Christopher O’Sullivan, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xlii) Senator Alice Mary Higgins moved recommendation 50:

“The Committee recommend that each sector and the Government as a whole develop plans in respect of emergency measures which might be taken if they are found to be off track.”

Withdrawn by leave.

(xliii) Senator Alice Mary Higgins moved recommendation 51:

“Sectoral ceilings which comply with the Carbon Budgets should be treated as a minimum and each Department or Sector should also be encouraged in greater ambition where possible, in order to ease pressure on future budgets.”

Agreed.

(xliv) Senator Alice Mary Higgins moved recommendation 52:

“The Committee believes that 2024 is too late for the publication of a “roadmap” for an exit from the 2.4 billion currently spent on fossil fuel subsidies. The Roadmap should be published in 2022 and steps taken in 2023. The wind down of these subsidies should reflect anti-poverty and social equity policies and funds saved should be redirected into climate action and just transition.”

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xlv) Senator Alice Mary Higgins moved recommendation 53:

“The Committee note that the MtCO₂e amount in each Carbon Budget relates to emissions and removals measurable within the time period of that budget, therefore no projected emission reductions or removals which might occur beyond the time frame of a carbon budget should be included when calculating or assessing the achievement of that carbon budget.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negatived accordingly.

(xlvi) Senator Alice Mary Higgins moved recommendation 54:

“The calculation of Carbon Budgets should not reflect assumptions based on future scientific or technological innovation which is hypothetical, untested or unproven.”

Question put, division demanded.

The Committee divided: Tá, 8; Níl, 6.

For: Deputies Réada Cronin, Brian Leddin (in the Chair), Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon.

The question was declared carried accordingly.

(xlvi) Senator Alice Mary Higgins moved recommendation 55:

“The Committee believe the State should invest in a major programme of research and development, particularly public-public partnerships, in areas such as energy storage, nature-based solutions, carbon capture or negative emissions technologies and other areas of future potential, accompanied by proper regulation and ecological and social sustainability criteria. However, any future mitigation which may emerge from such research will belong to the relevant future Carbon Budgets, and should not be relied upon or reflected in the calculation of the first two budgets.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negatived accordingly.

(xlviii) Senator Alice Mary Higgins moved recommendation 56:

“Preparations should be made for a more robust reflection of Scope 3 emissions within the third and future Carbon Budgets. Developments in this area might perhaps also be considered if there is any future review of the second Carbon Budget.”

Agreed.

(xlix) Senator Alice Mary Higgins moved recommendation 57:

“The CCAC’s Technical Report on carbon budgets notes that forestry planted now will deliver the majority of its carbon sequestration benefits in the period after 2030. This will be really important as Ireland moves to net zero. The Committee welcome the clarification from the CCAC that those potential post 2030 removals will not be counted as part of the first two Carbon Budgets as that would be clearly inconsistent with legal obligations in respect of the 2030 target. The Committee do however recommend that, given the long term nature of the financial and environmental dividends from forestry, supplementary supports and subsidies, which do not involve the carbon budgets, should be introduced to encourage increased planting according to the “the right tree in the right place” principles identified by the CCAC.”

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O’Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O’Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O’Reilly.

The question was declared negated accordingly.

(I) Senator Alice Mary Higgins moved recommendation 58:

“The Committee notes that peatlands have a crucial early role to play in relation to the Carbon Budgets, when rewet or restored they can sequester carbon but when degraded they are a source of emission. The Committee recommends that immediate action on this within the first budget period is possible and necessary.”

Question put, division demanded.

The Committee divided: Tá, 11; Níl, 3.

For: Deputies Réada Cronin, Cormac Devlin, Brian Leddin (in the Chair), Darren O’Rourke, Christopher O’Sullivan, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Timmy Dooley, Alice-Mary Higgins, Pauline O’Reilly.

Against: Deputies Richard Bruton, Alan Farrell,

Senators John McGahon.

The question was declared carried accordingly.

(li) The question is that the amendments submitted by Deputy Bríd Smith be agreed to:

Question put, division demanded.

The Committee divided: Tá, 6; Níl, 8.

For: Deputies Réada Cronin, Darren O'Rourke, Bríd Smith, Jennifer Whitmore.

Senators Lynn Boylan, Alice-Mary Higgins.

Against: Deputies Richard Bruton, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Christopher O'Sullivan.

Senators Timmy Dooley, John McGahon, Pauline O'Reilly.

The question was declared negated accordingly.

(lii) The question is that the draft report as amended be agreed to:

Question put, division demanded.

The Committee divided: Tá, 11; Níl, 3.

For: Deputies Richard Bruton, Réada Cronin, Cormac Devlin, Alan Farrell, Brian Leddin (in the Chair), Darren O'Rourke, Christopher O'Sullivan.

Senators Lynn Boylan, Timmy Dooley, John McGahon, Pauline O'Reilly.

Against: Deputies Bríd Smith, Jennifer Whitmore.

Senators Alice-Mary Higgins.

The question was declared carried accordingly.

***Recommendation 2**

“The Committee recommends that the Oireachtas adopts the Climate Change Advisory Council’s first two proposed carbon budgets (through to 2030).”

Deputy Brian Leddin & Senator Pauline O’Reilly

Recommendation 3

“The Committee recommends revising downward the proposed budgets to 2030 to a total of 468 Mt CO2 to reflect the Programme for Government commitment of a 7% per annum average reduction.”

Deputy Jennifer Whitmore

Recommendation 5

“The Ultimate Objective and Paris Compliance Ireland’s Climate Action and Low Carbon Development Act is clear that Carbon Budgets must be consistent with the “ultimate objective” under Article 2 of the UNFCCC namely the “stabilization of greenhouse gases in the system at a level that would prevent dangerous anthropogenic interference with the climate system.” The Committee do not believe that Carbon Budgets which only aim for a 50% probability of staying below 1.50C increase in temperature represent a sufficient level of consistency with that objective.”

Senator Alice-Mary Higgins

Recommendation 7

“The Committee recommends that the proposed carbon budgets to 2030 be reduced by, at an absolute minimum, an additional 67 Mt CO2eq.”

Deputy Bríd Smith

Recommendation 10

“Average Yearly Reductions and Size of Carbon Budgets The Committee believes that one important measure of the appropriateness of the proposed Carbon Budgets is the 2019 UNEP report which states that a global average of 7.6% reduction in emissions would be needed between 2020 and 2030 to have a 66% chance of limiting global heating to 1.50C. That same report notes that the later those reductions commence, the higher the percentage change needed. Even without yet factoring in the greater effort sharing responsibility which Ireland should be taking on as a wealthy country, this suggests that our total carbon budgets to 2030 should not be greater than 454MtCO2eq in order to be consistent with the 7.6% average, although given the later starting date, an average of 8% per annum and maximum budget of 444 MtCO2eq might be more appropriate. The Committee therefore recommend a 41 MtCO2eq reduction over the first two budgets to reflect the UNEP average of 7.6% per annum or a 51 MtCO2eq reduction to reflect an 8% average in light of the later starting date.”

Senator Alice-Mary Higgins

Recommendation 11

“Stakeholders, scientists and the representative of the Department of Environment who spoke to the committee all reiterated the importance of the commitment to an average of 7% reduction in emissions per annum based on 2018 levels as set out in the Programme for government. The Committee also heard evidence that the CCAC proposal for budgets of 495 MtCO2eq was cumulatively equivalent to an annual reduction rate of just 6% per year while an average of 7% reduction per annum would mean a cumulative 10-year total of 468 MtCO2eq. The Committee therefore recommend that the combined first two proposed budgets be reduced by at least 27 MtCO2eq to align them with that Programme for Government commitment.”

Senator Alice-Mary Higgins

Recommendation 13

“Aviation and Shipping The Committee believe that the Minister should provide for appropriate inclusion of shipping and aviation emissions, estimated at approximately 40 MtCO₂eq.”

Senator Alice-Mary Higgins

Recommendation 14

“The balance between the two budgets The Committee are concerned that the current proposed backloading in relation to the first two Carbon Budgets does not appropriately reflect the ‘Precautionary Principle’ (Article 191 of the Treaty on the Functioning of the European Union). Given the considerable risks and uncertainties which have been identified by the Advisory Council and Stakeholders, the Committee believe it would be prudent to adjust the balance between the first two Carbon Budgets. A slight reduction in the tonnage allocated in the first Carbon Budget will mean that we are less vulnerable to difficulties which may emerge during the second Carbon Budget period, including external variables.”

Senator Alice-Mary Higgins

Recommendation 15

“Rather than the current proposed backloading of emission reductions to the second Carbon Budget, the Committee believe the Minister should ideally aim for something closer to a straight line mitigation path with increasing year on year reductions, with an aim of achieving zero emissions at the earliest possible date.”

Senator Alice-Mary Higgins

Appendix 3 – Opening Statements and Briefings

Opening statement on Carbon Budgets

by

Prof. Brian Ó Gallachóir

on behalf of

Climate Change Advisory Council's Carbon Budgets Committee

to

Joint Oireachtas Committee on Environment and Climate Action

Tuesday, 11 January 2022

Opening Remarks

- 1) I want to thank the Committee for the opportunity to introduce the process underpinning the carbon budgets proposed by the Climate Change Advisory Council.
- 2) My name is Brian Ó Gallachóir, I am Professor of Energy Engineering at University College Cork, Director of MaREI, the Science Foundation Ireland Centre for energy, climate and marine research, and Chair of the International Energy Agency Technology Collaboration Programme on energy systems modelling. I was one of 15 individuals invited to join Council members on its Carbon Budget Committee, which was chaired by Marie Donnelly.
- 3) A number of other Committee Members are here today to answer your questions regarding the process and approaches that led to the formation of the proposed carbon budgets, namely Dr. Hannah Daly (UCC), Dr. David Styles (UL), Trevor Donnellan and Dr. Kevin Hanrahan (Teagasc), Prof. Lisa Ryan (UCD), Patricia King (ICTU), Prof. Peter Thorne (MU), along with our chairperson Marie Donnelly., Chairperson of the Climate Change Advisory Council and the Carbon Budgets Committee. .
- 4) It was challenging for the Council to assemble the necessary information and to propose carbon budgets in the timeframe required, and great credit is due to the secretariat in co-ordinating the meetings, analysis and engagements that supported the committee in our work.
- 5) The Committee would not have been able to produce these proposed carbon budgets had we not been able to draw on the modelling research capacity in energy, agricultural and land-use that was made available by University College Cork, Teagasc and University of Limerick. The continued and increased support for this research and analytical modelling capacity going forward is essential for informing national climate mitigation policy.
- 6) The most significant factor underpinning the proposed carbon budgets is the obligation under the Climate Act to achieve a 51% reduction in greenhouse gas emissions by 2030 relative to 2018 levels. In addition, the Committee also considered the implications for energy use and supply, for agriculture and land-use, alignment with EU policy and with the Paris Agreement, and the economic and societal implications of the carbon budgets.
- 7) I am confident that the carbon budgets proposed by the Council represent the optimum balance between the various obligations we were required to consider by the Climate Act. Figure 1 presents the proposed carbon budgets and Figure 2 illustrates an indicative future emissions trajectory that delivers the proposed carbon budgets (from the Council's Carbon Budget Technical Report).

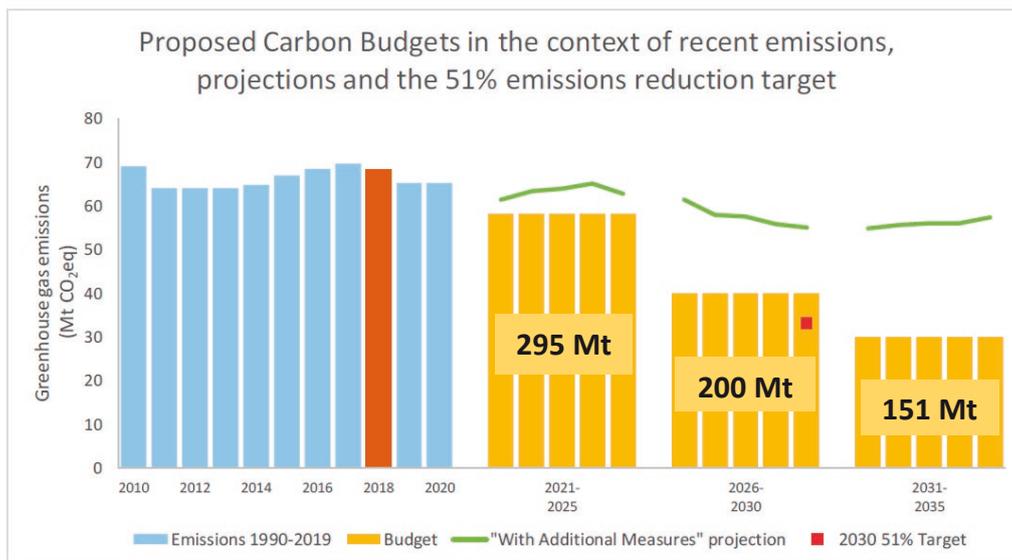


Figure 1 Proposed carbon budgets in the context of recent GHG emissions trends and projections

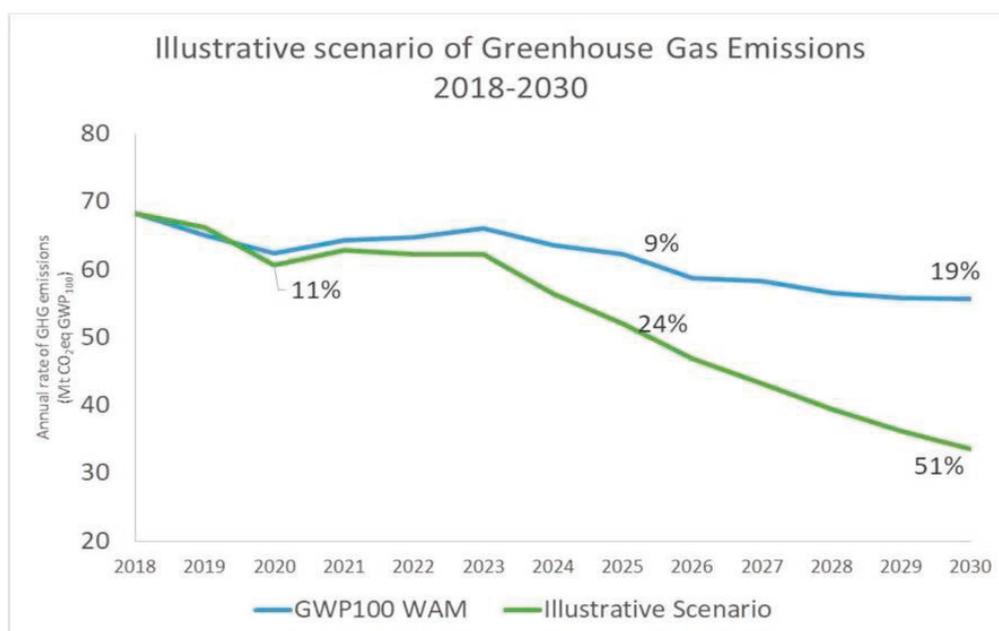


Figure 2 Total greenhouse gas emissions 2018 - 2030 in illustrative scenario that meets carbon budgets. Also shown are EPA 'with additional measures' projection for comparison

Process that led to the formation of the budgets

- 8) In terms of the background, the Council agreed at its meeting on Friday March 5th to establish a Committee on Carbon Budgets in order to provide recommendations for carbon budget proposals, prior to the Council's final decision on the proposals to submit to Government.
- 9) The Committee was tasked with drawing up draft carbon budgets, considering the criteria set out in legislation (namely the Climate Action and Low Carbon Development Act (2015) and the Climate Action and Low Carbon Development Amendment Bill (March 2021)). Towards this end the Committee members met more than fifteen times between March and September 2021¹

¹ two preparatory meetings (March 23, April 6), ten Committee meetings, (April 27, April 30, May 17, May 24, June 14, June 21, June 28, July 5, September 9, September 16), in addition to meetings with stakeholders, Government departments and a final meeting with the Climate Change Advisory Council (Sept 22)

Approach taken in achieving the obligations under the Act

- 10) The approach adopted by the Committee was to consider each obligation under the Act individually, drawing on analysis, modelling and expert engagement to discuss the obligations in detail, address information gaps, and formulate a view of how each obligation impacted the carbon budgets. The approach is described in further detail in the background document submitted to the Oireachtas Committee on 7 January and in the Carbon Budgets Technical Report².
- 11) The Committee was able to draw on analysis in the form of modelling results, technical papers and presentations that were prepared for the Committee on a range of topics relevant to the formation of the carbon budgets, namely the
 - a. implications of different sectoral emissions reduction pathways on the energy system (UCC), on agriculture (Teagasc), on land use and forestry (UL)
 - b. alignment of proposed national carbon budgets with EU 2030 Fit for 55 proposed emissions reduction targets for Ireland (UCC)
 - c. economic and employment and distributional implications of carbon budgets (ESRI, UCD, TCD, McKinsey) which also informed considerations of climate justice
 - d. implications of the Paris Agreement on Ireland's carbon budgets (UCC and DCU)
 - e. the potential impacts of climate action on biodiversity (TCD)

Alternative pathways considered

- 12) Towards developing the proposed carbon budgets, the Committee considered a range of scenarios with different mitigation efforts across the energy system and agriculture that were consistent with meeting the overall national 51% emission reduction target, in line with the Council's legislative mandate.
- 13) In addition the Committee also considered a set of scenarios to explore the speed and scale of change required across the energy sector to meet the 51% mitigation target, and to discover the potential costs associated with delivering the target at different speeds of reduction (i.e. the impacts of seeking to achieve more ambitious earlier and later mitigation).

Information taken into account when composing the budgets

- 14) In addition to the modelling, analysis and technical papers prepared for, and by Committee members, the Committee also took into account the recently published IPCC AR6 Working Group 1 report, the latest EPA GHG emissions inventories and projections, the latest available information regarding mitigation technologies and costs, the potential for negative emissions, outreach with stakeholder Departments and agencies, and a workshop with international experts on the science of national mitigation efforts and gases and 1.5°C

Closing Remarks

- 15) The ambition mandated by the legislation represents a significant step change beyond current climate mitigation policies and measures. This step change in ambition is reflected in the proposed carbon budgets, and will require rapid and sustained economic, social and technological transformation across all sectors of the economy.
- 16) The carbon budgets were developed and proposed during 2021, i.e. in year one of the first carbon budget period. We are now in year two.
- 17) I would encourage the Joint Oireachtas Committee to recommend that these carbon budgets be adopted, and further to ensure that the necessary urgency is directed at developing and

² [Technical Report | Climate Change Advisory Council \(climatecouncil.ie\)](https://climatecouncil.ie)

implementing the policy supports and regulations to enable Ireland to remain within these carbon budgets.



Joint Committee on Environment and Climate Action
Leinster House
Dublin 2
D02 XR20

7 January 2021

Ref: CCA-I-2021-258

In the invitation received on 16 December 2021 to a meeting of the Joint Committee to inform consideration of the carbon budgets, it is noted that *'The Committee would specifically like to discuss the process that led to the formation of the budgets, any alternative pathways considered, the information taken into account when composing the budgets and the approach taken in achieving the obligations under the Act.'*

This document provides a written overview of the matters highlighted for discussion to assist the Joint Committee in its considerations prior to the meeting on 11 January 2022.

Carbon Budgets Committee

The Climate Action and Low Carbon Development (Amendment) Act 2021 requires that the Council propose all of economy carbon budgets to the Minister of Environment Climate and Communications "as soon as may be" after the commencement of Section 9 of the Act. The Act was commenced in its entirety on 7th September and the Regulation foreseen in Section 6A of the Act as amended, was signed on 12th October 2021. The Council immediately thereafter concluded its work and made proposals to the Minister on October 25th 2021.

The proposed carbon budgets for each of the periods 2021-2025, 2026-2030 and 2031-2035 (provisional) must provide for a reduction of 51%¹ of greenhouse gas emissions using the GWP₁₀₀ metric by 2030 relative to 2018² and set Ireland on a pathway towards a sustainable economy and society where greenhouse gas emissions are balanced or exceeded by the removal of greenhouse gases by 2050.

The Climate Change Advisory Council agreed at its meeting on Friday 5th March to establish a Committee on Carbon Budgets. The Council agreed a Terms of Reference for the new Committee at its meeting on the 15th April 2021. The Committee was tasked with drawing up draft carbon budgets for the periods 2021-25, 2026-30 and 2031-35 (*CB1, CB2 and CB3 respectively*) to be considered by the Council. As part of this task, the Committee was mandated to include the criteria set out in the Climate Action and Low Carbon Development (Amendment) Act 2021 in its consideration of carbon budgets. In drawing up the draft carbon budgets as above, the Committee was tasked by the Council to use the following methodological approach;

¹ As per S.I. No 531/2021, this target does not include emissions from international aviation or shipping.

² As per S.I. No 531/2021 Climate Action and Low Carbon Development Act 2015 (Greenhouse Gas Emissions) Regulations 2021, signed on 12th October 2021.



- Top-down: Estimate an appropriate carbon budget for Ireland for the period 2021 – 2050 based on consideration of the global carbon budget (addressing legislated criteria: national climate objective, UN, Paris Agreement, science, climate justice).
 - a. The global carbon budget
 - b. The role of different gases
 - c. The potential for negative emissions
- Bottom-up: Consider what legislative requirements at national and EU level mean for emissions up to 2030, covering the first two carbon budgets (addressing legislated criteria: national climate objective, 51%, EU, inventories and projections, science, reporting, economy, and climate justice).
 - a. The implication of required compliance with EU and National Targets (e.g. 51%) incl. treatment/inclusion of LULUCF
 - b. Feasibility, competitiveness impacts, implications for investment
 - c. Distributional impacts, jobs

It was agreed by the Council that the starting point for addressing the bottom-up part of the mandate would be to undertake scenario modelling using the UCC TIMES Ireland Model, and other sectoral models such as the Teagasc FAPRI Ireland model.

Annex 2 of this document includes the dates of each meeting of the Carbon Budgets Committee and Climate Change Advisory Council between March and October 2021 and minutes of these meetings are published on the Climate Change Advisory Council website³.

Modelling and Development of Proposed Carbon Budgets

There is no single model in Ireland that captures in sufficient detail the technical information on mitigation options across all sectors. Modelling of carbon budget scenarios by three groups; University College Cork (UCC) TIMES Ireland Model (TIM), Teagasc Food and Agriculture Policy Research Institute (FAPRI) Ireland model and University of Limerick (UL) Goblin model was carried out. Analysis of carbon budget scenarios was sought to inform considerations of feasibility, competitiveness impacts, implications for investment, distributional impacts, impacts on employment and climate justice. The results of the modelling do not imply an endorsement or recommendation of the Council for particular mitigation strategies but rather illustrate the scale of the challenge and also establish appropriate mitigation pathways consistent with the legislated level of ambition including a 51% reduction in greenhouse gas emissions by 2030 relative to 2018.

Modelling of scenarios and analysis of the results allowed consideration of different mitigation options that may be applied to reduce emissions in line with carbon budgets, their potential, their costs, their interactions and their possible implications. The aim was to inform society

³ <https://www.climatecouncil.ie/aboutus/governance/>
<https://www.climatecouncil.ie/carbonbudgets/carbonbudgetscommittee/minutesofmeetings/>



wide carbon budgets that are achievable, consistent with international climate commitments and also to develop an evidence base to address the mandated criteria in the legislation.

The carbon budget scenarios considered represented different mitigation efforts across sectors that could be consistent with meeting the overall national 51% emission reduction target in line with the Council's legislative mandate. The Council considered a number of core scenarios which explore a range of different mitigation reductions across sectors. Different levels of mitigation in the broader energy sector (electricity, heat, transport and industry) were modelled by TIM. Different levels of mitigation effort were modelled in the agriculture and land use sector by both the Teagasc FAPRI-Ireland model and the Goblin model. Appropriate combinations of scenarios from each model gave an overall economy wide⁴ scenario for meeting the 51% reduction target by 2030. Each scenario represents different sharing of effort across sectors with Exx-Ayy representing a scenario where the Energy sector (heat, transport, electricity) reduces emissions by xx% while the Agriculture sector reduces by yy% and the LULUCF sector reduces by 51%, adding up to an overall reduction of 51% from 2018 levels.

In addition to the core scenarios a set of scenarios was developed to explore the speed and scale of change required across the energy sector to meet the 51% mitigation target, and to discover the potential costs associated with delivering the 51% target at different speeds of reduction. Early action scenarios were modelled as a linear pathway from 2020 to 2030 while late action or 'no constraint' scenarios were only constrained to meet the 51% target by 2030. These scenarios are illustrated in Figure 1 below.

The model was unable to find a technological option within the State to meet 51% reductions in the context of late action scenarios. Further, it was considered that the early action scenarios created an unachievable task for the first budget period due to;

- the time already elapsed, and;
- the lead in time required for deployment of technologies or changes in behaviour at scale.

Notably, the electricity sector requires large scale deployment of enabling infrastructure including offshore wind and grid upgrades to deliver ambitious mitigation. Decarbonisation of the electricity sectors is the foundation for the decarbonisation of other sectors such as heat and transport. The necessary legislation that enables planning and licensing for this kind of development, especially for offshore wind, has only recently progressed through the Oireachtas. As such within a two-year time frame it is not appropriate to assume significant and immediate reductions in energy emissions.

⁴ Excluding International Aviation and Maritime emissions

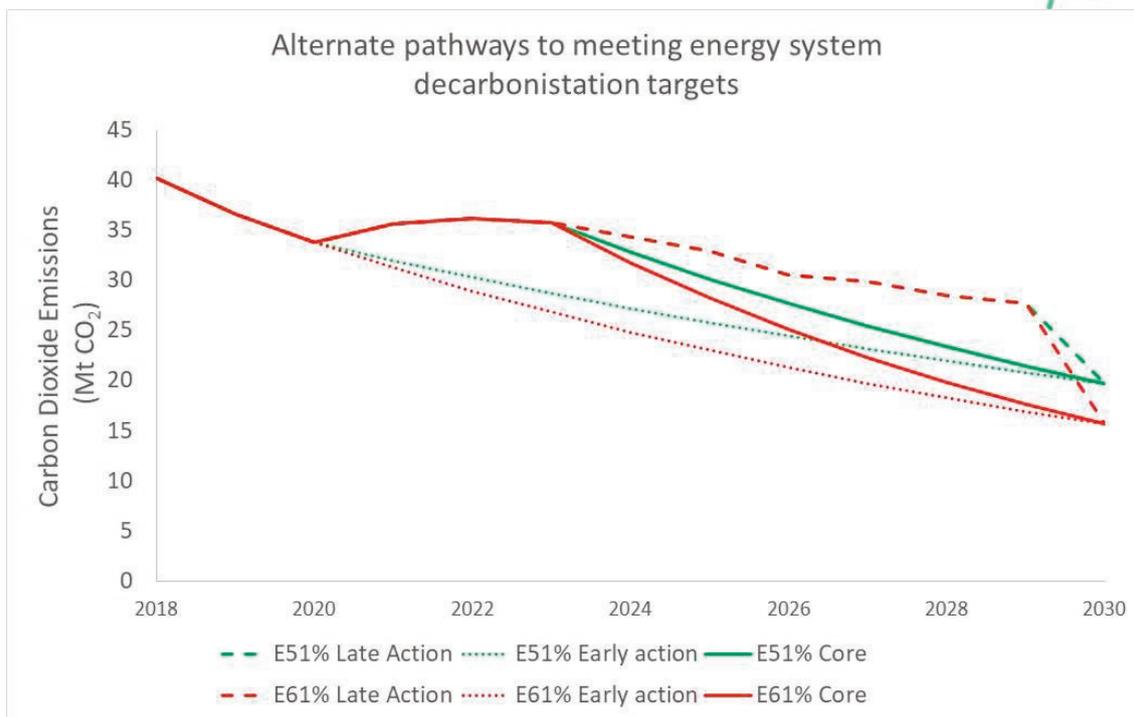


Figure 1 Comparison between TIM model outputs for selected core, early action, and no constraint scenarios (Carbon Budget Technical Report Figure 2-5)

This further analysis therefore demonstrated that the core scenarios represent the more feasible, cost-effective approaches, taking account of recent emissions projections, obligations under EU legislation and the long-term competitiveness of the economy. Delivering further mitigation in CB1 is not feasible due to technology constraints, while delivering less mitigation in CB1 makes the task of complying with the 51% emission reduction target by 2030 infeasible.

Within the legislation each carbon budget is a five-year cumulative limit to all covered emissions in that period.⁵ This allows for interannual variations which can arise for non-policy reasons e.g. a cold winter which may lead to increased emissions from heat demand. Such variations are transient and not indicative of long-term trends and will tend to average out. The 2021 Act has a specific target for a reduction of 51% in emissions in 2030 compared to 2018, however it is important to note that it does not determine the pathway to reach this target. The energy modelling shown in the technical report highlights that a linear pathway is technically unrealistic and is an economically inefficient way to meet this. The proposed 5-year budgets therefore are designed to and would enable the emissions target in 2030 to be met in a manner that is technically feasible and has less impact on society as a whole. However, given that action slowly ramps up across the decade and given the time-lag between policy implementation and actual emissions reductions this requires substantial interventions to start immediately.

⁵ The Regulation specifies that we include all sectors except international aviation and maritime.



In its 2021 Annual Review⁶, the Council highlighted a number of critical gaps in implementation of policy, including for example a failure to meet Ireland's 2020 target under the EU Effort Sharing Decision and delays in implementation of many of the measures in the 2019 Climate Action Plan. Rapid and sustained economic, social and technological transformation will be required across all sectors of the economy and increased investment must start now.

The modelling showed that there are numerous possible pathways consistent with meeting the 51% emission reduction target. A number of sensitivity scenarios were tested to explore the role of technologies and energy sources such as the timing of carbon capture and storage availability, the extent of availability of renewables such as offshore wind, the levels of bioenergy and green hydrogen and the level of energy service demand. Greater availability of energy sources and carbon capture and storage is important but the greatest impact on overall costs of transition was the level of energy service demand (i.e. heat, light, transport) with lower costs seen in a scenario of low energy service demand. Furthermore, greater reliance on electricity as the energy vector for transport and heating, along with growing electricity demand from population growth and data centres illustrates the importance of continuing to push energy efficiency alongside technological (e.g. demand response, system services) and behaviour change as a means to reduce the cost of transition. Continued support for research, demonstration and deployment of key zero emission technologies will also be important.

Inputs to the Carbon Budgets

The Carbon Budget Technical Report⁷, which was adopted by the Council at its meeting on 25 October 2021, provides an overview of the inputs to the proposed carbon budgets and describes the deliberations, reasoning and evidence behind the Council's carbon budget proposals.

A complete list of the background papers prepared for the meetings of the Carbon Budgets Committee can be found [here](#). A list of presentations given to the Carbon Budgets Committee can be found [here](#).

The inputs to the carbon budget proposals against the methodology described above included;

1. *Estimation of an appropriate carbon budget for Ireland based on the global carbon budget and the role of different gases:* The Committee received and considered a literature review addressing the global carbon budget and the role of different greenhouse gases from each of two CCAC Carbon Budget fellows⁸. An expert meeting was also held on 22 June 2021 on the science of national mitigation efforts. International speakers included Dr Andy Reisinger (New Zealand IPCC), Dr Joeri Rogelj (Imperial College London), Professor Myles Allen (University of Oxford) and Mr Florin Vladu (UNFCCC).
2. *The potential for negative emissions:* A literature review on the potential for negative emissions was prepared by Research Fellow Paul Price (Dublin City University) and

⁶<https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/Climate%20Change%20Advisory%20Council%20Annual%20Review%202021.pdf>

⁷ <https://www.climatecouncil.ie/carbonbudgets/technicalreport/>

⁸ Price, 2021; Smith, 2021



the physical potential of LULUCF was discussed at a meeting of LULUCF experts convened by the Secretariat on 3 June 2021.

3. *The implication of required compliance with EU and national targets (e.g. 51%), including treatment and inclusion of LULUCF:* Professor Brian Ó Gallachóir provided the Committee with an analysis of the existing and future EU targets and pathways to reach the 51% emission reduction target. Teagasc provided an analysis of scenarios of an agricultural sector contribution to meeting the 51% target, while Dr Hannah Daly provided an analysis of complementary scenarios of varying energy sector contributions to meeting the target.
4. *Feasibility, competitiveness impacts and implications for investment:* The Committee requested modelling of carbon budget scenarios by three groups (those using UCC TIM, Teagasc FAPRI-Ireland and the UL Goblin model), with scenarios and runs informed by the EPA inventory and projections. The Committee requested ESRI to use scenario outputs from TIM to inform further economic analysis.
5. *Distributional impacts, jobs:* Input was provided by Teagasc on the economic implications of different levels of mitigation, by UCD on investment and jobs impacts of TIM energy modelling outputs and by McKinsey on employment, investment and long-term competitiveness. Presentations were also provided on 28 June 2021 on skills, training and higher education requirements by the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS) and SOLAS.

In addition to the papers and presentations noted above, the Carbon Budgets Committee conducted a process of sectoral engagement with relevant government departments and agencies. Meetings about the agriculture, residential, transport, electricity and industrial sectors were held with the relevant bodies over the course of June and July 2021.

The work of the Carbon Budgets Committee, which met between 27 April and 9 September 2021, supported the calculation by the Council of the carbon budget proposals. At its meeting on 14 October 2021, the Council discussed potential carbon budget proposals and noted that the Climate Action and Low Carbon Development Act 2015 (Greenhouse Gas Emissions) Regulations 2021 were made on 12 October 2021. On 25 October 2021, the Council formally agreed the carbon budgets, as set out in the final version of the technical report.

Criteria under the Act

The Council is required to carry out its functions under Section 9 of the Act in a manner that is consistent with the ultimate objective specified in Article 2 of the United Nations Framework Convention on Climate Change. It is also required to have regard to a number of factors including the most recent greenhouse gas emissions inventory and projections, relevant scientific advice including with regard to the distinct characteristics of biogenic methane, international best practice in reporting greenhouse gas emissions and removals, the need to maximise employment and competitiveness and climate justice. The following sections set out the approach taken to achieve these obligations under the Act.



National Climate objective

The proposed carbon budgets set Ireland on a pathway consistent with the achievement of climate neutrality by 2050 with opportunities to achieve improvements in climate resilience and environmental sustainability and protect and enhance biodiversity. Analysis was carried out that showed that the proposed carbon budgets are consistent with achieving net zero emissions of long-lived greenhouse gases (carbon dioxide (CO₂) and nitrous oxide (N₂O)) and a significant reduction in methane (CH₄) emissions by 2050, thus establishing a climate-neutral economy.

Consistency with the Regulation

The proposed carbon budgets are consistent with Statutory Instrument S.I. No. 531 of 2021, Climate Action and Low Carbon Development Act 2015 (Greenhouse Gas Emissions) Regulations 2021, adopted on 12 October 2021. This requires the use of the GWP₁₀₀ metric for calculating and accounting for emissions and specifies the greenhouse gases to be taken into account in the carbon budgets, mandating a gross-net accounting approach for such emissions for carbon budgets.

A 51% reduction by 2030

The proposed budgets have been calculated, in line with S.I. No. 531 of 2021, to allow compliance with the 51% emission reduction by 2030 target. The Regulation requires the Council propose carbon budgets for all greenhouse gases reported by the EPA under the UNFCCC on the basis of Global Warming Potential values evaluated over 100 years, GWP₁₀₀, published in the IPCC Fifth assessment report (AR5). This ensures consistency with the EU who have adopted these values for reporting going forward from 2021 and is also consistent with UNFCCC reporting practices.

Objectives of the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement

Section 4.2 of the Technical Report on Carbon Budgets⁹ sets out how the Committee assessed the proposed carbon budgets in terms of an appropriate contribution for Ireland to the achievement of the ultimate objective of the UNFCCC (as per Article 2¹⁰) and the mitigation goals of the Paris Agreement¹¹. The Committee considered the question of the appropriate contribution for Ireland to the global effort to reduce greenhouse gas emissions and concluded

⁹ Published here; <https://www.climatecouncil.ie/carbonbudgets/technicalreport/>

¹⁰ <https://unfccc.int/resource/docs/convkp/conveng.pdf>

¹¹ https://unfccc.int/sites/default/files/english_paris_agreement.pdf Article 2 (1) aims to strengthen the global response to the threat of climate change, by '(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;'

that the carbon budgets must be at least consistent with the 1.5°C temperature target of the Paris Agreement. The consistency of the proposed carbon budgets scenarios modelled for the Committee with this target was assessed by calculating;

1. The temperature impact of the carbon budgets under different scenarios.
2. The gap between current global temperature levels and the 1.5°C target.
3. A comparison of the estimated temperature impact scaled up on a per capita basis to the global target.

Figure 2 shows the estimate of the potential impact on global temperature of Ireland’s emissions and removals of greenhouse gases based on the illustrative scenarios, and the “with additional measures” projection for comparison. It is important to reiterate that all the scenarios achieve the mandated target of a 51% emissions reduction by 2030. Beyond 2030, the scenarios assume a gradual increase in removals so as to achieve a balance of emissions which assures climate neutrality in 2050. It is clear that the scenarios differ in terms of the ultimate impact on warming. Table 1 shows the estimated temperature impact scaled up on a per capita basis to the global scale.

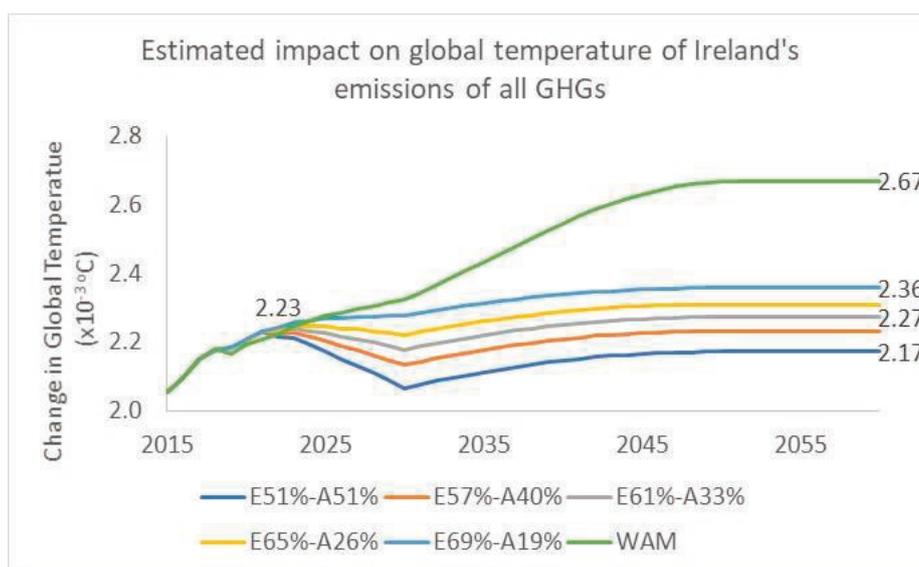


Figure 2 Estimated temperature response to emission of the main greenhouse gases based on the illustrative scenarios. The temperature impact of the proposed carbon budgets is at the scale of one-thousandths of a degree Celsius. (Carbon Budget Technical Report Figure 4-3)

The recently published IPCC AR6 Working Group 1 report provided an up to date assessment of the current attributable human-caused global surface temperature; the extent to which current global temperatures already exceed pre-industrial levels. This is estimated at 1.07°C, within a likely range of 0.8°C and 1.3°C.

In addition to the currently observed warming, based on the pathways by which global actions can achieve the 1.5°C goal, further warming is expected due to interactions with other gases. This is estimated as 0.2°C based on the analysis of the IPCC AR6 WG1 report. This leaves a

remaining temperature gap of 0.23°C expected to be taken up by global emissions of carbon dioxide.

Table 1 below summarises the results of the analysis for the five illustrative scenarios of carbon budgets modelled for the Committee. All scenarios pass the test comfortably, with the exception of E69-A19 scenario which marginally exceeds the estimate of the remaining temperature gap to the Global 1.5°C goal. The Council concluded that the proposed carbon budgets are broadly consistent with the legislated criteria regarding the UNFCCC and the Paris Agreement.

| Summary Table: Additional Impact of Ireland's emissions from 2020 on Global Temperature in 2050 | | | | | | |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Unit | E51%-A51% | E57%-A40% | E61%-A33% | E65%-A25% | E69%-A19% |
| Net Change in Global Temperature in 2050 relative to 2020 | x10 ⁻³ °C | -0.04 | 0.03 | 0.07 | 0.11 | 0.15 |
| Upscaled to Global level Temperature change to 2050 | °C | -0.05 | 0.04 | 0.11 | 0.16 | 0.24 |
| Remaining gap to global 1.5 degree goal (with confidence range) | °C | 0.23 (0.14- 0.32) |

Table 1 (Carbon Budget Technical Report Table 4-4)

Ireland's obligations under EU legislation

The proposed budgets will enable full compliance with the State's current Effort Sharing Regulation target of a 30% reduction by 2030 relative to 2005, and are evaluated as being consistent with existing obligations and the proposed targets for Ireland under the EU's 'European Climate Law' (Regulation (EU) 2021/1119) and its constituent parts, including the Effort Sharing Regulation (ESR). There may be a requirement to make use of the existing flexibilities to remain in compliance (such as banking and borrowing), as the timing of implementation may see a misalignment between national and EU targets.

Biodiversity

The Council's review of the analysis suggests that it is possible to implement carbon budgets while protecting and enhancing biodiversity. However, it is critical that further pressure on biodiversity from all aspects of climate mitigation measures is avoided, in particular from poor siting of renewable energy infrastructure and inappropriate land use change such as over-reliance on, or poor siting of, mono-species afforestation. Care must be taken to identify and implement measures that deliver "synergistic gains" for climate mitigation, biodiversity protection and restoration, and catchment resilience.



Use of latest inventories, projections and best practice reporting of emissions and removals

The proposed carbon budgets were calculated using data from the latest EPA inventories and projections. The modelling of carbon budget scenarios requested by the Committee was calibrated to and informed by data from the EPA inventory and projections¹².

Scientific advice including in relation to biogenic methane

The proposed carbon budgets are consistent with the latest science, including from the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) Working Group 1, while abiding by the legislated mandate and regulation (S.I. No. 531 of 2021). The IPCC AR6 updated our understanding of the global carbon budget and the need for net zero emissions of long-lived gases (e.g. CO₂ and N₂O) and for a strong, rapid and sustained reduction in CH₄ emissions. Recent analysis from the United Nations Environment Programme (UNEP) highlights the need for CH₄ emission reductions globally and emphasises the role of mitigation options for CH₄ emissions within the fossil fuel sector as a cost-effective option. Emission reductions in agriculture are seen as necessary but challenging. Additional research is required to enhance the mitigation options available.

Maximising employment, the attractiveness of the State for investment and long-term competitiveness of the economy

The proposed carbon budgets will have an impact on the economy, but failing to act on climate change would have greater consequences. The negative impacts can be mitigated by appropriate policies and supportive infrastructures, e.g. for training, while opportunities arising from a green reputation should be seized and innovation in products and services to support the low carbon economy should be made.

Climate Justice

It is the Council's view that the Paris Agreement represents the only international agreement on a fair approach to common but differentiated responsibilities and respective capabilities. An appropriate contribution to the Paris Agreement is an appropriate response to international climate justice.

People, nature and infrastructure in Ireland are already vulnerable to a range of climate impacts and these will only increase in the coming years as the climate continues to change. As identified by the Council in its Annual Review in 2020 and 2021, increasing adaptation efforts will be required to ensure that societal, economic and environmental goals remain achievable in the face of climate change. The 2021 Annual Review found that despite some progress at sectoral and local level, adaptation is still not adequately considered in a range of policies and initiatives. Policy continues to be concerned with decarbonisation with minimal

¹² EPA (2021). Ireland's Greenhouse Gas Emissions Projections 2020-2040. Available online: https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Ireland_2021_GHG_Emission_Projections_2020-2040.xlsx



consideration of the potential economic, as well as social and environmental, costs of climate change.



Annex 1 – List of invited members to the Carbon Budgets Committee

| Name | Organisation |
|------------------------|----------------|
| Marie Donnelly (chair) | CCAC |
| Alan Matthews | TCD (Emeritus) |
| Lisa Ryan | UCD |
| Brian Ó Gallachóir | UCC |
| Aoife Ahern | UCD |
| Stephen Treacy | EPA |
| Jim Scheer | SEAI |
| Keith Lambkin | Met Éireann |
| George Hussey | DHLGH |
| Aoife Parker Hedderman | DECC |
| Trevor Donnellan | Teagasc |
| Bill Callanan | DAFM |
| Hannah Daly | UCC |
| Kevin Hanrahan | Teagasc |
| David Styles | UL |
| Frank O'Mara | Teagasc |



Annex 2 – List of Climate Change Advisory Council and Carbon Budgets Committee meetings between March and October 2021

| Date | CBC | Climate Change Advisory Council | Other Meetings |
|-------------|-------------------------|---------------------------------|--|
| 05-Mar-21 | | Climate Change Advisory Council | |
| 23-Mar-21 | | | Preparatory Meeting |
| 06-April-21 | | | Preparatory Meeting |
| 14-Apr-21 | | Climate Change Advisory Council | |
| 27-Apr-21 | Carbon Budget Committee | | |
| 30-Apr-21 | Carbon Budget Committee | | |
| 13-May-21 | | Climate Change Advisory Council | |
| 17-May-21 | Carbon Budget Committee | | |
| 24-May-21 | Carbon Budget Committee | | |
| 03-Jun-21 | | | Meeting on LULUCF |
| 14-Jun-21 | Carbon Budget Committee | | |
| 18-Jun-21 | | Climate Change Advisory Council | |
| 21-Jun-21 | Carbon Budget Committee | | |
| 22-Jun-21 | | | Expert Meeting on the Science of National Mitigation Efforts |
| 28-Jun-21 | Carbon Budget Committee | | |
| 05-Jul-21 | Carbon Budget Committee | | |
| 12-Jul-21 | | Climate Change Advisory Council | |
| 22-Jul-21 | | Climate Change Advisory Council | |
| 02-Sep-21 | | Climate Change Advisory Council | |
| 09-Sep-21 | Carbon Budget Committee | | |
| 15-Sep-21 | | | Meeting on LULUCF |
| 16-Sep-21 | Carbon Budget Committee | | |



| | | | |
|------------------|--|----------------------------------|--|
| 22-Sep-21 | | Climate Change Advisory Council* | |
| 14-Oct-21 | | Climate Change Advisory Council | |
| 25-Oct-21 | | Climate Change Advisory Council | |
| | | | |

*The Carbon Budget Committee were invited to attend this meeting to discuss the draft Carbon Budget Technical Report.

Adoption of the first Irish Carbon Budget Programme, 2021-2035

Opening statement for the Oireachtas Joint Committee on Environment and Climate Action

Professor Barry McMullin
Faculty of Engineering and Computing
Dublin City University

12th January 2022



I thank the Joint Committee for the opportunity to provide evidence on the crucial subject of Ireland's first statutory carbon budget programme, under the [2021 Climate Act](#). I am a Professor in the Faculty of Engineering and Computing at [DCU](#), researching national energy system decarbonisation. My comments will focus primarily on the statutory requirement for the carbon budget programme to be consistent, in both design and execution, with the [Paris Agreement](#), and specifically the commitment to quantitative limits on global temperature rise, achieved on a basis of *equity* and informed by the *best available science*.

Under the Act, the [Climate Change Advisory Council](#) have proposed the [initial programme of three five-year carbon budgets](#) (with the third on a provisional basis). It is now up to the Oireachtas, informed by the views of this Committee, either to adopt these budgets as proposed or to revise them on some specified grounds. My view is that the candidate budgets proposed by the Council should be regarded as *absolute maxima*; and that the Committee should give serious consideration to revising them *downward significantly*. This is based on multiple lines of argument, which I will outline as briefly as possible.

The current [Programme for Government](#) committed explicitly to an "average" reduction in total emissions of 7% per year over the period 2021-2030. Using the baseline of 2018 emissions specified in the Act, this would allow a cumulative 10-year total of **468 MtCO₂eq**; whereas the Council's proposal is for **495 MtCO₂eq**, cumulatively equivalent to an annual reduction rate of just under 6% per year. While the Programme for Government properly fell outside the formal legal scope of the Council process, it is surely still relevant to the deliberations of this Committee and of the Oireachtas. Accordingly, I suggest that the Committee should consider revising down the first two proposed budgets by a combined amount of **at least 27 MtCO₂eq** to align them with the Programme for Government. Note that the Committee [should resist deflection into a narrow focus on the projected annual emissions level in 2030](#): this is simply not equivalent to the original Programme for Government commitment on any good faith basis of "best available science".

Separately, as explicitly required by the Act, the Council have assessed their proposed budget programme for consistency with the Paris Agreement. They have emphasised that this assessment depends not just on the budgets themselves, but on how they are allocated between sectors (which strongly affects the *relative* mitigation of different greenhouse gases), and on unavoidable value judgements required to interpret the obligations of the Agreement. While they concluded that their proposed budget programme is "broadly consistent" at least with the temperature goals of the Agreement, they were also clear that their assessment represented only a *minimal* test of Paris consistency; and took the position that the judgements involved ultimately go beyond the remit of the Council. It is therefore proper that this Committee should now make its own assessment and determination on all these issues.

A key aspect of this is *relative historical responsibility* for climate change, and the need to treat this on an equitable basis between countries: those with greater historical responsibility have a correspondingly greater obligation to act. This is a complex issue but directly affects the assessment of carbon budget consistency with the Paris Agreement through the choice of a *reference year* for temperature increase. In effect, differentiated historical responsibility is waived for all emissions before this reference year. In their assessment the Council adopted a reference year of 2020, but without offering any explicit rationale for this. In [previous work with colleagues at DCU and TCD](#) I have argued that 2015 should be regarded as the latest defensible reference year for this purpose, being the year when the Paris Agreement was adopted. Indeed, there is a good case for extending further back, even to

1992, when the [UN Framework Convention on Climate Change](#) was agreed. Since the Council published their budget proposals I have initiated, with DCU colleagues, independent analysis of the effect of varying the reference year. Preliminary results indicate that, using the Council's own methodology, but with a reference year of 2015, all but one of the scenarios considered by the Council would then *fail* the Council's own test for Paris Agreement consistency, strongly indicating a need for further reduction in the proposed budgets to adequately align with the intentions of the Act.

Next, regulations issued under the Act currently direct that certain emissions should be omitted from the carbon budget framework, namely those arising from international aviation and shipping. These are significant for Ireland, amounting annually to just under 4MtCO₂eq in 2018, primarily in aviation. However the fact that *accounting* for such emissions falls outside the budget framework does *not* mean they can be simply ignored in the setting of the budgets themselves. On the contrary: as already noted, the budget process is required to operate on a basis *consistent* with the Paris Agreement. Recent [independent legal analysis](#), commissioned by the Brussels-based [Transport and Environment NGO](#), is unequivocal that such emissions fall within the scope of the Paris Agreement. Accordingly, they must still be provided for *in some way* in the national budget process prescribed by the Act. The Council appear to have taken the view that this particular aspect of Paris consistency fell outside the scope of their assessment. On that basis, it therefore falls to this Committee to make such provision. Again, this indicates that the proposed budgets should be reduced, *at least* by the projected national share of such international aviation and shipping emissions. A *minimum* estimate of this would be **40MtCO₂eq** over the period 2021-2030.

A further critical consideration is *prudence*, as explicitly expressed in the Framework Convention through the precautionary principle. The Council's Paris test focused on the lower temperature goal of the Paris Agreement, namely limiting to no more than 1.5°C increase compared to pre-industrial conditions. This was very proper in the light of the [IPCC Special Report on Warming of 1.5°C](#) indicating rapidly escalating risks of severe global disruption as this threshold is exceeded. However, the relationship between that temperature limit and the permissible global GHG budget is still subject to very significant scientific uncertainty. It appears that, in effect, the Council adopted a budget based on just a 50% probability of meeting this temperature goal; i.e., no better than a coin toss. I urge the Committee to explicitly consider whether this represents an adequately prudential approach; if not, then the Irish budgets should be further reduced to reflect this.

It should be noted that the equity requirements of the Paris Agreement extend to at least the further dimensions of differentiated vulnerability and capacity to act; and arguably also to reparation for ongoing, severe, and highly unjust impacts of climate change. While the national claim on the global carbon budget is not the sole, or indeed the main, potential mechanism for responding to these issues, I would nonetheless urge the Committee to still bear them carefully in mind in assessing *overall* consistency with the Paris obligations.

Moving on from the immediate adoption of the carbon budgets, the next key step under the Act will be the division of these budgets across sectors, i.e., setting the sectoral emissions ceilings. As this is explicitly a Government responsibility, the Council properly refrained from prescribing any single sectoral breakdown, but did provide a set of five illustrative scenarios specifically exploring different potential divisions between the two largest emissions sectors, being agriculture and energy (including electricity, transport and heating). This was essential to inform their assessment of consistency with the Paris temperature goal: even though all these scenarios are designed to correspond to essentially the same aggregate carbon budget programme, as expressed in carbon dioxide equivalent emissions (CO₂eq), they differ

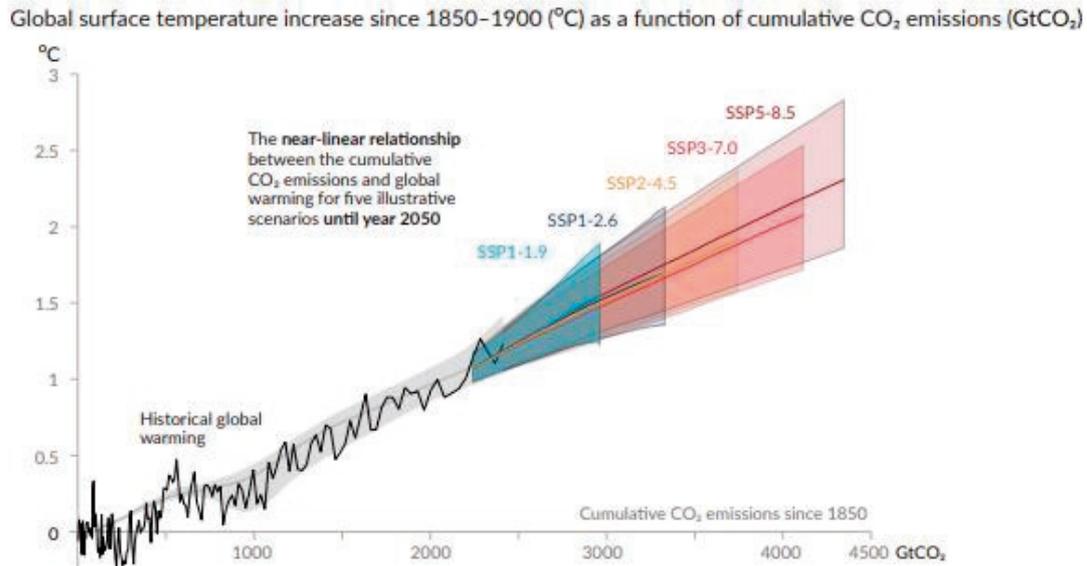
very significantly in their ultimate contribution to global warming. While the detailed interactions are complex, and will benefit from further scientific analysis, it is clear that the scenarios allocating relatively larger budget shares (or lesser emissions reduction) to the agriculture sector also correspond to greater absolute levels of warming, and therefore greater risk of failing the requirement of consistency with the Paris Agreement. I would urge the Committee to give early consideration to this issue, and offer relevant advice to the Government *in advance* of the setting of the sectoral emissions ceilings.

While adopting the national carbon budgets and corresponding sectoral ceilings are essential steps in Ireland's climate action their effectiveness will hinge on actual *delivery*. It is critical to recognise that, under the 2021 Act, carbon budgets are no longer mere "targets" to be "aspired to"; they are self-imposed *quantitative statutory constraints*, legally binding upon the state. This is a radically new and extremely challenging framework for our political and policy institutions. This is entirely justified by the scale and urgency of the climate emergency, but does now demand an urgent re-evaluation of our governance mechanisms to ensure that they are commensurate with this task. It is no longer a question of merely "doing our best": we must *do what is necessary*. In particular, there is a very strong case for the *early* establishment of mechanisms to dynamically regulate, as and when necessary, the upstream *inputs* to Irish societal activities, such as fossil fuels, that ultimately give rise to GHG emissions. This would effectively create a *backstop*, ensuring that carbon budget constraints would be reliably met, regardless of shortfalls in the effectiveness of other, less direct, measures. Given the overriding need for justice, equity, and national solidarity in these actions, this should be in the form of a system of *equitable rationing*. I have previously [advocated](#) for the deployment of one particular such system, known as [Tradeable Emissions Quotas or TEQs](#). But whether through that approach or some other, I urge the Committee to consider this need for much stronger, transparent, and societally inclusive, national carbon budget governance at the earliest possible opportunity.

My final comment is in relation to the international dimension of climate action. Through the 2021 Act, and the implementation of its voluntary, nationally determined, carbon budget process, explicitly bound by the Paris Agreement goals, Ireland has sought to take a leadership role in modelling how the Agreement can be effectively delivered on. However, the harsh reality remains that, unless those countries responsible for the great bulk of emissions adopt similarly ambitious measures, *the Agreement will still fail*, with devastating consequences for current and future generations in all countries across the globe — including Ireland of course. As we celebrate the centenary of the establishment of the state, we can take some justified pride in our record, as a small independent nation, in advancing progressive multilateral action through active diplomacy. This was most recently manifested through our rapid mobilisation of diplomatic support from other EU member states during the ongoing BRexit process, and through our success in being elected to the UN Security Council for the 2021-22 term. I suggest that this Committee now initiate an urgent collaborative activity with the Committees on EU Affairs and on Foreign Affairs and Defence to consider how we can significantly upscale and *prioritise* Ireland's diplomatic effort on climate action so that our newly ambitious local efforts can make the maximum possible contribution to catalysing the required *emergency* global response.

Opening Statement

Emeritus Professor John Sweeney
Maynooth University



The 6th Assessment Report of the IPCC has confirmed that a strong linear relationship exists between cumulative greenhouse gas emissions and the rise in global temperature. This identifies the existence of a finite remaining carbon budget available to avoid warming beyond the dangerous climate change Paris Agreement limits of 1.5°C and 2°C above pre-industrial levels. The remaining carbon budget to have a likely chance of limiting warming to these levels equates to approximately 9 and 25 years respectively based on emissions at current levels. Global temperatures have already risen by 1.1°C since pre-industrial times and Irish temperatures have matched this quite closely, having risen by 0.9°C in the past 120 years, much of this having occurred in the period since 1980.

Article 2 of the Paris Agreement commits Ireland to pursuing efforts to limit the global temperature increase to 1.5°C above these levels. The Agreement also binds signatories to an implementation that reflects 'equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances'. Recent work suggests that Ireland's 'Fair Share' of the remaining global carbon budget will be exhausted within 3-5 years.

The European Parliament in June 2021 set targets to reduce net EU emissions by 55% by 2030, from 1990 levels, and eliminate net emissions by 2050. The 2030 target has been provisionally agreed between the Parliament, Commission and Council. Though commensurate with the Climate Action and Low Carbon Development (Amendment) Act 2021, the budgets to 2030 proposed by the CCAC currently provide for a reduction over 1990-2030 of less than 45%, an aspect that will be dealt with by other contributors.

National Carbon Budget

The Climate Change Advisory Council's proposed 5-yearly Carbon budgets (295/200/151 Mt CO_{2eq}) are consistent with emissions in 2018 of 68.3Mt CO_{2eq} reducing to 33.5Mt CO_{2eq} in 2030, thus allowing compliance with the 51% emission reduction target. Several issues of timing arise, however:

1. The average annual percentage reduction required in the first compliance period is 4.8%, as opposed to 8.3% in the second. This means that any slippage in the period 2021-2025 will require an extremely onerous reduction in 2026-2030. A significant risk of this occurring exists, since Action 7 of the Climate Action Plan (CAP 22) does not envisage the incorporation of the legally adopted national and sectoral budgets in the plan until Q4 2022, i.e. until 40% of the current 5-year budget has elapsed. A failing trajectory over the next 5 years will undoubtedly result in litigation similar to what has been seen elsewhere in the EU.
2. Each year, and specifically for 2022, the Climate Change Advisory Council is obliged to report by 30 October and to request of relevant Ministers thereafter a plan for corrective action should their

Sectoral Emissions Ceiling not be on target. Recommendations made to them by the CCAC will require their response within 3 months. This potentially takes corrective action proposals into 2023, and beyond the time when the 2022 Climate Action Plan has been formulated (Q4 2022). By early 2023 the five year budget period will be advanced to the point where corrective action to stay on budget may require radical short term actions not currently contemplated.

3. The time lag for the availability of national emissions data hampers the work of the CCAC and the preparation of the CAP updates. Provisional data for emissions in 2020 were published by the EPA in September 2021 and final figures for 2020 will only be submitted to the EU Commission in spring 2022. To provide a basis for the CCAC report and the CAP 2022 it is highly desirable that advance access be given to provisional 2021 data during summer 2022. The MoU between the CCAC and all relevant government Departments and Agencies of May 2021 forms an essential recognition of these aspects.

Given the uncertainties surrounding the first national carbon budget period, the justification for leaving the maximum reduction rates to the second budget period is not warranted under the Precautionary Principle (Article 191 of the Treaty on the Functioning of the European Union). The rejection of a linear reduction pathway on technical and feasibility grounds is not consistent with action to tackle an emergency situation. Radical annual reduction solutions, appropriate to an emergency situation, do exist in sectors such as transport and agriculture not requiring additional infrastructure or technology.

Sectoral Emissions Ceilings

Allocation of sectoral emissions ceilings is a political choice. The scientific and legal imperative is that ceiling allocations add up to the national carbon budget, compliance is monitored, and corrective action is taken annually through the revision of the Climate Action Plan. The main sectors for allocation are:

Agriculture

| No of Farms 2020 | % national emissions | Average income Dairy | Average income cattle rearing | Average income Cattle other | Average income Sheep | Average income Tillage |
|------------------|----------------------|----------------------|-------------------------------|-----------------------------|----------------------|------------------------|
| 93,244 | 37.1 | €74,249 | €9,043 | €15,023 | €17,913 | €32,100 |

52% of farm households have off-farm employment. 67% of farms have no debt. Emissions from agriculture are projected to increase by 3.0% over the period 2021-2030 under the With Existing Measures scenario.

Transport

| Households with at least 1 car (2016) | Total vehicles (2019) | % national emissions | Average Household Income (national) |
|---------------------------------------|-----------------------|----------------------|-------------------------------------|
| 1,390,000 | 2,200,000 | 17.9 | €51,458 |

Emissions from transport are projected to increase by 5.7% over the period 2021-2030 under the With Existing Measures scenario

Residential

| Households | % national emissions | Average Household Income | Energy use: coal | Energy use: Peat | Energy use: oil | Energy use: gas | Energy use: renewables | Energy use: electricity |
|------------|----------------------|--------------------------|------------------|------------------|-----------------|-----------------|------------------------|-------------------------|
| 1,900,00 | 12.3 | €51,458 | 6 | 6 | 42 | 19 | 3 | 24 |

52% of households have some form of debt. Emissions from the residential sector are projected to decrease by 24.1% over the period 2021-2030 under the With Existing Measures scenario

Energy

| % national emissions | Renewable electricity |
|----------------------|-----------------------|
| 15.0 | 42.1% |

Emissions from the energy industries sector are projected to decrease by 11.9% over the period 2021 to 2030 under the With Existing Measures scenario.

Manufacturing & Industry

| % national emissions | Total Labour Force (includes services and all categories) |
|----------------------|---|
| 7.8 | ~2.25M |

Emissions from the Manufacturing & Industry sector are projected to remain at the same level over the period 2021 to 2030 under the With Existing Measures scenario.

Conclusions

1. The allocation of sectoral budgets will primarily require substantial changes in agricultural and transport emissions. As the primary polluter, agricultural emissions reductions will determine the burden to be placed on the rest of society.

| % Reduction in Agricultural Emissions 2021-2030 | Remaining % Reduction Burden on other sectors (Transport, Residential, Energy, Industry, Waste) |
|---|---|
| 51 | 51 |
| 33 | 60 |
| 15 | 80 |
| 10 | ?? |

Commitments from COP26 relevant to Sectoral Emission Ceilings

- (i) *A total of over 100 countries representing 70% of the global economy and nearly half of anthropogenic methane emissions Countries committed to a collective goal of reducing global methane emissions by at least 30% from 2020 levels by 2030.*

| Hypothetical Decrease in Agricultural Emissions by 2030 | Hypothetical decrease in Methane Emissions by 2030 | Consequent required decrease in remaining Agricultural Emissions by 2030 |
|---|--|--|
| 33% | 10% | 77% |

2. Only an immediate policy change to ensure significant near-term and ongoing reduction in methane emissions can protect livestock agriculture from far more onerous, sudden and less planned mandatory and very rapid emissions reductions to meet carbon budgets.

(ii) Calls upon Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition;

In 2019, the CSO estimated that €3.0 Billion was raised in energy taxes, €0.4 Billion was spent on environmental subsidies related to energy and emissions, and fossil fuel subsidies were €2.4 Billion. The 2021 Climate Action Plan targets the production only of a roadmap to transition away from fossil fuel subsidies by Q1 2024.

3. The production of only a roadmap in 2024 provides an over-lengthy delay in removing fossil fuel subsidies and this action should take place in 2022 with a view to incorporation in the 2022 financial budget and implementation commencing 2023.
4. As noted by the CCAC, a reduction in the application of Nitrogen would bring climate, biodiversity and water quality benefits and assist attainment of sectoral budget targets. Increased fertiliser usage continues to drive emission increases in N₂O, CH₄, NH₄ as well as reductions in water quality and biodiversity. Consideration should be given to the reduction of chemical Nitrogen in agriculture to 325,000t by 2025 and not 2030 as envisaged in Action 304 of the Climate Action Plan.
5. In reporting on their efforts to reach carbon neutrality and comply with relevant sectoral carbon budgets, firms should be obliged to account for Scope 3 emissions (supply chain) and include them in any assessment of expansion plans. Firms should be required by procurement policies to incentivise their suppliers to reduce their emissions where these occur within the jurisdiction.

Issues relating to timing, scope and implementation of key CAC climate actions, data availability, and policy slippage, currently render the attainment of legally binding carbon budget targets seriously at risk.

Joint Committee on Environment and Climate Action

Consideration of carbon budgets proposed by the Climate Change Advisory Council

Written statement of

Dr. Andrew Jackson

UCD Sutherland School of Law

For meeting on 12 January 2022

1. My apologies to the Committee for being unable to give oral evidence today. I would like to focus here on two points: the Climate Change Advisory Council's (CCAC) legal obligations in preparing and proposing carbon budgets; and the Minister and Government's obligations in considering, amending, finalising, and approving carbon budgets.
2. In my opinion, CCAC has not complied with its legal obligations in preparing and proposing carbon budgets under s.6A of the Climate Action and Low Carbon Development Act 2015 (as amended)(the Climate Act). As detailed below, the Minister and Government are under similar obligations, via s.3(3), in considering, amending, finalising, and approving carbon budgets and sectoral emissions ceilings. The Minister and Government should not make the same mistake as CCAC here and may comply with their legal obligations by approving carbon budgets (and within this overall ceiling, sectoral emissions ceilings) that are significantly smaller than those proposed by CCAC.

CCAC

3. Under s.6A(9)(a) of the Climate Act, CCAC must carry out its functions under s.6A (Preparation of carbon budgets) in a manner that is consistent with the ultimate objective specified in Article 2 of the UNFCCC and the matters specified in subparagraphs (i) and (ii) of section 3(3)(a). Subparagraph (ii) of

section 3(3)(a) refers to “the steps specified in Articles 2 and 4(1)” of the Paris Agreement.

4. The ultimate objective specified in Article 2 of the UNFCCC is “*stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system*”.
5. The Paris Agreement (per its Article 2) aims to enhance the implementation of this UNFCCC objective. Article 2 of the Paris Agreement contains the following steps of relevance:
 - a. Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change; and
 - b. Implementing the Paris Agreement “*to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.*”
6. In turn, Article 4(1) of the Paris Agreement requires Parties to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.
7. The Committee will note that both Articles 2 and 4(1) of the Paris Agreement refer to the need for action to be taken based on *equity*. Elsewhere, the Paris Agreement specifically obliges developed country Parties such as Ireland to *take the lead* by undertaking economy-wide absolute emission reduction targets (Article 4(4)).
8. In addition to the obligations on CCAC to perform its functions consistently with equity, common but differentiated responsibilities, etc., CCAC must separately, under s.6A(9)(b), have regard to climate justice in performing its functions under s.6A. There is clearly some overlap between s.6A(9)(a) and (b),

with the obligation to perform functions consistently with various matters under s.6A(9)(a) representing a stronger obligation than the “have regard to” obligation under s.6A(9)(b).

9. In its [Technical Report on Carbon Budgets of October 2021](#), CCAC states (at p.8) that “An appropriate contribution to the Paris Agreement is an appropriate response to international climate justice.” On the question of what this appropriate contribution should be for Ireland, CCAC states (at p.72; emphasis added):

*“In its deliberations, the Committee considered the question of what Ireland’s appropriate contribution would be to the global effort to reduce greenhouse gas emissions. **Any such determination has implicit or explicit implications around climate justice, historical responsibility, equity and equality. It is not the job of the Council or the Carbon Budget Committee to make such value judgements.** The Committee concluded that Ireland’s carbon budgets for the periods 2021- 2025, 2026-2030 and 2031-2035 must at least be consistent with the temperature goals of the Paris Agreement; the ‘Paris Test’, developed by the Secretariat under the guidance of the Carbon Budget Committee. This approach makes the lowest number possible of implicit assumptions.”*

10. Contrary to the words in bold/underlined above, CCAC is *specifically required by law* (s.6A(9)(a) of the Climate Act) to carry out its functions in a manner consistent with implementation of the Paris Agreement “to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.” Explicitly excluding such considerations is, in my view, a fundamental legal flaw in CCAC’s approach. CCAC is obliged by s.6A(9)(a) to act consistently with, inter alia, *all of* Article 2 of the Paris Agreement (Article 2(1)), while excluding consideration of equity and the principle of common but differentiated responsibilities and respective capabilities (Article 2(2)), CCAC’s ‘Paris Test’ is not a ‘Paris Compliant Test’.
11. Having thus abandoned consideration of equity and historical responsibility on the ground that such consideration is not its job, CCAC summarises its process (at p.75) as follows:

“Assessing entitlement or ‘fair shares’ are ethical and political judgements that can be fraught with difficulty. This [CCAC’s] ‘Paris test’ takes a different approach to consider what the temperature outcome would be if every country in the world, 1) had the same starting point as Ireland and 2) reduced emissions in the same speed and amount. In other words, on a per capita basis, we scale up Irish emissions to the global level. Different approaches could be taken (Price 2021, Smith 2021). This approach does not take into account previous actions nor does it take into account feasibility or cost.”

12. It is worth noting in this regard that:

- a. Every country in the world does not have the same starting point as Ireland (Ireland has amongst the highest per capita emissions globally and has benefited from its past high emissions);
- b. Climate change is an issue of *cumulative emissions* since the industrial revolution, so failing to “take into account previous actions” ignores historical responsibility (NB. that previous actions can justifiably be excluded in this way is an “implicit assumption” apparently overlooked by CCAC in its stated attempt to minimise such assumptions);
- c. Every country in the world does not have the same capability to reduce emissions in the same speed and amount. Nor are the costs the same.

13. CCAC appears to have been aiming for some kind of scientific ‘value-neutrality’ where this is not possible and where this runs counter to its legal obligations. That is, having stated that CCAC does not want to engage in “value judgements” about climate justice, historical responsibility, equity and equality, CCAC proposes a calculation method that is self-evidently not neutral on these issues: avoiding addressing questions of historical responsibility and equity does not amount to staying neutral on such questions. As part of its deliberations, CCAC received excellent papers on effort sharing by its research fellows, [Smith \(2021\)](#) and [Price \(2021, plus addendum\)](#). These identify and discuss different approaches to sharing out the remaining global carbon budget. At pp.4-5, for example, Smith (2021) provides a table summarising seven different approaches to sharing out the global carbon budget, with a commonly-used method (“grandfathering”) said to be “generally viewed as morally unacceptable” (citing Giraud et al, 2017), for example. However, when it comes to justifying its own approach, CCAC simply states “Different approaches

could be taken (Price 2021, Smith 2021)”; it notes that its own approach “does not take into account previous actions nor does it take into account feasibility or cost”; and it claims, without justification, that its approach “makes the lowest number possible of implicit assumptions.” In a [note](#) that appears to have formed the basis for CCAC’s adopted approach, the CCAC Secretariat describes the approach of scaling up Ireland’s emissions profile to the global population as “highly simplistic”.

14. A [recent article](#)¹ authored by many of climate justice’s leading scholars makes criticisms that can be transposed directly to CCAC’s approach: “As there is no ethically neutral position in the climate context, pretending to be value-free obscures unconscious biases under a veneer of neutrality, particularly in quantitative modelling. Analysis may be rigorous, replicable and systematic, but it should also explicitly outline normative assumptions and values within the specific political landscape of climate equity debates. Transparency about values enables all users to place the analysis in the context of other work and evaluate it accordingly.”
15. In its [Technical Report on carbon budgets](#), CCAC itself concludes (at p.75) “that the proposed carbon budgets are broadly consistent with the legislated criteria regarding the UNFCCC and the Paris Agreement”. I do not agree, and in any event, “broad consistency” is not what CCAC should be aiming for when it comes to its legal obligations under the Climate Act.
16. To be clear: CCAC could have tried to construct an argument to the effect that its method for proposing carbon budgets was somehow consistent with equity and common but differentiated responsibilities and respective capabilities. It did not do so. The legal flaw is that it *explicitly excluded* such issues from its consideration, despite the clear obligations in s.6A(9) of the Climate Act. As [Dooley et al \(2021\)](#) conclude, “analysis [of equity in the climate context] should inform, rather than supplant, the political process”. The carbon budgeting process under the Climate Act is specifically designed to ensure this: CCAC proposes budgets, which are then to be considered, potentially amended, and ultimately approved by the Government, with input from the Oireachtas. Within this framework, there is no danger of CCAC supplanting the political process in

¹ Dooley et al (2021) Ethical choices behind quantifications of fair contributions under the Paris Agreement, Nature Climate Change 11: 300-305.

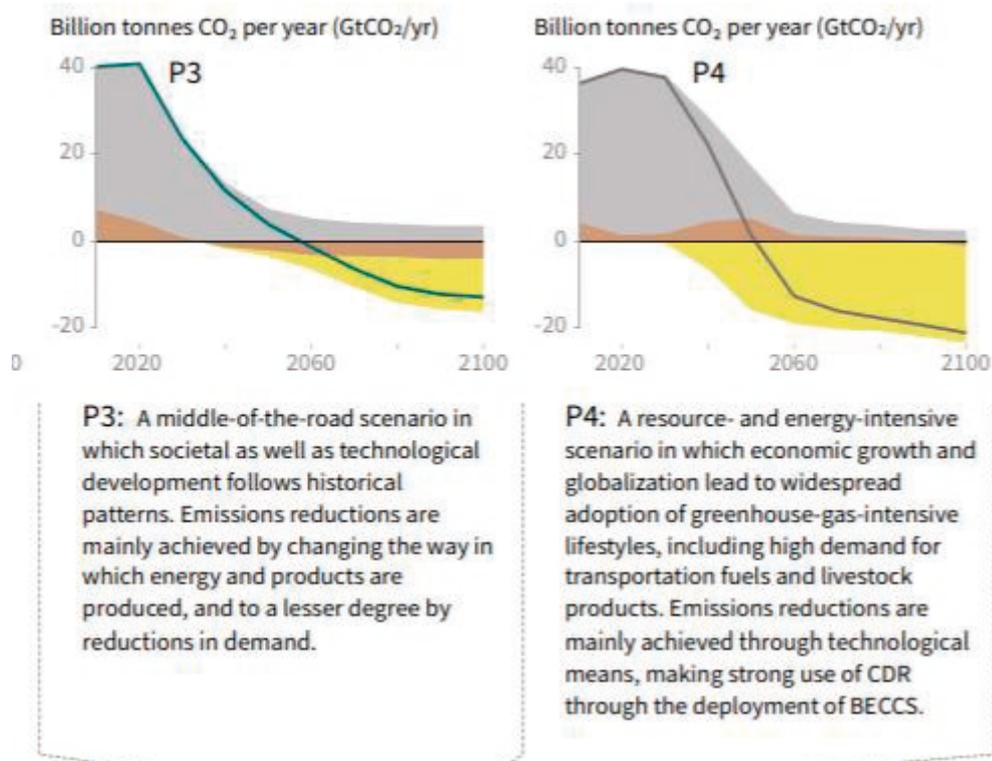
complying with its obligation to act consistently with considerations of equity and common but differentiated responsibilities in proposing budgets.

The Government and Minister

17. As noted above, the Government and Minister should avoid making the same legal error in considering, amending, finalising, and approving carbon budgets. As stated above, to comply with their legal obligations, in my view the carbon budgets should be significantly reduced in size before being approved. Like CCAC, the Government and the Minister, via section 3(3) of the Climate Act, must exercise their carbon budgeting functions consistently with the UNFCCC and Paris Agreement obligations set out in paragraphs 4-6 above.
18. As the Committee will be aware, the Government committed in the Programme for Government to *“an average 7% per year reduction in overall [...] emissions from 2021 to 2030 (a 51% reduction over the decade) and to achieving net zero emissions by 2050.”*
19. The 7% per annum reduction figure had its origins in a [2019 UNEP report](#), which said that, on *global average*, a 7.6% emissions reduction per year would be needed between 2020 and 2030 for a 66% chance of limiting heating to 1.5°C.
20. Note four things: First, the Government opted for a target in the Programme for Government (7%) that is *below* UNEP’s global average. Secondly, UNEP states in respect of its 7.6% annual reduction figure (starting in 2020) that *“Evidently, greater cuts will be required the longer that action is delayed.”* Since emissions have not reduced since 2020, the 7.6% global average figure is now out of date and needs to be increased. Thirdly, and very importantly, UNEP’s 7.6% figure is predicated on vast so-called negative emissions – that is, the need to somehow remove >200 Gt of CO₂ globally from the atmosphere by the end of this century (see *“Below 1.5°C in 2100 scenario”* on p.23 of UNEP’s report). We have no plan for this globally or nationally, and the IPCC notes that it is a *“major risk”* in seeking to limit heating to 1.5°C. CCAC highlighted these assumed large-scale negative emissions in its recent [Annual Review 2021](#), noting in this regard that the State has not yet delivered its Long-term climate strategy to the European Commission, now more than two years after the legal deadline of 1 January 2020. Fourthly, the Climate Act targets and CCAC’s proposed carbon budgets do not cover emissions from international aviation

or shipping, despite the fact that these are within the scope of the Paris Agreement.

21. The public debate seems to have focused almost exclusively on how Ireland's commitment to reduce emissions by 2030 might be achieved. However, given that Ireland's 2030 target assumes massive negative emissions later in the century, the public debate (and the Committee's current work) should surely *also* engage *now* with how Ireland's share of this can and will be achieved. The current *assumption* is that a large part of this (e.g. the area shaded in yellow below in two of the IPCC's illustrative model pathways from its [Special Report on 1.5°C](#))² could perhaps be achieved by so-called Bioenergy with Carbon Capture and Storage (BECCS): that is, planting millions or billions of trees to sequester carbon; burning the wood in power plants and capturing and storing the carbon released. Numerous questions immediately arise: e.g. where will these trees and power stations go in Ireland, what would the impacts of such planting, felling, and power plant construction/operation be, and anyway where is the evidence of planning *now* for this at the required scale (forests take decades to establish, after all)?



² The brown areas represent removals in the Agriculture, Forestry and Other Land Use (AFOLU) sector.

22. Focusing just on agriculture and land use emissions, based on historic and projected emissions from these sectors from the EPA, CCAC stated in its recent Annual Review 2021 that “By 2050, carbon dioxide removals of 26 Mt CO₂ eq balance the projected residual emissions. Land-use in Ireland is currently a net source of emissions. Significant progress in the implementation of action to reduce or eliminate emissions and to enhance removals, including afforestation, is required in the near term in order to realise removals in the longer term. **It is not clear how removals at this scale would be achieved, and would almost certainly involve the deployment of novel technologies.**” Figure 6.2 of the Annual Review illustrates the scale:

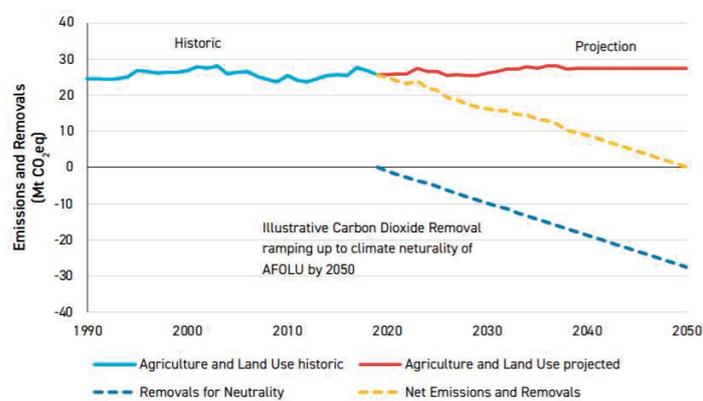


Figure 6.2: GHG emissions from agriculture and LULUCF including an illustrative pathway for removals to achieve neutrality by 2050⁵⁴⁷

23. Note that this figure of 26 MtCO₂ eq to be removed *each year* (by 2050, just 28 years from now) to achieve climate neutrality from the agriculture and land use sectors alone is equivalent to about 40% of Ireland’s total emissions in 2018. How (even broadly) would this be achieved? In its [Technical Report on carbon budgets](#), CCAC concludes “it is clear that forest plantation rates need to significantly increase and that preparations need to be made for negative emissions technologies.” But how does one prepare for technologies that do not exist or do not exist at scale? The Committee surely needs an answer to these sorts of questions as part of its current work. While not all of the required removals are to be delivered over the life of the first three carbon budgets, these budgets nevertheless assume that very large-scale negative emissions will be achieved by Ireland in time. How?

24. CCAC’s [Technical Report](#) (at p.86) cites Price (2021) to the effect that a cumulative total of 200 MtCO₂ by way of removals “would represent a challenging

but feasible assessment for planning and budgeting purposes” in Ireland,³ with the ability of land use removals reportedly saturating at 100 MtCO₂, the other 100 MtCO₂ presumably to be achieved by unknown “negative emissions technologies” (which will (need to) become “more prominent in the long term” according to CCAC). Note that a need to remove 26 MtCO₂ eq per annum on an ongoing basis to achieve carbon neutrality in the agriculture and land use sectors in Ireland, as envisaged in the figure above, is incompatible with an available cumulative total of 200 MtCO₂ in removals potential. That is, the removals needed to balance (or ‘net zero’) the projected level of agricultural and land use emissions from 2050 onwards would use up Ireland’s entire carbon removals potential within 8 years. These sorts of discrepancies or mismatches between the amounts of carbon needing to be removed and the amounts it will be practically possible to remove led [McMullin et al \(2020\)](#) to conclude that “much more ambitious, near-term reduction of gross CO₂ emissions remains the most urgent policy priority.” Conforming with the cumulative removals ceiling of 200 Mt CO₂ cited by CCAC would, according to McMullin et al, “imply the achievement of national net-zero territorial CO₂ emissions by about 2035–2040, i.e. much earlier than the currently “most ambitious” net-zero target of about 2050.”

25. In summary, if we do not have good answers *now* as to:

- a. how much the Government is planning to achieve by way of CO₂ removals (NB. as noted above, the State has not produced the required Long-term climate strategy that would reveal this, despite an EU law deadline of 1 January 2020);
- b. whether this exceeds the amount assumed to be achievable;
- c. how and when the required scale of removals can and will be achieved; and
- d. how in practical terms the Government is planning for this *now*,

in my view the Government/Oireachtas cannot fairly burden younger and future generations with achieving such removals by approving the carbon budgets proposed by CCAC (or anything like them). In terms of Climate Act obligations, approval in such circumstances would appear inconsistent with the principle of (intergenerational) equity.

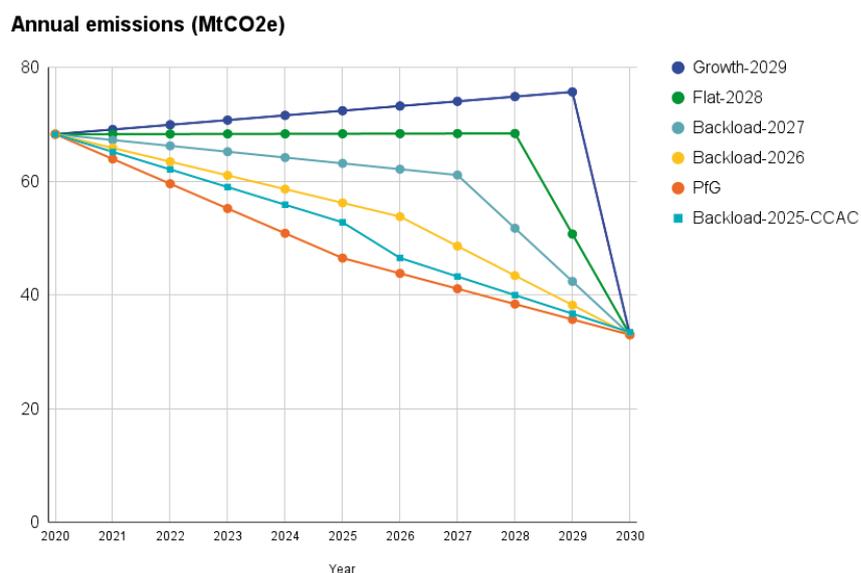
³ See [McMullin et al \(2020\)](#), which makes it clear that 200 MtCO₂ is a cumulative total.

26. To my mind it is vital that people know now that vast carbon dioxide removal, including from “*novel technologies*”, is ‘priced in’ to our targets and proposed budgets. Understanding this makes it clear why we cannot delay very deep and rapid emissions reductions now in the hope that future technologies will somehow magically save us later – the Programme for Government’s 7% per annum target to 2030 is *already counting on this magic happening later*. As Naomi Klein puts it in her book *This Changes Everything*, “*we are literally betting the habitability of the planet on the faint hope of a miracle cure.*”
27. It is worth noting that using removals in other countries to offset Irish emissions will not prove a viable or equitable solution. In their recent report [*“Not Zero: how ‘net zero’ targets disguise inaction”*](#), a coalition of international climate justice organisations states that “*There is simply not enough available land on the planet to accommodate all of the combined corporate and government ‘net zero’ plans for offsets and Bioenergy with Carbon Capture and Storage (BECCS) tree plantations.... By putting the burden for carbon sequestration onto land and tree plantations in global South countries [...], most ‘net zero’ climate targets are effectively driving a form of carbon colonialism.*”
28. As Professor Kevin Anderson et al noted in a [recent peer-reviewed paper](#), ‘*If...the mitigation agenda of ‘developed country Parties’ is determined without reliance on [highly speculative] planetary scale [negative emission technologies]⁴ and with genuine regard for equity and ‘common but differentiated responsibilities and respective capabilities’, the necessary rates of mitigation increase markedly.*’ In Ireland’s case, Professor Anderson emphasised in [earlier evidence](#) before this Committee the need for Ireland to achieve at least an 80% cut in CO₂ emissions by 2030 (compared with 2018); the need to reach full decarbonisation of Ireland’s entire energy system (including aviation and shipping) by 2035-40; and the need to cut total agricultural methane and nitrous oxide emissions by at least 3%, year on year. Yet even this is based on a global carbon budget that gives only a 33% chance of staying below 1.5°C,⁵ and our Climate Act does not aim to achieve anything like these reductions. Nevertheless, in my view the principle of equity points towards calculating Ireland’s carbon budgets in the manner Professor Anderson suggests: that is, without reference to speculative future carbon removals/negative emissions technologies.

⁴ Which the authors define to include *inter alia* removals by way of BECCS.

⁵ See Anderson et al (2020) A factor of two: how the mitigation plans of ‘climate progressive’ nations fall far short of Paris-compliant pathways, *Climate Policy* 20(10): 1290-1304.

29. In summary, a 7% per annum (average) reduction in emissions (amounting to a 51% reduction in annual emissions by 2030 compared to the 2018 level) is clearly insufficient for Ireland on the basis of equity (being lower than UNEP’s suggested global average), and assumes very large-scale speculative negative emissions (infringing the principle of intergenerational equity). However, as [noted elsewhere](#) by Professors Barry McMullin, John Sweeney and the present author, the Climate Act did not in fact require the achievement of an average 7% reduction per year by 2030, despite the Programme for Government commitment. Instead, the Act sets no upper limit on the carbon budgets that CCAC can propose to 2030. And indeed, CCAC has in fact proposed budgets that amount to an average reduction of just less than 6% per annum. All pathways on the figure below (courtesy of Professor Barry McMullin) are notionally consistent with s.6A(5) of the Climate Act because annual emissions in 2030 are -51% vs annual emissions in 2018. However, the associated carbon budgets (the area ‘under the line’ in each case) vary widely. The light blue line (Backload-2025-CCAC) equates to the budgets proposed by CCAC; the orange line (PfG) equates to the budgets implied by the Programme for Government commitment. The first two proposed budgets (to 2030) would need to be reduced by a combined amount of at least 27 MtCO₂ eq to meet the Programme for Government commitment.



30. The Committee may have seen claims that Ireland’s 2030 target is amongst the most ambitious in the world, and may perhaps be tempted to view the

proposed carbon budgets in this light. However, it is important to avoid falling into the trap of shifting baselines. Starting from Ireland's 2020 (or 2018) level of emissions, the 2030 target indeed looks ambitious. But using the UNFCCC's standard 1990 baseline puts the ambition in better context: we are aiming to reduce our emissions by 44.5% in 2030 compared to the 1990 level (that is, from 60.37 Mt CO₂ eq in 1990 to 33.5 Mt CO₂ eq in 2030);⁶ the EU collectively is aiming for a 55% reduction over the same period.

31. It is interesting to note in this regard that Germany's highest court - the Federal Constitutional Court - recently held in the [Neubauer case](#) that Germany's target of a 55% reduction by 2030 compared to 1990 infringed fundamental rights in the absence of a pathway to net zero in 2050. As the Court put it, *"one generation must not be allowed to consume large portions of the CO₂ budget while bearing a relatively minor share of the reduction effort, if this would involve leaving subsequent generations with a drastic reduction burden and expose their lives to serious losses of freedom."* Germany has since increased its target to a 65% reduction by 2030 compared to 1990, while Denmark has enshrined the highest target of all in the EU, at 70% between 1990 and 2030. Claiming that our 2030 target is amongst the most ambitious in the world (from 2018 or 2020 levels) is open to obvious criticism because it neglects the deep emission reductions others have made since 1990, while we have allowed our emissions to rise. To use a crude metaphor, picture a marathon runner joining a race three-quarters of the way through, then sprinting into the leading pack. Those who had been in the race since the start would justifiably regard the late-joiner's shouts of "look, I'm in second place"⁷ with scepticism. (There are of course obvious limitations to this metaphor, including the fact that we are here discussing paper targets, while CCAC emphasised in its recent Annual Review that Ireland's climate targets are not yet translating into the necessary action.)
32. Legally, the Government is of course not bound to agree with CCAC's proposal of carbon budgets amounting to less than a 6% (average) reduction per year to 2030. The Government could and should approve budgets that are significantly smaller than this, reflecting considerations of equity and common but

⁶ The stated figure for 1990 was obtained applying the same methodology as CCAC used to calculate the 2018 emissions baseline cited in its Technical Report; with thanks to Professor Barry McMullin for calculating the 1990 figure.

⁷ Having already reduced its emissions by >30% between 1990 and 2018, Denmark has set a target for 2030 (relative to a 2018 baseline) that is higher than Ireland's 51%.

differentiated responsibilities and respective capabilities, and ignoring speculative removals/negative emissions, for example. In respect of emissions from international aviation and shipping, which are said to be outside the scope of the Climate Act, the Minister and Government (and CCAC before them) must nevertheless be able to justify, pursuant to s.3(3), how their approval (and proposal) of carbon budgets remains consistent with the objective of the UNFCCC and Articles 2 and 4(1) of the Paris Agreement (including equity and common but differentiated responsibilities and respective capabilities), absent inclusion of such aviation and shipping emissions.

33. I would note finally that the Climate Act is not the only relevant legal consideration in respect of the carbon budgeting process. Section 3(1) of the European Convention on Human Rights Act 2003 requires every organ of the State to perform its functions in a manner compatible with the State's obligations under the ECHR. Equally, constitutional rights are in play. If the Government were to approve the carbon budgets proposed by CCAC, this would amount to approving budgets for Ireland that:

- a. aim to achieve less than 6% per annum (average) emissions reductions by 2030, where UNEP has advised that a global average reduction of 7.6% per annum from 2020 to 2030 is necessary (assuming massive negative emissions);
- b. do not reflect Ireland's fair share contribution, where the Dutch Supreme Court in *Urgenda* has held that every country must do "its part" to comply with ECHR obligations (an interpretation that seems likely to be confirmed in one or more of the climate cases pending before the European Court of Human Rights); and
- c. are based on a 44.5% reduction in emissions in 2030 (compared to the 1990 level), in the absence of a pathway of reductions to carbon neutrality in 2050, in circumstances where Germany's highest court has recently found an infringement of fundamental rights based on a (higher) 55% target for 2030 (compared to 1990) and similarly no pathway to net zero by 2050.

In my view, significantly smaller carbon budgets than those proposed by CCAC are required to protect and vindicate fundamental rights and to comply with the Climate Act.

Submission to the Joint Committee on Environment and Climate Action

(hearing date: 12th January 2022)

“to inform their consideration of Ireland’s carbon budgets”

Professor Kevin Anderson (PhD, CEng, FIMechE)

Chair of Energy and Climate Change,

School of Mechanical, Aerospace and Civil Engineering,

University of Manchester

Tyndall Centre for Climate Change Research

(submitted 10th June 2022)

1 INTRODUCTION

My name is Professor Kevin Anderson. I currently hold a joint professorship in energy and climate change at the School of Engineering at the University of Manchester, the Centre for Sustainability and the Environment (CEMUS) at Uppsala University (Sweden) and the Centre for Climate and Energy Transformation at the University of Bergen (Norway). Prior to moving to academia in the mid-1990s, I worked for a decade as an engineer, principally in the petrochemical industry and I am a chartered engineer and fellow of the Institution of Mechanical Engineers.

I have examined issues around energy and climate change for thirty years. I have been a member of the Tyndall Centre (the UK's leading interdisciplinary and academic climate change research centre) since 2001, an organisation where I have previously served both as the Deputy Director and Director.

I attended both weeks of Glasgow and Paris Climate Conferences (respectively COP26 and COP21), as a scientific observer, presenting at formal events and engaging with scientists, policy makers and media. In relation to the Paris Agreement, several scientific colleagues and I scrutinised the evolving drafts of the Paris text, making clear and public assessments during major press conferences. I was commissioned by *Nature* to provide a personal evaluation of the final text of the Paris Agreement.

All views contained within this statement are attributable solely to the me and do not necessarily reflect those of my wider researcher colleagues or associated organisations.

2 CONTEXT

Political background

At the November Glasgow COP26, the Taoiseach reiterated Ireland's commitment to "play its part" in delivering the "large-scale reductions in greenhouse gas emissions [necessary to] keep the possibility of limiting warming to 1.5 degrees alive."

"To achieve our Paris goals, immediate, large-scale reductions in greenhouse gas emissions are essential. Unless we act now, we will not keep the possibility of limiting warming to 1.5 degrees alive.

The scientists are playing their part, in helping us to understand the dynamics of climate change and in developing the technologies and responses we need to limit its effect.

As political leaders, it is our responsibility to put the necessary policies in place.

Ireland is ready to play its part."

Similar recognition of the need to increase ambition to deliver on the 1.5°C framing of climate change has been forthcoming from a breadth of Irish policy makers (e.g. Eamon Ryan, Darren O'Rourke and Pauline O'Reilly), leading thinkers (Mary Robinson and Pope Francis) and institutions (from Oxfam to An Taisce).

Quantitative background:

- Even allowing for the global banking crisis and Covid pandemic, Ireland's emissions in 2020 are unchanged from those in 1990. In the intervening years Ireland's average annual emissions have been almost 20% higher than they were in 1990.
- Ireland has territorial emissions of carbon dioxide per capita that are around 17% above the average for the EU27.
- In 2019 (latest year for comparative data) a typical Irish citizen had a total carbon footprint (i.e. a consumption-based emissions value) 27% higher than an average Chinese citizen, 75% above the global mean, and over ten times higher than that of a typical African person.
- In 2020 Ireland's GDP per capita (in purchasing power parity, PPP) placed it as the world's third richest country. It has a PPP/capita value of over twice that for the EU, more than five times the Global average and sixteen times that of a typical African citizen.
- The population density of Ireland is around 70 people per square kilometre, considerably lower than the EU value of 117. In addition, Ireland has a very long coastline, an extremely favourable wind regime and high tidal ranges. Overall, Ireland is disproportionately well served for developing renewable energy.

My submission:

- a) Takes the commitment of the Taoiseach (and wider Irish establishment) at face value
- b) Is based on the carbon budgets provided in the IPCC AR6 report (2021)
- c) Adopts a framing of equity aligned with the UNFCCC's core concept of "common but differentiated responsibility and respective capabilities"
- d) Builds on the analysis outlined in a peer-reviewed paper: [A factor of two](#) (Anderson et al 2020)

3 ANALAYSIS

If Ireland's fair contribution to the 1.5°C commitment, reiterated in the speech of the Taoiseach, is to be realised, its mitigation policies need to be informed by a dispassionate analysis based on the latest carbon budgets (from AR6) and the equity criteria enshrined in CBDR-RC. Such analysis must eschew political sensibilities and not be constrained by ephemeral tenets of the economic status quo.

Whilst the following analysis focusses specifically on carbon dioxide emissions arising from energy use and supply, the role of wider emissions (principally agricultural emissions of methane and nitrous oxide) are key factors in estimating the size of the remaining carbon budget.

For this submission just two of the AR6 headline budgets values are considered. The first is the value for a 67% chance (or better) of not exceeding 1.5°C. This value is chosen to represent the ramping up of the 1.5°C ambition evident in the G7 Climate and Environment Ministers' communique (May 2021) and subsequently as the underpinning of the Glasgow COP26. This increase in ambition followed the IPCC's SR1.5 (2018) report in which the scale and scope of the difference in impacts associated with only a small change in temperature was emphasised (i.e. the impacts at 2°C compared with those estimated for 1.5°C). The second value is for a 50:50 chance of 1.7°C, chosen to represent the Paris Agreement's commitment to cut emissions in line with "*well below 2°C*" and "*pursue efforts to limit ... warming to 1.5°C*". The carbon budget for a 50% of 1.7°C is almost the same as that for an 83% of staying below 2°C. AR6 gives these carbon budget values as, respectively, 400GtCO₂ (hereafter the 1.5°C budget) and 850GtCO₂ (hereafter the 2°C budget). Both of these budgets are for emissions starting in 2020.

Updating the budgets to January 2022 and making very conservative allowances for process emissions from industry (dominated by cement), leaves an 'energy only' global carbon budget of around 270GtCO₂ for 1.5°C and a less onerous 680GtCO₂ for 2°C. It is important to keep in mind that that the 2°C budget significantly increases the risks of far more devastating climate impacts. These will be felt initially by poorer and climate vulnerable communities elsewhere (typically both low-emitters and people of colour) and within a decade or so by our own children and grandchildren.

To give these budget values some high-level perspective, if current levels of emissions were to persist (and they are presently still on an upward trajectory) they would represent under eight years for 1.5°C and under nineteen years for 2°C. However, these are global values, and Ireland has signed up to mitigate emissions informed by the equity concept captured in CBDR-RC. Accordingly, if even a weak interpretation of CBDR-RC was to be adopted, then wealthy nations, such as Ireland, would have a much smaller carbon budget.

Provisionally, and based on the method outlined in the Factor of Two paper (linked above) and updated with AR6 carbon budgets and to the start of 2022, then Ireland's energy-only carbon budgets would range from, very approximately, 120MtCO₂ (1.5°C) to 300MtCO₂ (2°C). As noted, these are provisional estimates, and cover the period 2022-2100, and are for all energy CO₂, including international aviation and shipping.

Another way of viewing these budgets is in terms of highly stylised emission pathways. At Ireland's current level of energy-only emissions (including an estimate for international aviation and shipping), it will consume its fair share of the global carbon budget for 1.5°C in a little over three years, and for 2°C, in a little over 8 years. If, however, Ireland was to immediately begin a simple straight line reduction from its current emissions to zero CO₂, the time to zero fossil fuel emissions would extend to between 2029 (1.5°C) and 2038 (2°C). Alternatively, the budgets could be used to prescribe an exponential emission reduction pathway of between 12% p.a. (2°C) and 30% p.a. (1.5°C), assuming these reductions begin from this year (2022). Each year of delay, increase substantially these reduction rates, bringing forward still earlier the date of zero fossil fuels.

Why so different to other analysis

There are two key reasons why the carbon budget values and emission pathways presented here are much more onerous than those typically forthcoming from both global mitigation models and more detailed national models.

- 1) Virtually all global models adopt planetary scale uptake of 'carbon dioxide removal' (CDR), beginning in earnest in a decade or so from now, increasing in scale over time and continuing across and beyond the century. This ubiquitous assumption that future generations will remove from the atmosphere the emissions we have chosen not to mitigate is increasingly being brought into question. Whilst it certainly reduces significantly the level of mitigation demanded of today's policymakers, it does so at a very considerable risk to future generations. To give a sense of the scale of this assumption (dominated by technologies that are, at best, at pilot-scale): the level of emissions typically assumed to be removed from the atmosphere is not too far from the net level of CO₂ absorption by total global photosynthesis. Put another way, it assumes an industry approaching the size of the current global oil and gas industry, from one that currently remains in its early infancy.
- 2) Within the national mitigation analysis and models of wealthier nations, equity (in the form of CBDR-RC and enshrined in the UNFCCC, and all subsequent international climate agreements), receives scant if any attention. Play out the implications of the carbon budgets explicit or implied in the mitigation policies of wealthier nations, and it is immediately evident that such nations allocate themselves a disproportionate quantity of the small and rapidly dwindling carbon budget (for both 1.5°C and 2°C).

My personal view on CDR, is that it should be the subject of a major programme of research and development. Moreover, if '*negative emissions technologies*' and so-called '*nature-based solutions*' can meet stringent ecological and social sustainability criteria, then they should be deployed. However, that they may work at scale in decades from now should not be relied on when developing today's mitigation policies. In terms of energy specifically, emissions need to reach real zero, not net zero. Ultimately, any absorption of CO₂ through CDR will need to compensate for the warming from that residual element of agricultural emissions that cannot be eliminated. That said, even here agricultural emissions will need to be kept under very tight control, as the prospect of successfully and reliably removing hundreds of billions of tonnes of CO₂ from the atmosphere and burying it somewhere securely remains highly speculative.

4 KEY CONCLUSIONS:

- 1) If Ireland is to meet its Paris climate commitments it has to limit its total emissions of energy-related carbon dioxide, i.e. its carbon budget, to between 120MtCO₂ and 300MtCO₂. The former is for a "likely" chance of staying below 1.5°C, the latter for a even chance of staying below 1.7°C (which equates to a very likely chance of below 2°C). These values are from the start of 2022.
- 2) If Ireland began an immediate cut in its emissions, such as to deliver a straight line mitigation path from today to zero emissions, then these budgets equate to reaching zero emissions by between 2029 and 2038. Another way of viewing this, is that 120MtCO₂ equates to an annual mitigation rate of around 30% p.a., with 300MtCO₂, much lower at a little over 12% p.a. These reductions include emissions from international aviation and shipping.
- 3) Whilst these conclusions for energy-based emissions are hugely challenging, they nevertheless are based on carbon budgets that rely on major and ongoing reductions in global emissions of non-CO₂ GHGs. In Ireland's case, this plays out as a fundamental change in the nation's agricultural emissions of methane and nitrous oxide, requiring a profound rethink in Ireland's agricultural practices and consumption of meat and dairy.

- 4) There is no easy way out of the dilemma rich high emitting nations now find themselves in. We are here precisely because we have for thirty years been unprepared to face the climate challenges with honesty and integrity. Whether wealthy nations fail again now is a matter of choice – a choice where honesty and integrity are this time far more important than economic expediency and Machiavellian policies.

5 SUMMARY:

Ireland is an extremely wealthy nation, with a highly educated population and very favourable renewable energy potential. Moreover, it has a low population density that should make siting of renewable supply much less problematic than for most other nations. Despite Ireland's unique financial and geographical position to lead the world in renewable energy development, according to the Sustainable Energy Authority of Ireland, only 11% of its gross energy consumption is from renewable sources. Or put another way, around 90% of Ireland's total energy consumption is unsustainable. Ireland's failure to deliver any reduction in net emissions since 1990, despite its favourable financial position and geography suggests, thus far, that climate change has received no serious political attention. The unprecedented carbon budget challenges Ireland faces today stem, in part, from its own choice to ignore three decades of clear scientific analysis. Each year this failure to heed the science continues, so the mitigation challenge will increase. Ultimately, the physics of the climate will always beat any ephemeral economics that ignores it, with the subsequent climate impacts bequeathed to Ireland's own future and to more vulnerable communities elsewhere today.



NESC Presentation to the Joint Committee on Environment and Climate Action

January 13th, 2022

Niamh Garvey and Dr Jeanne Moore

1.1 Introduction

We would like to thank the Chairperson and members of the Committee for this invitation.

The National Economic and Social Council is a government body which advises the Taoiseach on strategic policy issues. Council members are appointed by the Taoiseach and represent business and employers, trade unions, agricultural and farming organisations, community and voluntary organisations, and environmental organisations; as well as heads of Government departments and independent experts. Given this composition, the Council plays an important and unique role in bringing different perspectives from civil society together with Government. Jeanne Moore and I are attending here today as members of the Secretariat.

Our statement will focus on areas where NESC has recently engaged in research and has published reports, notably in relation to a just transition approach. These are relevant for the Committee's request to explore *'whether there is a need for special measures to help those less well placed to make the transition and the type of policy tools needed to deliver on the ambition.'*

1.2 Increasing focus on a just transition approach to climate action

NESC has undertaken significant work in the area of just transition in recent years.¹ Under the Climate Action Plan, NESC has been requested to continue to provide strategic advice, research and analytical support for a just transition.

¹ In November, 2020 NESC outlined its work on just transition to the [Joint Oireachtas Climate Action Committee](#) including the NESC report No. 149, *Addressing Employment Vulnerability as Part of a Just*



The Council believes that a just transition approach in climate action is essential. As cited in the Climate Action Plan 2021, NESC defines “a just transition as one which seeks to ensure transition is fair, equitable, and inclusive in terms of processes and outcomes.” A just transition refers both to the broader policy framework of climate action and supports and the process of ensuring that individuals and communities have a voice and a role in informing and shaping these supports.²

The Council’s research reveals that we can expect the transitions in Ireland to be complex and time consuming. There is no one blueprint, but two key elements are highlighted here:

First, identify both the risks and opportunities to employment from transition.

There are vulnerable sectors and vulnerable job roles, but these are coupled with new job and enterprise opportunities. Further work is required to scope out the outcomes and processes appropriate for impacted individuals and communities; and key sectors such as agriculture and food, transport and parts of industry. Ireland is not alone in needing further research on the social and employment implications of climate policies (Pai et al. 2020 cited in Pinker, 2020).³

Second, adopt a proactive, managed and participative approach to transition at national, regional and local levels. NESC’s work in relation to wind energy identifies the importance of an intentional, problem-solving State-led process to underpin transition.⁴ Collaborative top-down and bottom-up action are required as transition initiatives rely on a wide range of actors to be delivered (Pinker, 2020; Mercier, 2020). As part of this, participative social dialogue is effective for fostering trust and adopting a collaborative approach.

Current NESC research is exploring transitions facing rural areas in Ireland using a place-based approach to enhancing sustainable rural development and identify achievable and acceptable pathways. Dr Niamh Moore Cherry and colleagues argue that collaborative engagement and support for community-led initiatives can aid

Transition in Ireland. NESC just transition work can be found here <https://www.nesc.ie/work-programme/transition-teams/>

² Government of Ireland (2021) Climate Action Plan 2021: Securing Our Future. Work on urban and rural contexts includes Creamer et al (2021) [Building Long Term Resilient and Sustainable Cities](#), NESC Research Series, Report No. 22; and McCabe, S. (2021) [Economic Resilience in Sustainable Communities: Innovative Approaches in Public Spending to Maximise Local Benefits](#), NESC Research Series, Report No. 19.

³ Pai, S; Harrison, K; Zerriffi, H. 2020. A Systematic Review of the Key Elements of a Just Transition for Fossil Fuel Workers. Clean Economy Working Paper Series. Smart Prosperity Institute. In Pinker, A. (2020) *ibid*

⁴ NESC (2014) [Wind Energy in Ireland: Building Community Engagement and Social Support](#), NESC Council Report No. 139.



successful transition.⁵ Other NESC work on the Covid-19 pandemic has noted the importance of co-design evident in Ireland's community call response. The capacities of communities to harness local resources and use them in new ways helped to foster innovation and entrepreneurship.⁶

Just transition forms a substantive part of the Climate Action Plan and new structures and processes are under development to develop just transition policy and practices, such as the Just transition Commission and a research and policy working group. Other policy areas also focus on just transition, including the rural development policy *Our Rural Future*,⁷ and there is merit in considering how this approach can be applied to other sectors and policy areas.

1.3 Just transition in agriculture and rural resilience

NESC report No. 149, *Addressing Employment Vulnerability as Part of a Just Transition in Ireland* identified the agri-food sector as one of the most impacted sectors in terms of employment from the low carbon transition.

NESC has been requested by Government to undertake research on climate and agriculture in 2022. A new project will explore how climate targets, and the transition that they imply for Irish agriculture, can be achieved in a manner that considers social equity and inclusion, environmental resilience and economic well-being. It will focus on:

- Understanding how climate action and transition is understood within the sector, with a focus on both opportunities as well as concerns, including from an economic, environmental and social perspective.
- Examining the options, alternatives and costs in supporting ambitious climate action, mapping existing innovative approaches and situating action within a broader rural development perspective. For example, climate action resources, such as retrofit or renewable energy supports, can be a catalyst for rural communities.⁸

⁵ Moore-Cherry, N., Clavin, A. Krawchenko, T. and Tomaney, J. (Forthcoming 2022) Exploring Place-based Opportunities for Policy and Practice in Transition, NESC Research Series.

⁶ McGauran, A. (2021) [Community Call: Learning for the Future](https://www.nesc.ie/publications/community-call-learning-for-the-future/), NESC Secretariat Paper no. 22, <https://www.nesc.ie/publications/community-call-learning-for-the-future/>

⁷ Government of Ireland (2021) *Our Rural Future: Rural Development Policy 2021-2025*

⁸ McCabe, S. (2021) [Ibid](#)



- Assessing the strengths and weaknesses of possible policy levers to support climate action and transition, including for example advisory services, market requirements and economic instruments.

The project will be overseen by a NESCS working group and will engage collaboratively with a wide variety of stakeholders. It is due to be completed in March 2023.

1.4 Conclusion

Carbon budgets require reductions in emissions. This will inevitably mean that certain activities and sectors will be impacted more than others. The focus of work in just transition, is how to ensure that those individuals, communities or areas, more disproportionately impacted by such policy decisions can be identified earlier and better supported such that nobody is left behind.

While just transition is in the early stages of policy and practice in Ireland, there is a firm commitment to develop it.

There is no single policy instrument or measure that can be applied, and the specific context for each sector, their workers and communities will be important to consider.

NESCS work points to the value of early, inclusive engagement with those potentially impacted by decarbonisation. The Council's latest project will seek to engage widely to further understand what a just transition approach can bring to agriculture.



**Chambers
Ireland**
Advancing business together



Chambers Ireland opening statement to the Joint Oireachtas Committee on Environment and Climate Action

January 2022

Chambers Ireland has, since the publication of the 2019 Climate Action Plan, been calling on Government to integrate Carbon Budgeting within the decision-making process of all State agencies.

If we are to be serious about our 51% reduction targets for 2030, and our net-zero aspirations for 2050, the State has to incorporate the carbon impact of its actions and its policies into its decision matrices, or else the long-term climate costs will continue to be deferred against short term fiscal incentives.

Our 2018 greenhouse gas emissions, which our 2030 targets are based upon, mean that we must be emitting no more than 33.5 million tonnes of CO₂ equivalent by the end of this decade.

Collectively the State, though its wide range of agencies, is the primary player when it comes to CO2 emissions. The State is the largest energy consumer in the country, but even more importantly, its decisions shape the environment that the rest of us, the business community and the public, navigate in our daily lives.

Nationally, our track record to date on emissions reductions has been extremely poor with our benchmark 2018 emissions being almost 10% higher than our 1990 levels – our emissions in 2022 will be still higher than they were in 1990.

Chambers Ireland is generally supportive of the Carbon Budgeting proposal that was published by the Climate Change Advisory Council. Carbon Budgeting is a useful tool for ensuring appropriate public policy making because ultimately it is the activities of the State that bind us to our current behaviour and limit the range of our potential activities.

However, if, instead of being a mechanism to direct state policy, a Carbon Budget is used as a mechanism for allocating CO2 emissions between different sectors in society, it will do no more than act as a multiplier on the existing carbon taxes.

If we in the business community, and all of us in our wider society, are to be able to transition to less polluting alternative energy sources, we need the State to have laid the groundwork to ensure that those alternatives are available. There's little point trying to send out market signals through the price mechanism if more environmentally sustainable substitutes are not available.

Across successive Governments, the State's response to greenhouse gas emissions, and climate crisis in general, has been characterised by inactivity.

Inaction around the CO2 emissions consequences of policies are just as damaging to our environment as actions that actively pollute.

When communities are planned without integrated public transport networks and active transport links, the State relies on people using cars to fill in the gap where those services ought to be. When housing estates are built with no pedestrian access to shops and schools, that is the State locking in decades of transport associated CO2 emissions.

Inactivity has caused the long delay in creating regulatory and planning certainty for offshore renewable energy. While we greatly welcome the recent passing of the Marine Area Planning Bill the problem shouldn't have taken fifteen years to progress, this has meant that that we have not been able to develop a clean offshore wind energy industry. A lack of action which has locked in decades of fossil fuel emissions.

The main benefit to introducing Carbon Budgeting is that it will no longer allow administrations to defer action as the rolling five-year budgets require immediate action, and to this end it needs to become a key element of both the planning process, and the planning programmes of Government.

This decade will see an enormous investment in the built fabric of our country, between the National Development Plan infrastructure, and the hundreds of thousands of housing units that we so desperately need, a huge amount of 'extra' CO₂ is going to be released, even as we are attempting to curtail emissions. An effective Carbon Budgeting mechanism should accelerate the delivery of projects that will decrease our CO₂ consumption. Carbon Budgeting incentivises us to take the bigger, harder actions first. Commencing difficult tasks is never an easy political move, but early action will be rewarded by a Carbon Budgeting system. And, in the longer run, taking impactful action immediately will afford us more options and greater flexibility as time progresses and our timelines to net-Zero are inevitably brought forward.

It is vital that all elements within the State consider not only the carbon output of the decisions that are being taken, but also the associated second order effects that those decisions cause in the public through shaping our behavioural responses.

This is the reason why Chambers Ireland has been calling on Government to consider Carbon Budgeting within their decision making. The 300,000 housing units that will be built over the next few years as part of "Housing for All" will, in general, stand for at least a hundred years.

Where they are located, what services are available to them within a fifteen-minute walk, will determine what a century of emissions will look like.

Given that our members are based in cities and towns across Ireland, we found it heartening that the Climate Change Advisory Council have a sense that on transport

“liveable cities are the ‘easy’ bit”. We do however have to say that, if making city and town centres attractive places to live and work is the easy part of this process of transition to a decarbonised economy then the vast majority of people are going to be shocked by the enormity of the task we have ahead of us.

Even very small movements towards reactivating vacant and underutilised property are happening at a pace that suggests we will not have made much ground by 2030. The prioritisation of various transport projects echoes the same. And the lack of urgency around offshore renewable energy speaks to a lack of coherence in the State’s overall approach to the decarbonisation of our society.

Chambers Ireland hopes that Carbon Budgets will be the tool that finally spurs us into action.



**Joint Oireachtas Committee on Environment and Climate Action
13 January 2022**

Environmental Pillar Opening Statement

Chair, Committee members, the Environmental Pillar is grateful for the opportunity to participate in your Consideration of the Carbon Budgets proposed by the Climate Change Advisory Council and recommended by Government for approval by the Oireachtas.

As you know, the Pillar is the advocacy platform of national environmental NGOs in Ireland and a social partner, represented on NESC since 2009.

The first thing to say is that the Environmental Pillar welcomes this landmark moment. Members of our network have campaigned for a climate law to establish a statutory framework for climate policy since 2007, a statutory framework with legally binding targets, independent expert advice and monitoring, 5-year carbon budgets, and strong parliamentary oversight as demonstrated by the work of this committee.

So, we are pleased to be here to see that legislative framework finally kicking in. However, we are now playing catch-up for a lost decade. The latest emissions figures from the EPA have Ireland's national emissions at 57.7mt in 2020, exactly the same as they were in 2011.

2011 was the year we were due to pass a climate law not unlike the one that was finally passed last year. That legislative effort failed largely because of a huge lobbying effort by business and industry lobby groups also represented in these hearings today.

Their proposition at the time was that the EU climate regime was all we needed for Ireland to meet its agreed reduction targets. We now have the results of that real-time, real-life political experiment. And it is a record of failure. The most recent EPA figures show that Ireland overshot its 2020 target by 6.7mt or 18%, and that Ireland was one of only 2 EU member states where emissions were higher in 2020 than they were in 1990. Furthermore, the EPA found that in 2019 Ireland had the second highest per capita emissions in the EU. That rang a bell so I went back and checked. When I started this job, 17 years ago this month, Ireland had ... the second highest per capita emissions in the EU.

I don't say any of this simply to score points, but rather to underscore the following characteristics of the reality we face as this Committee considers its recommendations to Government and the Oireachtas about the Carbon Budget Programme and climate policy more generally:

- We have no time to waste. Or rather **we have no more time waste**. From now on, every time the state faces a decision at national or local government level we have to choose the option that lowers emissions.
- Whenever any stakeholder group pleads for even further delay or dilution of climate action remember this, the longer we leave the transition the more abrupt and the less “just” it will be. If we had passed that strong climate Bill in 2011 then we would have needed to reduce emissions by 3.5% a year to halve emissions by 2030. As you know, because of our lost decade, **we now need to reduce emissions by 7% a year, twice as fast as if we had started a decade ago**.
- We’re a democracy. Interest groups have a fundamental right to freedom of association and freedom of expression. **But vested interests don’t have a right to influence public policy**. Because of the undue influence of carbon intensive industries across the world, and in Ireland, the climate crisis of 15 years ago is now the climate emergency declared by the Dáil in 2019.

Now we have to cut emissions in half in 10 years rather than 20. So now, as you have done during the public health emergency of the last 2 years, decision makers need to make climate policy, informed by expert advice, on the basis of the public interest, often under-represented in the media debate, and not based on vocal vested interests who often dominate public debate.

As a public interest organisation, the Environmental Pillar welcomes the proposals from the Climate Change Advisory Council on the carbon budgets.

In short, we think that the Committee should accept the proposal from the Council on the size of the first and second carbon budgets (to 2030) and recommend them for adoption to both Houses of the Oireachtas. On the third carbon budget (to 2035) which is a provisional, indicative proposal and will not be adopted as binding by the Oireachtas at this time, we would propose to the Committee that it asks the Council to do further research and study before the Council makes its formal proposal on what the binding carbon budget for 2031-2035 should be (most likely in 2025).

The basis for these two proposals for recommendations by this Committee is our belief that **at the centre of Irish climate policy should be the principle of fairness**.

By fairness we mean:

- Global climate justice
- Intergenerational justice
- Fairness between sectors

- A fair and just transition, protecting the vulnerable

What that means in practice is the following:

Global climate justice: Ireland should do its fair share of the global effort to achieve the goals of the Paris Agreement, specifically limiting global warming to “well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C”.

Intergenerational justice: this generation of decision makers and power-brokers, people in their 40s, 50s and 60s should make the necessary cuts in pollution now, before it is too late to leave a liveable planet to the generations in their teens, 20s and 30s who will have to live with the consequences of our decisions or inaction long after we have departed.

Fairness between sectors:

- Every sector of society and the economy will have to do its fair share to reduce its pollution. That is not the same as an equal share, some sectors will move faster than others, but every sector will have to reduce its emissions drastically, starting now, and get to zero or close to zero, as fast as possible. As the IPCC puts it: limiting global warming to 1.5°C will “require rapid, far-reaching and unprecedented changes in all aspects of society ... land, energy, industry, buildings, transport, and cities”
- What is different now, under the Climate Act, and with the adoption of this carbon budget programme is that we now have a binding national emissions ceiling for the first time, under Irish law. So now, the size of the overall pollution pie, or emissions cake, is set by this carbon budget programme and what different sectors are now debating is not whether we will meet our overall target, but how big a slice of the carbon budget pie their sector will get. And any sector that argues they should reduce their pollution by less than the average (51% by 2030) is saying that some other sector should reduce by more than 51%, and they should be asked which sector they think that should be.
- It is also worth noting *a crucial characteristic* of the indicative sectoral emissions reductions ranges in the 2021 Climate Action Plan. Only if we achieve the upper ranges of every sectoral reduction target will we meet the overall binding 51% reduction. So they are not really ranges, more progress reports on how far the Department of the Environment has got in extracting adequate commitments from other sectoral Departments. This will be a crucial test for the Government as it prepares the 2022 Climate Action Plan and converts those indicative reduction ranges into specific sectoral emissions ceilings under the law. While this falls outside the official scope of the immediate work of this Committee which is to consider the overall national carbon budget, it is a legal reality it is worth noting now.

A fair and just transition, protecting the vulnerable:

- Workers and communities who are affected by the winding down of intensely polluting economic activity, like those in the Midlands and around Moneypoint, are entitled to the resources and supports they need to continue to have economic opportunity, decent jobs and flourishing communities. And specifically they are entitled to have their representatives, for example the trade unions, engaged in formal, structured, social dialogue about how to achieve a Just Transition.
- Equally, those on low incomes or at risk of poverty must not be further disadvantaged or marginalized by climate action, for example either by increasing fuel poverty or the skewing of subsidies towards schemes that primarily benefit wealthier sectors of society.
- And industries that will need to significantly adapt their business models or even phase out part of their activities are entitled to have their views heard by decision makers and to whatever supports can be made available to them. What they can no longer do however is delay or dilute policy or action in any way that undermines Ireland's ability to live within our carbon budget.

Based on all of those considerations, it is important to put on the record that, although they are very challenging, our 2030 target of halving emissions and the two carbon budgets that the Climate Council has proposed to 2030 still do not amount to our fair share of the effort required to fulfil the Paris Agreement. Ireland will continue to use more than our fair share of the remaining global carbon budget consistent with the 1.5°C goal for the rest of this decade.

So while the Environmental Pillar accepts the proposal from the Climate Council regarding the two carbon budgets to 2030, they leave us feeling deeply uneasy. Because, as we have been saying for years it is possible for a target to be both “ambitious”, as the jargon goes, that is to say challenging to achieve *and* inadequate based on science and equity.

The analysis by the UN is that in order to have a decent chance of limiting global warming to 1.5C we need to cut *global* emissions more or less in half by 2030 and to near zero by 2050. But that is *globally*, and under any definition of climate justice and according to the principle of Common but Differentiated Responsibilities and Respective Capabilities in the 1992 UN Convention on Climate Change, rich countries like Ireland, the EU as a whole, and the US have to do more, sooner.

So while we accept, however reluctantly, that it is probably impractical, if not impossible, for Ireland to reduce its emissions by more than 50% in 9 years it is important to recognise and acknowledge that we will still be adding to our debt, both carbon debt and moral debt, to those in the Global South who have done least to cause climate change and are being hit

first and hardest, and to younger and future generations who have done little or nothing to cause climate change and have little or no power to stop it.

Given that reality, we think it is imperative that the Government:

- Step up our contributions to climate finance to help poorer countries adapt to the impacts of climate change that can't be avoided. And our increasing contributions to climate finance must not come at the expense of Irish Aid to build the health, education and social systems they need to develop.
- Become an advocate at EU level for the strongest possible climate change governance and climate action measures.
- Brook no argument from those voices who argue that Ireland shouldn't have to reduce our emissions by 50% by 2030 or that their sector should somehow be exempt. Because cutting our pollution by 50% by 2030 is the least we have to do, and it is a down-payment not a final payment on our fair share of the effort to achieve the Paris goals.

In particular, we would urge this Committee to request the Climate Change Advisory Council to review what Ireland's fair share of effort under the Paris Agreement is, and to recommend to the Minister that he formally asks them to do that. That is the least we must do to reflect the commitment in the climate law to climate justice. It is not clear to me from the documents published by the Council how they fulfilled their duty under the law to take climate justice into account in preparing their carbon budget programme proposal.

Specifically, the Council's indicative proposal for the third Carbon Budget from 2031 to 2035 does not seem compatible with climate justice. Having proposed a reduction rate of 8% a year from 2026 to 2030 the Council suggests a reduction rate of only 3.5% from 2031 to 2035. It seems to presume a linear reduction path from 2030 to near zero in 2050. As is clear from the UN analysis, richer countries must reach net zero sooner than 2050 given the principles of climate justice and Common but Differentiated Responsibilities. And the climate law is clear that Ireland should reach climate neutrality by 2050 *at the latest*. Given the time constraints the Council was operating under and the imperative to get the proposal on the first two carbon budgets to Government, I wonder how much time, relatively, went in the consideration by the Council of what the principle of climate justice means for our reduction pathway after 2030 and for the final date for Ireland getting to zero emissions.

Given that the third carbon budget is only indicative there is plenty of time for the Council to commission appropriate research on this question and to give adequate consideration to this matter before it gives its formal proposal for the 2031-2035 budget in a few years. However, it would be helpful if this committee in its report explicitly reminded the Government and the Council of its duty to fully consider the principle of climate justice.

In general, it is worth saying one more time that nobody is asking Ireland to do more than its fair share but we are asking Ireland to do its fair share. And nobody is asking any sector of the economy or society to do more than its fair share. But we are asking every sector to do its fair share.

Because only if every sector does its fair share do we have any chance to reduce emissions fast enough to prevent complete climate breakdown and fairly enough to leave no one behind. That is the challenge and the opportunity at hand now.

I would also like to focus on the forestry sector in relation to its contribution under sectoral targets.

Ireland and the EU have declared a Climate and Biodiversity Emergency, and it is now widely accepted that sustainably managed forests can contribute significantly to climate mitigation, with biodiversity restoration and conservation benefits. The Irish Government is planning to substantially increase forest cover with a new target to plant 8,500 ha per annum over the coming years. The positive or negative impact that this new forestry in Ireland will have on climate mitigation and biodiversity will ultimately depend on a range of factors, such as where afforestation/new planting takes place, the management model of forestry used and the environmental safeguards that are implemented.

Forestry Sector Issues and Obstacles:

Firstly, to summarise the issues and obstacles, given the perfect storm of events that are now afflicting the forestry sector: a licensing logjam; public opposition to the tree farming model; farmers reluctant to plant for many reasons, the main land opportunity for farms to increase our low forest cover; afforestation levels which are now the lowest since the 1930's, Brexit and over reliance on the UK markets, with 85% of wood products exported to the UK.

We also see the absence of a serious hardwood component, despite the conditions here among the best in the world for hardwood growth, the absence of a woodland culture and associated strong wood crafts and furniture making sector. This is combined with the lack of traditional woodland skills and knowledge for alternative forest management methodology and forest uses. The lack of these drivers is therefore also unable to contribute towards a move in this direction.

The overall failure to grow higher quality timber of diverse species to service a wider market, instead focusing on a race to the bottom model of fast-growing monocultures, is threatened by the global glut of cheap timber from the same type of tree farming

model driving global timber prices down. Lower volumes of higher quality and more diversity will ensure a more secure profitable future.

By way of example, the ESB is a regular large-scale purchaser of timber products, who at one point imported €45 million worth of timber poles in one year during the Celtic Tiger years to service new developments, and who are still importing thousands of line poles for an average of €600 to €800 per pole and transmission poles at €2000 each. It is remarkable that both the industry and the Forest Service failed to see this gap and aim to fill some of it. The Irish Timber Frame Association, who are involved with 35% of house builds, have admitted that they mainly import graded quality softwood from Scandinavia. Further, we are importing kiln dried hardwood as firewood for sale in the supermarkets and builders suppliers.

Coillte, the Irish Forestry Board, Not fit for Purpose:

We have a state forestry company managing the largest public forestry area which is not fit for purpose, according to the All-party Oireachtas Climate Committee's final report published in 2019. The creation of Collte Nature does not go far enough for the root and branch reform needed in our opinion and looks like window dressing. Coillte are in a privileged position and should be leading the forestry sector in terms of Sustainable Forest Management and innovation in the sector.

An Industrial Forestry Model Not fit for Purpose:

A serious ecological and biodiversity deficit exists in the forestry model, as evidenced by the struggle to ensure new forestry licenses can live with improved environment standards, huge clear-fells and avoidance of Environmental Impact Assessment processes by staying just under the 50 ha threshold. We also have over harvesting of younger trees and not enough older trees managed for long term multiple benefits combined with lower planting rates, leaving us headed for deforestation with large forest carbon deficits.

The industrial tree farming model is concentrated in a number of under populated counties, including Clare, Mayo, Cavan, and Leitrim, with 30% among the highest area concentration of these green deserts, with major negative consequences. Much of this new planting of extractive forestry is being incentivised by tax free grants availed of by private investors, while the legacy state blanket coniferisation policy on upland peat soils is maintained by Coillte, with at least 6% under a clear cut and replant regime and is made up of 90 to 95% non-native Sitka spruce. Much of this Coillte industrial plantation area is on steep slopes, using vertical drains, which cause flooding in the lowlands, especially after large clearfells. These vertical drains are also assisting carbon leakage from soils and currently there is no regulatory authority responsible for them. They are operating in a regulatory limbo.

Under existing EU Sustainable Forest Management (SFM) treaties, e.g. Helsinki, Lisbon, etc, all Member States were required to amalgamate all existing forestry legislation into one Act which reflects the objectives of those SFM treaties. The 1988 Forestry Act, which created Coillte, Act predates the 1992 Rio Declaration on the Environment, from where the SFM Principles originate, giving equal prominence to environmental, economic and social considerations.

This is impacting on more than half of the total of 11% forest cover and is unacceptable as well being totally out of line with existing EU Sustainable Forest Management treaties.

Urgent Need for an Independent Accurate Satellite Survey of Timber and Carbon Stocks with Full Cost Benefit Analysis:

We urgently need an honest, accurate, independent appraisal and critique of the current situation before we start drafting any new policy, strategy or programme and to align with our climate action plans.

As part of this independent analysis, we need to know the precise status, health and condition of the broadleaves and the Native Woodland Scheme elements, and we need to see a critique of these two schemes. The same is needed for plantations, including those abandoned and failed, so that we know what is working and not working. A full cost benefit analysis that includes the environmental impact costs, known as the triple bottom line would also help this process, as to date analyses have been solely focused on social and economic impacts.

A complete and fully detailed breakdown of wood products and timber, softwoods and hardwoods imported from the Central Statistics Office would be useful in order to plan for wood import substitution, which has been lost sight of and was one of the main objectives for developing a forestry sector back in the 1930's.

Precise, up-to-date Information and data, including the use of independent satellite mapping to cross check with the National Forestry Inventory, are needed to make informed decisions. We do not have this data and are instead relying on assumptions and inaccurate projections of carbon and timber stocks.

Forest Carbon Storage:

Regarding carbon storage from Ireland's forests, we are told by the industry and by the Forest Service that the sector accounts for 3.8mt each year, while according to Teagasc, the national farm research body, projections via their marginal abatement curve scenario for agriculture emissions reductions predict only 2.1m tons of carbon between 2021 and 2030, based on their calculations of low afforestation and higher harvesting.

We need a National Land Use Strategy which integrates farming and forestry to assist the agriculture sector in meeting our climate and biodiversity targets.

Coford, the state forestry research body, in 2007, warned the industry that a minimum afforestation level of 10,000 ha per annum would be needed to stand still and balance our annual harvesting rates and that ideally 15,000 to 20,000 ha was necessary to ensure that our forest area would increase, as well as deliver on carbon storage, timber production and biodiversity commitments at EU and UN level.

The fossil fuel use and full carbon accounting of our current forestry model, which is dependent upon thousands of truck journeys as well as heavy harvesting machines, is also completely out of step with EU Forestry Strategy. The rate of harvesting is increasing and the age profile of the plantations is reducing, combined with historically low afforestation rates, and as a result we are looking at a deforestation scenario in Ireland with exaggerated carbon sequestration projections that cannot be supported.

Further, Coillte are converting forested areas for wind farms, which have caused massive carbon and biodiversity losses, via large scale landslides, e.g., Derrybrien, in breach of the EIA Directive.

Time for a New Forestry Model and Vision:

The priority must be an expansive, imaginative ecologically focused forestry vision, which genuinely balances the three legs of the Sustainable Forest Stool: the Social, Environmental and Economic. It must protect and enhance existing valuable habitats and water quality, while increasing long term carbon storage via permanent forests with increased use and creation of longer-lived wood products. It must also involve supports for a new alternative Woodland Management Training element, together with research and development, moving from our production-focussed system to one which benefits communities, the environment and the economy.



Address by IFA Deputy President Brian Rushe to the Joint Oireachtas Committee on Climate Action on Carbon Budgets Thursday, 13th January 2022

Chairman and Committee Members, I would like to thank you for inviting IFA to address you today.

As you are aware, farming and the wider agri-food sector is the backbone of economic activity in rural Ireland. In 2019 Ireland's agri-food sector was valued at €14.5 billion. It is Ireland's largest indigenous sector, providing employment to over 300,000 people directly and indirectly.

Climate change is arguably the greatest challenges facing the world today with farmers very much on the frontline. Irish farmers understand that they have a unique role to play in meeting the climate change challenge and are committed to playing their part in reducing GHG emissions. However, this must be done in a fair and balanced way.

The Government commitment to reduce Ireland's Greenhouse Gas (GHG) emissions by 51% by 2030 has implications for all parts of the Irish economy. Achieving the reduction target set for agriculture, of 22% to 30% by 2030, which represents an emissions reduction of between 5 to 7 million tonnes CO₂ (Mt CO₂), will be extremely challenging for the sector.

Farming's Environmental Credentials

Irish farming is a world leader in grass-based food production and is a highly emissions-efficient, sustainable food production model. In dealing with the climate change challenge, it is imperative that Irish farmers' current sustainability credentials are fully acknowledged at the outset. These include the following:

- Irish dairy and beef output is extremely efficient from a carbon footprint perspective. Irish milk has the lowest carbon footprint in the EU while Irish beef has the fifth lowest. Despite what many would lead us to believe, the carbon-efficient expansion of milk production in Ireland has helped displace approx. 4 million tonnes of carbon which would have been emitted had the equivalent dairy product been produced outside of Ireland.¹
- The majority of Irish farms are not intensively stocked, over 60% of Irish livestock farms in Ireland are stocked at less than the equivalent of 0.33 cows per acre.²
- Ireland's overall livestock numbers have remained relatively static over the last 30 years. Over the 20-year period from 1999-2019 the number of cattle in Ireland remained the same. During

¹Teagasc (2019) *Taking stock of sustainable growth*. Retrieved from: <https://www.teagasc.ie/media/website/publications/2019/Taking-stock-of-sustainable-growth.pdf>

²CSO (2018). *Farm Structure Survey 2016*. Retrieved from: <https://www.cso.ie/en/releasesandpublications/ep/p-fss/farmstructuresurvey2016/>.

the same period, Irish vehicle numbers rose by 75% (CSO) and the number of passengers through Dublin airport increased by 155% (Dublin Airport Authority).

- Irish farming is a predominantly grass-based system. As a result, the use of direct energy (e.g., electricity) on Irish farms, at 56% of EU average, is very low by European and international standards.³
- Irish farmers have a strong track record in participating in agri-environment schemes. Today, 33% of Ireland's land is farmed under agri-environment measures compared to a 13% average at EU-27 level. Over 50,000 farmers participated in the Green Low-Carbon Assurance Scheme (GLAS), the most recent agri-environment programme.
- Irish farmers, through the Origin Green programme, were the first internationally to complete annual sustainability audits. To date, over 212,000 carbon audits have been undertaken on Irish dairy and beef farms. These audits show dairy farmers and beef farmers have reduced their carbon footprint per unit of produce by 9% and 5% respectively since 2014.⁴
- While Ireland has a relatively low level of forest cover (approx. 11%), in its place it has the third largest total hedgerow area in the EU, with an estimated 450,000 hectares or 6.4% of the land area. Since 1994, 6,605 kilometres of new hedgerows and more than 3.7 million trees have been established on non-forest land. These hedgerows, which farmers continually upkeep, help both maintain biodiversity and sequester carbon.

Agricultural Emissions

In 2020, agricultural emissions accounted for 37% of total Irish GHG emissions. This reflects the relative importance of agriculture to Ireland's economy, and the lack of heavy industry in comparison to other Member States.

Agricultural GHG emissions are predominantly methane (from enteric fermentation and manure management) and nitrous oxide (from fertiliser and animal excreta deposition on soils). Current scientific understanding indicates that reducing Irish agricultural GHG emissions through technical means is extremely challenging, particularly so for biogenic methane produced by pasture-based ruminants.

However, it is important to recognise that agricultural emissions, as a percentage of total emissions, have remained relatively static since 1990. While in the same period, emissions from transport have more than doubled from 9% to 19%.

Since 1990 Irish farms combined have increased their output by approximately 40%. In spite of the increase in production total agricultural emissions by the sector have remained static with 19.5 million tonnes CO₂e from the sector in 1990 and 21.4 million tonnes CO₂e in 2020.

The increased production was achieved by improving efficiency and reducing the emission intensity of Ireland's food production model. The emissions footprint per kg of Irish milk and meat are low by international standards, with one EU study showing Irish milk to have the joint lowest carbon footprint in the EU and the 5th lowest footprint for beef.

³ Department of Agriculture, Food and the Marine (2021). *Draft SWOT Analysis Preparations for Ireland's CAP Strategic Plan 2023-2027*.

⁴ Bord Bia (2019). *Origin Green Progress Report Update*. Retrieved from: <https://www.origingreen.ie/globalassets/origin-green/og-publications/origin-green-progress-update-report-ir.pdf>.

Due to Ireland's existing emissions efficiencies in food production, the scale of the proposed reduction target of between 22% to 30% by 2030 for the sector, poses a significant challenge.

Agricultural targets in the Carbon Budget

The proposed reduction target for agriculture is to reduce emissions by between 22% to 30% by 2030 from the 2018 baseline of 23 million tonne of CO₂ (Mt CO₂) to between 16 – 18 Mt CO₂.

This is an extremely challenging target for the sector. According to Teagasc there is no prospect in the current decade of scientific solutions alone being capable of delivering agricultural GHG emission reductions of the magnitude required to meet the higher target.

The Climate Action Plan 2021 has identified potential measures to deliver emission reductions including actions primarily based on the Teagasc Greenhouse Gas Marginal Abatement Cost Curve (MACC) which are set out in AgClimatise – A Roadmap Towards Climate Neutrality. These have the potential to reduce emissions by approximately 2 Mt CO₂.

These actions focus on farmers adopting various mitigation measures to improve carbon footprint by changing farming management practices, particularly in relation to nutrient management such as reducing fertiliser use, increased use of protected urea and increased update of Low Emission Slurry Spreading (LESS).

A key barrier to the uptake of these mitigation measures will be around farmers concerns that changes to farming practices and/or investment in mitigation technologies will negatively impact production and income. With only 34% of farms deemed to be economically viable, many farmers will not be in a position to take the risk of changing management practices. To optimise adoption, it will be crucial that farmers are supported to transition towards more sustainable farming practices.

Other potential identified measures focus on improved animal feeding by reducing crude protein in feedstock and utilising newly developed feed additives during housing period, earlier finishing of cattle and increasing organic farming. These have the potential to mitigate emissions by 3 - 3.5 Mt CO₂. However, these proposed measures, particularly around early slaughter, are less developed and how they will be implemented at farm level is unclear.

The difficulties in accurately measuring and accounting for the impact of changes in farm management practices and adoption of new innovative technologies in the National GHG Inventory must be considered when setting the carbon budgets for agriculture.

Major scientific research and technological innovation in agricultural mitigation is ongoing in Ireland and globally particularly around pasture-based additives and breeding, and is expected to yield positive results in the coming years. It is envisaged that these new technologies could potentially deliver reductions of between 1.5 - 3.5 Mt CO₂. Therefore, a late-action trajectory to meet the emission reduction targets is required to provide time for these new practices and technologies to be adopted, measured and verified.

It is evident based on the proposed measures set out in the Climate Action Plan 2021 that the maximum potential emissions reduction, from currently available mitigation measures, is 5.5 Mt CO₂. To achieve

this rate of reduction it would require full adoption of the various measures set out in the Climate Action Plan, which is highly challenging within the timeframe provided.

It is vital that the minimum reduction target of 22% is attributed to Agriculture, in recognition of the economic and social importance of the sector, the technical challenges to reduce emissions as well as the timeframe required for adoption.

Carbon sequestration and on-farm renewables potential

A lower target for Agriculture will recognise the sectors' unique ability to remove carbon from the atmosphere by carbon sequestration through enhancing carbon sinks and reducing carbon losses as well as offset emissions in other sectors through on-farm renewables.

The Teagasc MACC estimates that the agricultural sector could sequester 26.8 Mt CO₂e over the 2021-2030 period, through afforestation, management and enhancement of hedgerows, the management of peaty agricultural soils as well as optimal grassland and cropland management on mineral soils.

Irish grasslands are a significant carbon store, with mineral and peaty agricultural soils under grasslands containing between them over one billion tonnes carbon – 500 million tonnes stored in mineral grassland soils and between 500 -700 million tonnes in grassland on peat soils.

Teagasc, via funding from the Department of Agriculture, Food and the Marine has established the National Agricultural Soil Carbon Observatory (NASCO) which will address the challenges in terms of measurement and verification of soil carbon sequestration, particularly in grassland soils, in the coming years.

Progress on enhancing forest carbon sequestration has been thwarted by Government policy, which actively disincentivises afforestation and management of farm scale forestry, thus threatening to considerably reduce the forest carbon sink.

Ireland's adoption of renewable technologies at farm level is well below the European average. In 2018, Ireland ranked 23rd out the EU-27 countries for generation of renewable energy from Agriculture, producing just 2.6% compared with the EU-27 average of 12.1%.

Farmers want to be central players in Ireland's energy transition. They recognise the opportunities offered by renewable energy to produce energy for their own use but also to diversify their farm income by selling excess energy to the grid thereby enhancing the sustainability of their farm business.

The Teagasc MACC report has identified that almost two Mt CO₂ can be reduced by displacing fossil fuel use in the sector, in areas such as energy efficiency, bioenergy and biofuels. Bioenergy is a thriving industry across Europe. However despite our natural advantage in producing bioenergy due to our mild climate and fertile land, Ireland is ranked 27th out of 28 Member States in terms of its use of renewable heat (SEAI). Ireland currently derives 4% of its energy from bioenergy. This needs to rise to 15% by 2030 with further deployment beyond if 2050 targets are to be met.

Bioenergy, particularly biogas, can help the circular economy and reduce the environmental impact of the agricultural sector. The environmental and climate benefits of biogas are wide ranging, together with reduction in emissions and increased energy security, it allows for the exploitation of agriculture by-products. Furthermore, the by-product of anaerobic digestion (i.e. digestate) can be used as an organic

fertiliser. Finally, biogas is the only full dispatchable renewable energy that can assist in addressing our electricity, heat and transport renewable energy targets.

Growing demand for food production

A lower reduction target will also ensure that Ireland can maintain and possibly increase food production, improving the emissions footprint and protecting the economic sustainability of the sector while meeting the food security and climate change challenge.

According to the United Nations the world's population is projected to grow from 7.7 billion in 2017 to 8.5 billion in 2030 (10% increase) and to 9.7 billion in 2050 (26% increase).⁵ This growth will drive global food demand, which is expected to increase anywhere between 59% and 98% by 2050.⁶ It is projected that 58% more milk and 73% more meat will be required by 2050 compared with 2010 consumption levels.⁷

In light of the increasing demand on food due to projected population growth, any contraction of food production in Ireland to meet the emissions ceiling may simply be replaced by production elsewhere, potentially to countries with a higher emissions footprint, resulting in carbon leakage and higher overall global emissions.

Achieving reduction targets

Achieving emissions reductions will be extremely challenging for agriculture and is more complex than mitigation in other sectors. Agricultural mitigation involves the reduction of GHG emissions which are produced naturally as part of biological processes, thereby limiting the emission reduction options.

Agriculture is also less consolidated than other sectors and reducing emissions requires action by approximately 140,000 farm families operating at different levels of scale, fragmentation, age-structure and financial vulnerability.

The single biggest barrier to meeting the climate action targets is the financial vulnerability of many farms. Financial vulnerability has a large impact on the ability of farmers to adopt more sustainable practices as it limits their ability to test new practices and stifles innovation due to financial constraints. Pursuing a more sustainable production system requires farmers further embrace new practices, adopt new technologies with no guarantee of immediate success.

Studies have shown that farmers on average experience decreased yields during a transition process, as they gain the required experience to learn and perfect the implementation of more regenerative and sustainable practices. A decrease in production poses a difficult financial challenge to overcome – especially for Irish farmers where only 34% of farms are considered to be financially viable⁸.

The economic sustainability of farms must not be further undermined to meet the emission reduction targets.

⁵ United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects 2019: Highlights*. ST/ESA/SER.A/423. Retrieved from: https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

⁶ Valin et al. (2013). *The future of food demand: understanding differences in global economic models*. Retrieved from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/agec.12089>

⁷ FAO (2011). *World Livestock 2011 – Livestock in Food Security*. Retrieved from: <http://www.fao.org/3/i2373e/i2373e.pdf>

⁸ Teagasc (2020). *National Farm Survey 2019*. Retrieved from: <https://www.teagasc.ie/media/website/publications/2020/Teagasc-National-Farm-Survey-2019.pdf>

The KPMG report, Ireland's 2030 Carbon Emissions Targets - An Economic Impact Assessment for the Agriculture Sector, commissioned by the Farmers Journal shows that to reduce emissions by 21% adopting the measurable mitigation measures set out in the Teagasc MACC would reduce farm profits by 7% on dairy farms (€4,300) and 13% (€1,300) on suckler farms. If the reduction target is increased to 30% the reduction in farm profits is 24% on dairy farms (€17,500) and 31% (€2,800) on suckler farms.

The report shows that a 21% reduction in emissions would reduce economic output by €1.1 billion and employment by 10,000, while a 30% reduce would reduce economic output by €3.8 billion and employment by 56,400.

Closing remarks

Farmers have a major role to play in reducing Ireland's emissions and contributing to addressing the climate change challenge. Farmers are committed to playing their part and have already made significant investments to improve efficiency and reduce emissions.

Farmers are engaging positively with new guidance on farming practices and environmental programmes such as the ASSAP, Smart Farming, Signpost Programme as well as European Innovation Partnership (EIP) projects and training programmes.

It is vital that the sector is set a reduction target that is achievable, that empowers and supports farmers to make the necessary changes to farm management practices and adopt new technologies to reduce emissions footprint. A reduction target of 22% for Agriculture is extremely challenging but based on potential mitigation measures outlined in the Climate Action Plan is achievable.

The lower target would also recognise the social and economic importance of the sector as well as the vulnerabilities and technical challenges faced by the sector.

Agriculture is a major part of the solution to climate change and with appropriate supports can continue to innovate and adapt in Ireland's transition to a climate neutral economy.

Ends.



Implementation of Carbon Budgets

Submission to the Joint Committee on
Environment and Climate Action



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Presentation to the Joint Committee on Environment and Climate Action

Social Justice Ireland welcomes the opportunity to make a submission to the Joint Committee on Environment and Climate Action on the implementation of carbon budgets and the achievement of sectoral targets and ranges. How we implement these budgets and the policies to meet these targets, will have profound implications for the future of our economy and society.

To deliver on our climate targets, Government has committed to a Green New Deal for Ireland and a Just Transition in the Programme for Government. It is essential that every sector makes a contribution to this effort, and that those people, communities and regions who will be impacted the most are supported during the transition.

Overall approach

Ireland has the capacity to develop ambitious policy, as the Fossil Fuel Divestment Bill, the report of the Joint Committee on Climate Action (2019) and the Citizen's Assembly (2017) report on climate change attest to. Our challenge is when it comes to implementing these policies.

A key starting point to move towards a sustainable model of development which protects the environment and enhances our natural capital is the assessment of Ireland's environment by the Environmental Protection Agency:

Essentially we have to rethink, and redesign what we mean by social and economic 'prosperity' in order to deliver the resilience essential for us to prevail. We must all learn to live, produce and consume within the physical and biological limits of the planet. To achieve this will require integrated and enduring governance, including brave social and economic measures (EPA, 2016:159).

A continued focus on cost-neutral or cost-effective actions to mitigate the impacts of climate change in the Climate Action Plan is misguided. While addressing the impact of climate change and implementing adaptation policies comes at a cost and requires strong collective effort, the cost of inaction and the associated social fallout would be much higher (European Commission, 2019c).

Significant investment is required to ensure that our society meets our climate targets and that the transition is done in a just fashion. Focus must be on the long-term value and return that will be derived from this investment.

The coming decade will be one of transformation as we strive to meet our climate goals. Our approach must be guided by the principles of a Just Transition. One of the fundamental principles of a Just Transition is to leave no people, communities, economic sectors or regions behind as we transition to a low carbon future.

Transition is not just about reducing emissions. This is just one part. It is also about transforming our society and our economy, and investing in effective and integrated social protection systems, education, training and lifelong learning, childcare, out of school care, health care, long term care and other quality services, Social investment must be a top priority of transition because it is this social investment that will support those people, communities, sectors and regions as we make the difficult transition to a carbon-neutral economy, transforming how our economy and society operates.

Ireland's climate targets

The Programme for Government¹ commits to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade), and to achieving net zero emissions by 2050.

The Climate Action and Low Carbon Development (Amendment) Bill 2021² established a legally binding framework with clear targets and commitments set in law, and ensure the necessary structures and processes are embedded on a statutory basis to ensure Ireland achieves national, EU and international climate goals and obligations in the near and long term. The Bill contains a provision that the first two five-year carbon budgets proposed by the Climate Change Advisory Council should equate to a total reduction of 51% emissions over the period to 2030.

There are also European targets that Ireland must contribute to. As a member of the EU, Ireland has committed to legally binding emissions reduction targets in 2020 and 2030. We have committed to a 20 per cent reduction on 2005 emission levels by 2020, and a 30 per cent reduction of emissions compared to 2005 levels by 2030. Ireland will not meet the 2020 target and we are certainly not on a trajectory to make our 2030 targets. The European Commission has also committed to a net reduction in greenhouse gas emissions by at least 55% by 2030, a substantial increase on the previous target of a 40% reduction. Ireland must make a contribution to this target.

Carbon budget programme

The Climate Change Advisory Council (2021) submitted its proposal for Ireland's first carbon budget programme on the 25th of October. The programme is broken down into three five-year carbon budgets. Carbon budgets prescribe the maximum amount of greenhouse gases that may be emitted over a specific period of time in the State.

The first two carbon budgets in the programme provide for the 51% reduction in greenhouse gas emissions from the state by 2030 relative to 2018 as set out in the Climate Action and Low-Carbon Development (Amendment) Act. The annual Average Percentage Change in Emissions from the first carbon budget 2021-2025 is a reduction of 4.8%, the second carbon budget 2026-2030 sees a reduction of 8.3%, and the third budget 2031-2035 sees a reduction of 3.5%.

The first carbon budget has built in the implications of the time-lag between making decisions and investments on the one hand, and on the other hand, seeing the emissions reductions come into effect.

The Climate Action Plan sets out indicative ranges of emissions reductions for each sector of the economy.

Emissions reductions by 2030 – by sector:

- Electricity: 62-81%
- Transport: 42-50%
- Buildings: 44-56%
- Industry/Enterprise: 29-41%
- Agriculture: 22-30% reduction
- Land Use, Land Use Change and Forestry (LULUCF): 37-58%

¹ <https://www.gov.ie/en/publication/7e05d-programme-for-government-our-shared-future/>

² <https://www.oireachtas.ie/en/bills/bill/2021/39/>

It also sets out the specific actions needed to deliver on our climate targets for each sector. The Plan also commits to a National Dialogue on Climate Action to give everyone in society the opportunity to play their part. The plan also commits to embedding a just transition framework into the design and implementation of climate policy. This framework is comprised of four principles:

1. An integrated, structured, and evidence-based approach to identify and plan our response to just transition requirements
2. People are equipped with the right skills to be able to participate in and benefit from the future net zero economy
3. The costs are shared so that the impact is equitable and existing inequalities are not exacerbated
4. Social dialogue to ensure impacted citizens and communities are empowered and are core to the transition process

Policy context for sectoral targets

Provisional greenhouse gas emissions published by the Environmental Protection Agency for 2020³ show that Ireland's greenhouse gas emissions decreased by 3.6 per cent in 2020, less than the reduction seen in 2019 (EPA, 2021).

Lockdown measures in response to the COVID-19 pandemic resulted in a 15.7 per cent decrease in Transport emissions, the largest sectoral emissions reduction.

Peat fuelled electricity generation decreased by 51 per cent in 2020. Together with a 15 per cent increase in wind generation - this led to a 7.9 per cent reduction in Energy Industry emissions.

Residential greenhouse gas emissions increased by 9.0 per cent, with a substantial increase in carbon intensive fossil fuel use driven by low fuel prices and working from home.

Agriculture emissions increased by 1.4 per cent in 2020, driven by increased activity in all areas, including a 3.2 per cent increase in the number of dairy cows.

While the overall reduction in emissions of 3.6 per cent is welcome, the majority of the reduction was due to a short term decrease in transport emissions due to the Covid 19 pandemic, which is likely to be once-off.

Ireland's emissions

Emissions in Ireland are cyclical, and even though emissions fell during the recession, they immediately increased as economic activity increased. Even with the impact of the pandemic taken into account, Ireland will miss our energy and climate targets for 2020.

Agriculture

Irish dairy farms produce up to three time more greenhouse gas and ammonia emissions than other farming sectors (Teagasc, 2019), yet the dairy sector has been earmarked by Government for continued expansion. Increases in herd sizes on dairy farms is undermining any gains from more efficient and sustainable farming practices. This type of policy incoherence makes it challenging to support this sector to meet climate targets. While reducing agricultural emissions will be difficult, it is necessary. In order to do so it is vital that Food Wise 2030 reflects the Farm-to-Fork principles of the European Commission and sets ambitious targets to reduce our agricultural emissions. The Ag Climatise Strategy commits to a reduction in absolute emissions from agriculture by 2030, but does

³ https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/Irelands-Provisional-Greenhouse-Gas-Emissions-report-1990-2020_final.pdf

not detail a specific target, nor outline some of the difficult yet very necessary policy changes that must be introduced if absolute emissions from agriculture are to be reduced. The setting of carbon budgets, and the detailed emissions reductions required from each sector means that policy change and investment is required immediately to support farmers in the transition to a greener economy and society.

There will be challenges in meeting our emissions targets in all sectors. In terms of agriculture, improvements in production efficiency will not be enough to meet and the long-term trajectory for the livestock sector must be considered. Continued support for the beef sector must be contingent on much stronger conditionality and essential income support for low-income farm households via CAP (Common Agricultural Policy) should be consistent with the green transition and emissions reduction ambitions (CCAC, 2020). We must move away from the existing approach whereby the targets in our agricultural and food strategies serve to undermine the targets in our environmental policies.

With regard to our national and international climate commitments we need to consider what agricultural policy will be best-placed to ensure Ireland meets its national and international targets: Is it a policy of agricultural expansion and increased emissions to reach additional markets, or, is it a policy of ensuring Ireland produces the food required to meet our population needs and supports the agricultural sector in the developing world to ensure they can provide the food required to meet their own population needs? These are the kinds of issues that the Climate action Plan must begin to address.

Transport

Transport is another area which faces challenging targets. Despite impact of Covid-19 restrictions in emissions from this sector in 2020, a significant amount of work needs to be done in order to reduce emissions. While emissions fell significantly in 2020 due to the impact of the pandemic, emissions in Ireland are cyclical, thus transport emissions are likely to increase again.

Road transport is just one element of transport emissions. Emissions from aviation are not taxed directly. Jet kerosene use increased by 1.2% in 2019 and is now greater than petrol use and air travel is now second only to private cars as a share of transport energy. As we begin to look at what measures are required to deliver on the policies in the Climate Action Plan, we must look at the aviation sector and the policy levers that are available to ensure that it makes a contribution to our climate targets. *Social Justice Ireland* has consistently argued that the aviation sector should make a contribution to Ireland's emissions targets⁴ and outlined proposals as to how this could be achieved. Now that Government has published 'The Impacts of Aviation Taxation in Ireland' it is important that the key recommendations of this report, to target the taxation of CO₂ directly by abolishing the Jet Kerosene exemption.

Significant investment is needed to develop a public transport network powered by electricity and renewable energy. To encourage electric car use the national charging infrastructure must be upgraded and the tax on electric vehicles should be reduced to make them a more affordable option.

The initial investment in public transport will be substantial if it is to have the necessary effect, but the long-term social, environmental and economic benefits of such a change would greatly outweigh the cost. It is vital that the upgrade to the public transport network has a strong focus on connectivity

⁴ For further details see our proposal on aviation taxation in Budget Choices 2020, 2021 and 2022.

to ensure that people travelling from rural or regional areas to urban centres are encouraged to do so by public transport.

Energy

Energy is the third largest driver of our emissions. Energy efficient homes help reduce our carbon footprint as they require less fuel to heat. One of the most cost-effective measures to promote sustainable development is to increase building energy efficiency through retrofitting for example. The SEAI estimate that €35 billion would be needed over the coming 35 years to make Ireland's existing housing stock 'low-carbon' by 2050. More than 50,000 home will have to be retrofitted every year to meet the targets Programme for Government. Budget 2022 contained a welcome allocation of €85m to the Local Authority Retrofit Programme. Investment in renewable energy and retrofitting on the scale required to meet our national climate ambition requires large scale investment in infrastructure.

Cost of missing targets

While the environmental implications of not meeting our emissions targets are obvious, there are also significant economic implications as a result of not meeting our EU 2020 targets. The Climate Change Advisory Council in its annual review notes that the use of public funds to buy emissions allowances in order to comply with our 2020 EU targets provides no domestic benefit, imposes a current cost on the Exchequer, and leaves the country with an even bigger task to meet our future targets to 2030 and beyond (CCAC, 2019:iv).

As a member of the EU, Ireland has committed to legally binding emissions reduction targets in 2020 and 2030. We have committed to a 20 per cent reduction on 2005 emission levels by 2020, and a 30 per cent reduction of emissions compared to 2005 levels by 2030. Ireland will not meet the 2020 target and we are certainly not on a trajectory to make our 2030 targets. This has very serious implications for our environment, our society and our economy.

Because we are projected to miss our 2020 targets, Ireland will be subject to fines at an estimated cost of between €65 million and €130 million per percentage point below the overall 16 per cent target. A recent assessment of Ireland's progress towards achieving emission reduction targets set under EU Effort Sharing Decision No 406/2009/EU suggests that Ireland's non-ETS emissions are projected to be between 2 per cent and 5 per cent below 2005 levels in 2020 compared to a target of 20 per cent (EPA, 2020).

Sectoral Recommendations

Investment

Investment in renewable energy and retrofitting on the scale required to meet our national climate ambition requires large scale investment in infrastructure. An upgrade of the national grid must be a key element of infrastructure investment so that communities, cooperatives, farms and individuals can produce renewable energy and sell what they do not use back into the national grid, thus becoming self-sustaining and contributing to our national targets.

Retrofitting

Issues around renewable energy subsidies and energy poverty must be addressed. Too often subsidies are only taken up by those who can afford to make the necessary investments. Retrofitting is a prime example. As those who need them most often cannot avail of them due to upfront costs, these subsidies are functioning as wealth transfers to those households on higher incomes while the costs (for example carbon taxes) are regressively socialised among all users. Incentives and tax structure must look at short and long term costs of different population segments and eliminating energy

poverty and protecting people from energy poverty should be a key pillar of any Just Transition platform. A state led retrofitting scheme is required to ensure that people living in social housing and poor quality housing have access. This would increase energy efficiency, reduce bills, improve health outcomes, and assist us in meeting our climate-related targets.

Carbon pricing

The Climate Change Advisory Council recommends that Government ensure that the level of Ireland's carbon tax be sufficiently high to reflect the cost of achieving the 2050 targets, rising to €80 per tonne by 2030. The Council also proposes that Government design a strategy to remove fossil fuel subsidies, including the accelerated removal of price supports for peat generation and the introduction of a carbon price floor. An appropriate carbon price floor would remove the need for ongoing support of renewables via the Public Service Obligation levy (CCAC, 2020). *Social Justice Ireland* has consistently proposed that revenues from carbon taxes are used to support households in energy poverty to improve energy efficiency and in low carbon technologies to improve the energy efficiency of the housing stock. It is vital that any carbon tax is well-designed and accompanied by the necessary measures to assist people and communities to transition to low-carbon alternatives.

Environmental taxation

The taxation system should reflect the environmental costs of goods and services. In designing taxes or incentives transitional measures, regional differentiation, the availability of alternatives and differences in purchasing power should all be taken into account. When designing environmental taxes it is vital that revenues generated should be used to offset any regressive impacts. When considering environmental taxation measures to support sustainable development and the environment, and to broaden the tax base, the Government should ensure that such taxes are structured in ways that are equitable and effective and do not place a disproportionate burden on rural communities or lower socio-economic groups. The European Commission has recommended the use of economic instruments such as taxation to ensure that product prices better reflect environmental costs. *Social Justice Ireland* believes that there is merit in developing a tax package which places less emphasis on taxing people and organisations on what they earn by their own useful work and enterprise, or on the value they add or on what they contribute to the common good. Instead, the taxes that people and organisations pay should, to the greatest extent possible, be based on the value they subtract by their use of common resources.

Environmental taxation, enforcing the polluter pays principle, and encouraging waste prevention can help to decouple growth from the use of resources and support the shift towards a low carbon economy. In order to promote sustainable development, it will be necessary to develop the economic system to reward activities that are socially and environmentally benign. This, in turn, would make it easier for people and organisations to make choices that are socially and environmentally responsible. Incorporating social and environmental costs in regulating and pricing both goods and services, combined with promoting those goods and services which are sustainable, should become part of sustainable development policy.

Environmental subsidies

Subsidies are also an element of the environmental tax code that should be reviewed. These subsidies mean that government has a wider fiscal space available to it in terms of climate policy and taxation. Government can address climate challenges by removing those subsidies which are harmful rather than levying new environmental taxes or increasing the existing environmental tax rates/levels. This gives additional budgetary space for Government when implementing and designing climate policy.

According to the latest data published by the CSO, €2.4 billion was not collected by the Exchequer due to direct subsidies and revenue foregone due to preferential tax treatment supported fossil fuel activities in Ireland in 2018⁵. This represents an increase of 8 per cent on the previous year. The revenue foregone due to the excise duty exemption for jet kerosene used for domestic and international commercial aviation, which was €626.5 million in 2018. Between 2012 and 2016, €4 billion per annum in taxation was forgone through potentially environmentally damaging subsidies. €2.5 billion went in direct subsidies and preferential tax treatment supporting fossil fuel activities in Ireland and a further €1.6 billion supported other potentially environmentally damaging activities in the Agriculture, Transport and Fisheries sectors. A study by the ESRI (2019) found that budgetary cost of these subsidies was over six times higher than the entire carbon tax revenue of the Government in 2017.

The value of these subsidies is substantially higher than the allocation to Just Transition and biodiversity. By ending environmentally damaging tax breaks and investing this money in people, communities and regions that will be most affected by climate adaptation, Government can help to ensure a Just Transition. It also means increases the fiscal space available to government in terms of climate policy. Government can alleviate adverse climate change impacts by removing these subsidies rather than levying new environmental taxes or increasing the existing environmental tax rates/levels. This is something that must be considered in budgetary terms when implementing and designing climate policy.

In terms of overall public expenditure, systematic reviews should be carried out and published on the sustainability impacts and implications of all public subsidies and other relevant public expenditure and tax differentials. Subsidies which encourage activity that is damaging to natural, environmental and social resources should be abolished.

By eliminating these harmful subsidies and investing in renewable energy and schemes to address energy poverty Ireland will be in a much better place to meet our energy targets. This is a policy that Government can begin to implement immediately and would be an important component of a national mitigation and transition programme. If Government is really serious about Ireland transitioning to a low carbon economy all subsidies for fossil fuels should be reviewed in 2022, with those which are harmful removed and the savings invested in renewable energy.

Policy Coherence

To ensure policy coherence as we aim to meet our 2030 and 2050 national climate targets and ambitions Government should integrate a Sustainable Development Framework into economic policy. Sustainable development is defined as ‘development which meets the needs of the present, without compromising the ability of future generations to meet their needs’ and should encompass the environment, society and the economy. Maintaining a balance between the three is crucial to the long-term development of a sustainable resource-efficient future for Ireland.

To date there has been a strong degree of policy incoherence at national level, with government pursuing policies such as Food Harvest 2020 and Food Wise 2025, despite the fact that these will each result in increased emissions that will inhibit the achievement of our climate-related goals. The increased emissions from both agriculture and transport mean that Ireland will be subject to fines for not meeting our European targets. Energy policy is also affected by policy incoherence. There is a mismatch between pursuing a policy of data centre expansion, and the pressure that this will put on energy resources whilst simultaneously trying to reduce our energy emissions. Eirgrid found in their

⁵ <https://www.cso.ie/en/releasesandpublications/er/ffes/fossilfuelsubsidies2018/>

‘All-Island Generation Capacity Statement 2019-2028’ that forecasted energy demand in Ireland continues to be heavily influenced by the expected growth of large energy users, primarily data centres. Data centres can require the same amount of energy as a small town and Eirgrid forecast that 29 per cent of total energy demand will come from data centres by 2028 (Eirgrid, 2019).

In addition to the immediate financial costs of missing our 2020 targets, the potential social, economic and environmental impacts of climate change are immense, and their cost must also be taken into account. Government’s commitment to green budgeting and the publication of all Exchequer climate related expenditure is an important part of the policy coherence process and incorporating climate change and the SDGs into the budget process.

In order to improve policy coherence the SDGs should be placed at the centre of policy making in Ireland. Government should, as a matter of priority, outline a five-year plan containing the following:

- A plan to support the CSO to develop Ireland’s System of Environmental-Economic Accounts (SEEA) and how the SEEA will be incorporated into the National Development Plan;
- All proposed environmental taxation changes over the period;
- Details of the energy efficiency and renewable energy projects that this revenue will fund over the period to support our low carbon transition;
- A circular economy strategy for Ireland;
- A mitigation and transition programme.

This plan should be overseen and monitored by an Oireachtas committee.

Mitigation and Transition - supporting communities and people

One of the fundamental principles of a Just Transition is to leave no people, communities, economic sectors or regions behind as we transition to a low carbon future. Transition is not just about reducing emissions. It is also about transforming our society and our economy, and investing in effective and integrated social protection systems, education, training and lifelong learning, childcare, out of school care, health care, long term care and other quality services, Social investment must be a top priority of transition because it is this social investment that will support those people, communities, sectors and regions as we make the difficult transition to a carbon-neutral economy, transforming how our economy and society operates.

Transition to a sustainable economy can only be successful if it is inclusive and if the social rights and wellbeing of all are promoted. A Just Transition requires a social protection system – along with appropriate services and infrastructure – that prevents poverty and social exclusion for those that lose employment or income due to the effects or mitigation of climate change (NESC, 2020).

The National Economic and Social Council proposes that Ireland should adopt an approach to transition that:

- is a purposeful, participative, reflexive and multi-faceted approach to governance;
- ensures appropriate social protection for those at risk from transition impacts, as well as adequate services and infrastructure;
- provides supportive arrangements and sectoral measures to enable quality jobs, and training and skill-development for workers;
- develops an inclusive place-based development framework, and invests in low-carbon and digital-ready infrastructures, plus community enterprise and household supports, that empower community action and enable sharing of benefits; and

- ensures that just transition policies, institutions and dialogue processes draw on existing and international experience and practices, with clear deliverables, remits and timelines.

A comprehensive mitigation and transition strategy is required to ensure there is public support for our domestic and international environmental and sustainable development goals. This strategy must pre-empt some of the challenges we face as we move to a more sustainable form of development. *Social Justice Ireland* proposes that the strategy should contain, as a minimum:

- Retraining and support for those communities who will be most impacted by the loss of employment related to the move away from fossil fuels;
- Support and investment in the circular economy with regional strategies and targets;
- Investment in the deep retrofitting of homes and community facilities;
- The provision of community energy advisors and community energy programmes;
- Investment in renewable energy schemes;
- Policies to eliminate energy poverty;
- Investment in a quality, accessible and well-connected public transport network.

The development of a national mitigation and transition strategy is a matter of priority if there is to be public support for the significant and fundamental changes required in the years ahead.

Stakeholder engagement - Social Dialogue

Social Justice Ireland welcomes the commitment in the Climate Action Plan to a social dialogue and a National Dialogue on Climate Action. In order to ensure the move to a sustainable future for all is successful, stakeholders from all arenas must be involved in the process. Social dialogue is an effective mechanism for fostering trust and adopting a problem-solving approach to transition (NESC, 2020).

In order to develop a sustainable society, services and infrastructure must be well-planned and capable of adapting to the changing needs of the population over time. This means that policy planning and design should, from the very beginning, include potential future changes, and as far as possible should be designed with these in mind.

Social dialogue

If Ireland is to succeed in addressing our climate and other challenges, the pathway to doing so must be founded on consensus, must be well-managed, and must be properly evaluated.

Reforming governance and widening participation is key to a successful Just Transition. An increased recognition of the need to include all stakeholders in the decision-making process is needed. A deliberative decision-making process, involving all stakeholders and founded on reasoned, evidence-based debate is required. One component of real participation is recognition that everyone should have the right to participate in shaping the society in which they live and the decisions that impact on them. In the 21st century this involves more than voting in elections and referenda. Ireland needs real, regular and structured deliberative democracy to ensure that all interest groups and all sectors of society can contribute to the discussion and the decision-making on the kind of society Ireland wishes to build.

Ireland would greatly benefit from having a structure that would engage all sectors at a national level. Social dialogue helps highlight issues at an early stage which would allow them to be addressed promptly. More importantly, it ensures that the various sectors of society are involved in developing mutually acceptable solutions to problems that emerge which in turn would be most likely to ensure their support for such solutions when implemented by Government. For such an approach to succeed

it must include all five pillars i.e. employers, trade unions, farmers, community & voluntary and environmental.

As already noted, Ireland faces significant challenges in the coming decades, among them the housing and health situations, an increasing older population and the transition to a cleaner, greener economy. We need to get beyond growth and markets and recognise that, while they do have a role, they are only part of the solution. It is also important that all sectors of society – young and old, urban and rural, businesses, trade unions, farmers, community/voluntary, social inclusion and environmental – have a voice in deciding how these challenges will be met.

The National Economic Dialogue (NED) is an example of the potential for such dialogue. Government held the first NED in July 2015 and has repeated the process annually since. Social Justice Ireland welcomed this deliberative approach to policymaking but argued that it should meet more regularly than once a year, and should broaden its deliberations beyond the economy.

If Government wishes for all of society to take responsibility for producing a more viable social and economic model, it must involve all major sectors in society in shaping it.

Social dialogue involving all sectors of society enables the development of mutually acceptable solutions to problems that emerge. This in turn would make it more likely that support for such solutions can be secured when implemented by Government. People who have been involved in shaping decisions are far more likely to take responsibility for implementing these decisions.

An on-going and robust social dialogue structure at regional and national level is required to ensure the appropriate services and infrastructure are delivered, and that there is ongoing public support for the pathway by which these services and infrastructure will come on-stream. There is an increased responsibility on local and national government to engage with communities on this issue and build local capacity (CCAC,2020). This dialogue should also focus on what is required to transition Ireland to a low-carbon future, and how such services and infrastructure can be delivered and managed in a sustainable way. This requires input from all stakeholders. Such a mechanism would ensure that there is support and understanding as to how services and infrastructure are to be resourced and rolled out at local, regional and national level.

A robust social dialogue process provides a structure where current and future challenges can be addressed in a positive manner, acknowledging the task ahead, where reasoned, and evidence-based debate forms the basis for decision making and where all stakeholders are included in the decision-making process. This dialogue should be built into the Just Transition principles outlined in the Climate Action Plan with the appropriate mechanisms, supports and investment at all levels.

Key Policy Priorities

A successful transition to sustainability requires a vision of a viable future societal model and the ability to overcome obstacles such as vested economic interests, political power struggles and the lack of open social dialogue. Ireland is at the cusp of this transition. To achieve it in the years ahead, in addition to the specific areas discussed in detail in this submission *Social Justice Ireland* believes that policy should:

- Set ambitious emissions reduction targets for 2030 and ensure sufficient resources to support implementation of these targets;
- Adopt targets and a reporting system for each of the Sustainable Development Goals;
- Integrate a Sustainable Development Framework into economic policy;

- Introduce a strategy for Ireland that includes the principles of the circular economy and cradle-to-cradle development;
- Introduce shadow national accounts, and assign value to natural capital and ecosystems in our national accounting systems;
- Develop a comprehensive mitigation and transition programme to support communities and people in the transition to a low carbon society;
- Develop a progressive and equitable environmental taxation system;
- Develop a new National Index of Progress encompassing environmental and social indicators of progress as well as economic ones;
- Establish a National Social Dialogue including all five pillars focused on addressing our climate and other challenges;
- Develop a Just Transition Dialogue structure at regional level.

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Social Justice Ireland is an independent think-tank and justice advocacy organisation of that advances the lives of people and communities through providing independent social analysis and effective policy development to create a sustainable future for every member of society and for societies as a whole.



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An Roinn Forbartha
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Irish Congress of Trade Unions Opening Statement Oireachtas Committee on Environment and Climate Action

January 13, 2022

On behalf of Congress I want to thank the Committee for the opportunity to participate in this very inclusive consultation process and contribute to a debate that has quite profound implications for how we will live and work, many years into the future.

I am joined by my colleague David Joyce and we would be happy to respond to any questions that may arise on foot of this.

No one who has watched or participated in these hearings can be under any illusion as to the magnitude of the challenge we face, or the sheer scale of the transformative change under discussion.

There is nobody at work today who will remain untouched by this. Equally, the range of opportunities and quality of jobs available to future generations will be largely determined by decisions that are made now.

Therefore, it is imperative that the overall transition and decarbonisation process is underpinned by engagement and inclusive dialogue - especially with those workers and communities positioned at the frontline of this change.

But as the workers of Bord na Móna and the communities of the Midlands will readily testify, our record thus far is quite poor.

The obvious danger is that the very idea of transition becomes synonymous with job loss and lower living standards and make it almost impossible to deliver.

To be clear, job losses and lower living standards are *not* the inevitable outcome of the transition process, but result from bad planning and poor policy.

Specifically, we see a serious disconnect between official declarations and policy implementation.

Successive governments have repeatedly embraced the principle of Just Transition: from the 2015 Paris Agreement, to the seminal 2019 NESC report and the progressive commitments contained in the COP 26 Just Transition Declaration.

But these have yet to become reality and we urgently need policymakers to adopt the language *and* the substance of Just Transition.

Congress welcomed the commitment in the Climate Action Plan on the creation of a national Just Transition Commission (JTC), which we have advocated for several years.

However, the recently-published annexes to the plan reveal that the Commission is unlikely to be operational until sometime in 2023.

This delay is untenable.

We therefore request that the Committee acts to ensure that this crucial component of the transition process is prioritised and an effective vehicle for structured social dialogue - at national and sectoral level - is established without delay.

The comprehensive guidelines from the ILO provide a clear blueprint for this.¹

The urgency of this task was underscored by the Climate Change Advisory Council (CCAC), in their October 25 letter to the Minister.²

This characterised “early and effective engagement with workers, local communities, business and social partners” as an essential step in the transition process.

The carbon budgets set out by the Council provide clear targets and a timeframe in which to reach the goal of net zero by 2050.

We know where we have to go and how far we have to travel.

But without a vehicle for structured social dialogue, we have no roadmap on how to get there.

The next significant step in this process involves the agreement of sectoral emission ceilings, across the economy. As the CCAC has outlined, this has major implications for employment.

Some of this we can predict. Jobs will be created in renewables, but are likely to be lost in transport and related services.

But what we do not know is the *number* and *type* of jobs that will be affected, nor whether jobs lost will be replaced by high quality employment.

But we have an opportunity to address this now and bring coherence, foresight and proactive planning to the process.

To that end, Congress is calling for a new, mandatory requirement that each sectoral emission ceiling be accompanied by a comprehensive **Employment Impact Report**.

Based on agreed metrics and standards, such a report would have two key components: firstly, a full break down of the likely jobs impact - positive and negative - of the proposed emission ceiling in each sector; secondly, the concrete measures and plans required to either maximise job creation opportunities, or minimise possible job losses.

The process would be organised under the auspices of the Just Transition Commission with the Impact Report providing the basis for full engagement at sectoral level, across the economy.

It is only through dialogue and early engagement that we can hope to restore confidence and build trust in the transition process.

Unveiling a comprehensive plan *after* the event will not suffice. Thank you for your time.

Ends

¹ https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf

² <https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/Final%20Letter%20to%20Minister%2025.10.21.pdf>

18th January 2022

Consideration of the Carbon Budgets

Opening Statement by Bill Callanan, Chief Inspector, DAFM

Introduction

Thank you, Chairman, and thank you for the opportunity to address the Committee to inform your considerations of the Carbon Budgets.

I am joined by my colleagues:

- Deirdre Fay, who is Head of the Department's Climate Change and Bioenergy Policy Division, and by
- Fergus Moore, who is Head of Forest Sector Development within the Department.

Delivery of the proposed Carbon Budgets - contribution from the agriculture, forestry and other land use (AFLOU) Sector.

- The 51% reduction in greenhouse gas emissions on an economy wide basis is an extremely ambitious but also challenging target for all sectors, including both agriculture and the landuse, landuse change and forestry sectors.
- The agriculture sector, due to its biological nature, coupled with the high level of methane in the emissions profile for agriculture results in unique challenges in particular when compared to other EU Member States. In the absence of new technological innovations and as long as the sector produces food, feed or fibre there will always be residual emissions.
- The recently published Climate Action Plan 2021 sets out what is needed from each sector with the plan committing the agriculture sector to reducing its emission by between 22-30% to bring the emissions for agriculture into the range of 16-18 MT and for LULUCF, a contribution of 2 Mt CO₂ eq from landuse and landuse change and forestry.

- We are not starting from a point of inaction and the commitments within the Climate Action Plan 2021 builds on progress to date. Food Vision 2030, the stakeholder-led strategy for the development of the sector, sets an ambitious agenda, addressing sustainability in all its dimensions, and identifying that Ireland will aim to become a world leader in sustainable food systems. Food Vision 2030 is about targeting increases in value growth rather than volume growth and evolving and adjusting to a more sustainable way of farming that uses less inputs and relies instead on new technologies and new practices.
- The publication of the Climate Action Plan 2021 goes hand in hand with Food Vision so ensuring that Ireland can continue to produce high quality food in a manner that protects the environment and mitigates climate change. It is important that we drive this momentum forward.
- Driving environmental ambition and change at farm level will require a combination of policy instruments such as through financial incentives, be that through the Common Agricultural Policy Strategic Plan or through market-driven support for farmers by food processors and food companies; and through regulation with an initial focus on reducing nitrogen use and finally through roll-out of new emerging technological solutions and innovations.
- Early action and high levels of take-up will be required across our 135,000 farms to drive momentum towards achieving the required ambition within the context of managing emissions from our dairy herd and transforming our model of beef production.

Carbon Budgets – meeting the requirements under the Climate Act

- As noted earlier, food production is a biological system and the Climate Act made it clear that the social and economic role that Irish Agriculture plays in society must be considered at all stages of the carbon budgetary process.
- To ensure early action within the first 5-year carbon budget, there will be a significant focus on reducing nitrous oxide emissions in agriculture, mainly associated with the use of chemical nitrogen fertiliser. A national

fertiliser register of compliance will be developed and reductions in chemical nitrogen allowances will help achieve our objectives as will support such as training and advisory services to underpin this transition.

- Reductions in methane are more challenging as the technological advances are currently not available in the marketplace. Progress on methane is expected to accelerate within the second 5-year carbon budget as methane reducing feed additives become commercially available. DAFM is continuing to significantly fund and participate in international research in order to address the methane challenge from pasture-based livestock production systems.
- The importance of cutting methane to achieve the Paris temperature goals is widely recognised but it must be acknowledged that in the short term, the global focus is on cutting fossil methane, something the EU Commission will legislate for in 2022.
- The challenge to reduce methane levels in Ireland is very clear, as 95% of total methane emissions arise within the agriculture sector where abatement potential is limited.

Carbon budgets - intersection with the Climate Action Plan 2021

- New technologies, such as the development of feed additives, will be needed to complement existing technologies to bring the sector into the Climate Action Plan 2021 target range of a reduction of 22-30% for agriculture and long-lead in times are essential to allow for the scale up and deployment of commercial technologies. Importantly, given the international research focus and findings to date the commercialisation potential of this technological advancement & innovation is extremely promising.
- Increasing afforestation rates, a focus on reducing emissions associated with management of peat based soils in agricultural use and the development of our knowledge around carbon flows in our soils, something we are supporting through the National Soil Carbon observatory will be critical also in respect of land based emissions and opportunity for removals.

Conclusion

- To conclude, Agriculture globally has impacts on our climate but is also very much impacted by climate change. As set out in Food Vision 2030, there is a critical need to consider the three pillars of social, economic and environmental sustainability as we move forward. The targets as set out in the 2021 plan are both ambitious but challenging for the sector as part of the economy wide target of 51% reduction in emissions.
- In particular, there are significant challenges around the reduction of methane within our pasture-based livestock production system and we welcome the fact that the second 5-year carbon budget is aligned with the current technology constraints in this regard.
- I and my colleagues are happy to answer any questions that you may have.

Thank you

A short overview of Carbon Budgets and the contribution for the Agriculture, Forestry and Other Land Use (AFOLU) sector

1. Overview

The agriculture, forestry, and other land use (AFOLU) sector must and will play its' part in contributing to Ireland's climate ambition of a 51% reduction in greenhouse gas emissions (GHGs) by 2030. Food Vision 2030 charts a course for how Ireland's agri-food sector can become a world leader in sustainable food systems. The Climate Action Plan 2021 goes hand-in-hand with Food Vision to ensure the production of high-quality safe food in a manner that protects the environment and mitigates climate change

The Climate Acton Plan 2021 sets out a set of core and further measures to meet this 51% GHG emissions reduction ambition. Sustained effort across all the sectors including agriculture will be required, and the commitments for the AFLOU sector as set out in the Climate Action Plan are as follows:

- For agriculture a 22-30% reduction in greenhouse gas emissions is required to bring the emissions for agriculture into the range of 16-18 Mt CO₂ eq.
- For LUCLUF a contribution of 2 Mt CO₂ eq from landuse and landuse change and forestry.

In addition, a proactive response to consumer demands and regulatory requirements necessitates a step-up in environmental ambition for the sector.

2. Contribution to the Delivery of Carbon Budgets - Agriculture and Land Use, Land Use Change, Forestry, and the Marine

It is clear within the Climate Act that the social and economic importance of Irish agriculture, combined with the distinct characteristics of biogenic methane, are to be considered at all stages of the carbon budgetary process. The agriculture sector will reduce its' emissions as set out in the Climate Action Plan 2021, and as a contribution to the 51% reduction in GHG emissions, through a series of core and further measures as follows:

Core Measures for Agriculture

- Significant reduction in nitrous oxide emissions through reduction in chemical fertilizer use, increased use of protected urea and increased uptake of Low Emission Slurry Spreading.
- Improved animal breeding in dairy and beef herds.
- Improved animal feeding through reducing crude protein and utilising feed additives over the housed winter period.
- Reducing the average age of slaughter of prime animals from 27 to 24 months by 2030.
- Increase organic farming to 350,000 ha by 2030.
- Contribute agriculture feedstocks to the production of 1.6Twh of biomethane.

Further measures for Agriculture

- Review diversification opportunities for income and landuse for farmers.
- Explore the development of a carbon farming model.
- Explore the potential for methane reducing feed additives for pasture-based solutions.

In addition, there is a separate contribution from the landuse, landuse change and forestry sector of 2 Mt CO₂ eq towards the target of 2-3 Mt CO₂ eq in 2030 as follows:

- Increasing the annual afforestation rate including promoting forest management initiatives.
- Reducing the management intensity on 80,000 ha of grasslands on drained organic soils.
- Improving the management of carbon sequestration of at least 450,000 ha of grasslands on mineral soils.
- Increasing the inclusion of cover crops in tillage to at least 50,000 ha by 2030.
- Increasing the incorporation of straw to at least 10% of the tillage areas.

The Climate Action Plan 2021 includes provision for accounting for afforestation with removals realised post 2030 has the potential to deliver a further 2.1 Mt CO₂ eq in direct savings. From Forestry including new afforestation to 2030 of 0.8 Mt CO₂ eq there is therefore a maximum potential of 2.9 Mt CO₂ eq in direct savings. These savings will be achieved through increasing our annual afforestation rate consistent with achieving carbon neutrality no later than 2050. The promotion of forest management initiatives to increase carbon sinks and stores will also be required to meet this level of emission reductions.

The Department of Agriculture, Food and Marine's (DAFM) policy approach in relation to the achievement of the climate targets for the AFOLU sector centres on four different drivers of change:

Public Supports/Incentives

The new **Common Agricultural Policy Strategic Plan** (CSP) for the period 2023-2027 will contain a range of new measures to drive behavioural change on farm.

Regulation

This will focus on reducing nitrogen allowances, mandatory use of low emission manure technology and use of Nitrogen fixing clover, including in the context of the introduction of a National Fertiliser Register as well as ongoing compliance with the Nitrates Directive.

Market/ Private Industry Incentives

Financial incentives by industry will play a significant role in driving on farm change. Several new incentives around biodiversity bonus payments have already been established. The Department continues to engage with industry on the development of price and bonus payments to ensure our goals are firmly aligned around the achievement of our climate and environmental targets.

New Technologies, Innovation and Diversification Opportunities

New technologies and innovations are on the horizon and showing promise that when fully mature can deliver significant emissions reductions in the agriculture sector. Industry incentives will also be needed to ensure that they are fully adopted at farm level. These includes innovations such as pasture-based feed additives, income diversification into areas such as Anaerobic Digestion and, finally, development of Carbon farming models.

3. Carbon Budgets – meeting the requirements under the Climate Act

It is clear that the two 5-year carbon budgets as proposed will meet the 51% reduction in GHG emissions by 2030. The Climate Act makes it clear that the social and economic role that Irish agriculture plays in society must be fully considered at all stages for the Carbon budgetary process. This special role for agriculture was also reflected in the Programme for Government. The position of the agriculture sector is unique as food production is a biological system and a 51% reduction in emissions for the agricultural sector could not be achieved without significant economic and social consequences. In addition, considering the higher proportion of methane within the national

inventory, which differs greatly from other Member States as well as the absence of major technological advances, there is a significant challenge for agriculture to reduce its emissions.

Agriculture is committed to a reduction of emissions by 22-30% towards the achievement of the national climate objectives. Early action with high levels of take-up is required to drive momentum towards achieving the required ambition within the context of managing emissions from our dairy herd and transforming our model of beef production. To that end within the first 5-year carbon budget, there will be a significant focus on reducing nitrous oxide emissions, mainly associated with the use of chemical nitrogen fertiliser. A national fertiliser register will be developed and reductions in chemical nitrogen allowances will help achieve our objectives.

Reductions in methane are more challenging as the technological advances are currently not available in the marketplace. Progress on methane is expected to accelerate within the second five-year carbon budget as methane reducing feed additives become commercially available. DAFM is continuing to fund and participate in international research in order to address the methane challenge from pasture-based livestock production systems.

While the Climate Change Advisory Council rightly acknowledge the importance of cutting methane to achieve the Paris temperature goals, it must be acknowledged that in the short term, the global focus is on cutting fossil methane, something the EU Commission will legislate for in 2022. The challenge to reduce methane levels in Ireland is very clear, as 95% of total methane emissions arise within the agriculture sector where abatement potential is limited. However, it is worth noting that Article 2 of the Paris Agreement does recognise that the achievement of this climate ambition cannot be done so in a manner that threatens food production.

4. How does the C budgets intersect with the Climate Action Plan 2021

The Climate Action Plan 2021 outlines a pathway and series of action that will reduce GHG emissions by 51% by 2030. The Plan also acknowledges that future technology and innovations will be required to meet this ambition. The Climate Action Plan 2022 and the setting of the sectoral ceilings for individual sectors will be the key next steps in this regard.

Based on analysis conducted there is broad consensus that a reduction of emissions of 3-4 MT CO₂ eq is achievable in agriculture, based on existing technologies and on the principle of a broadly stable herd. New technologies, such as emerging feed additives will be needed to bring the sector into the Climate Action Plan 2021 target range of a reduction of 22-30% for agriculture and long-lead in times are essential to allow for the scale up and deployment of commercial technologies.

DAFM notes that the second 5-year carbon budget is aligned with the current technology constraints.

Joint Committee on Environment and Climate Action

18 January 2022

Opening Statement by Brian Carroll, Assistant Secretary General

Department of the Environment, Climate and Communications

I am the Assistant Secretary responsible for Climate in the Department of the Environment, Climate and Communications. I am accompanied by two of my colleagues from the Energy Division – Philip Newsome from Renewable Electricity and Robert Deegan from Residential Energy Efficiency. I will use my opening remarks to address the three issues that the Committee has indicated it would like to discuss.

The first relates to how Departments intend to deliver the carbon budgets. The Climate Action Plan 2021 builds on the Climate Action Plan 2019, recognising that a larger range of measures are now required to achieve the significant increase in ambition set out in the 2020 Programme for Government. The focus of the 2021 Plan is on delivering a 51% reduction in greenhouse gases by 2030, and a pathway consistent with climate neutrality by no later than 2050.

To support these two objectives, the Climate Action and Low Carbon Development (Amendment) Act 2021 provides for the adoption of a programme of three sequential, five-year, economy-wide carbon budgets: 2021-2025; 2026-2030; and 2031-2035 (the latter being provisional) – which this Committee are currently considering with a view to providing a report to the Oireachtas. Once the carbon budgets are adopted, Government must then approve sectoral emissions ceilings, within the limits of the respective economy-wide, carbon budgets.

The 2021 Climate Act also provides that Government approve an annual update to the Climate Action Plan that is consistent with the carbon budget programme, so once the carbon budget programme and associated sectoral emissions ceilings have been adopted, Climate Action Plan 2022 will update the 2021 Plan to ensure such consistency.

While I have set out key elements of the legal and policy framework to support Departments delivering the carbon budgets, this is not to say that it will be easy. The challenge of doing so is very significant and will require transformational change across all sectors of society and the economy. The current Climate Action Plan sets out ambitious targets, measures and actions for all sectors, while also recognising that we cannot yet identify all the emerging science, technologies or policies to meet our full ambition, but it points to further measures that could close the gap. A programme of work will be undertaken to refine the potential of these measures and to set relevant targets and pathways. These will be reflected in future Climate Action Plans.

The second issue signalled by the Committee is whether the carbon budgets meet the requirements under the 2021 Climate Act. While the Minister for the Environment, Climate and Communications is currently considering the carbon budgets in accordance with the provisions of the legislation, including consulting with the Committee,

other Ministers and the public, the Carbon Budget Technical Report of the Climate Change Advisory Council clearly sets out that the proposed budgets have been calculated to allow compliance with 51% emissions reduction by 2030, and to set Ireland on a pathway to achieving climate neutrality by 2050.

The proposed carbon budgets have been calculated in line with S.I. No. 531/2021 – *Climate Action and Low Carbon Development Act 2015 (Greenhouse Gas Emissions) Regulations 2021*; they use the most recent EPA inventories and projections, are built on the latest science, and are consistent with international best practice on reporting.

With regard to the need to maximise employment and ensure a just transition in Ireland, appropriately designed climate policies, measures and actions have huge potential to open up new employment and enterprise opportunities, including targeted supports to help particularly impacted groups, regions and communities to adapt to the new economy, as committed to the Climate Action Plan 2021.

In terms of consistency with Article 2 of the UNFCCC and having regard to international climate justice, Ireland is required to make an appropriate contribution via the European Union's Nationally Determined Contribution to the Paris Agreement. The proposed carbon budgets will enable this.

The third and final issue that the Committee highlighted for discussion is how the carbon budgets intersect with the Climate Action Plan. I have already outlined this in my statement. It is clear that a relentless focus on delivery and intense policy evaluation over future iterations of the Climate Action Plan will be essential to achieve the greenhouse gas emissions reductions necessary for compliance with the carbon budget programme to be adopted by Government this Spring.

I thank the Committee for inviting myself and my colleagues. I am happy to answer any questions.

Joint Committee on Environment and Climate Action

18 January, 2022

Opening Statement by Conor Ó Raghallaigh, Head of Climate Action, Roinn an Taoisigh.

I am head of the Climate Action Unit at the Department of the Taoiseach, which was established in recognition of the need to ensure a whole-of-government response to the climate crisis and specifically to strengthen governance and oversight of the implementation of climate policy.

The Unit concerns itself with the broad scope of issues relevant to the climate challenge as well as with wider environmental issues, including biodiversity, water and air quality. Our purpose is to support the Taoiseach and the Government in their leadership of Ireland's transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy, as mandated in the passing of Climate Action and Low Carbon Development (Amendment) Act last summer.

The legislation is one part of the Government's comprehensive approach to climate action. A wide range of practical commitments are included in the Programme for Government and now also contained in the Climate Action Plan 2021. In December, the Government published an Annex of Actions to the Climate Action Plan that contains details of over one thousand individual measures that have been agreed to complete the actions committed to in the Plan.

The Climate Action Unit plays a role in coordinating climate action across Government, which is essential in such a complex policy space, and in making sure that each Department and sector can play its full part in moving us quickly and coherently towards the changes that are required. The work of the unit is, as you would expect, cross-cutting, supporting climate action through the provision of systemic supports and seeking to identify and remove barriers to our transition to the climate neutral future envisaged by Government policy. Our principal purpose is to support the Cabinet Committee on the Environment and Climate Change in its work as well as that of the associated Senior Officials Group.

The Unit also supports the work of the Climate Action Delivery Board, which has been tasked with holding each Department and public body accountable for the delivery of actions set out in the climate action plan. The Delivery Board is chaired by the Secretary General to the Government and the Secretary General of the Department of Environment, Climate and Communications.

Monitoring the implementation by Departments of agreed climate action measures which are set out in the Climate Action Plan and its Annex, and the preparation of quarterly

progress reports is a key aspect of that oversight. This work is also undertaken by the Climate Action Unit.

Under the Climate Action Plan, and its Annex of Actions, Departments have been assigned lead responsibility in respect of each measure and a timeline for completion is provided. Departments who have responsibility for actions each quarter report progress to our Department. Detailed progress reports are prepared, which document each of the measures completed, as well as those that have been delayed and the reasons for any such delay. This process is essential to maintain accountability in the system.

These reports are brought to Government for its information and are published on the Department's website. To date, nine progress reports have been published, the most recent covering Quarter 3 of 2021.

By the end of 2020, there had been successful implementation of 78% of the 500 measures contained in the Climate Action Plan 2019. At the end of quarter 3 of 2021, the overall implementation rate of measures due under the interim climate actions stood at 66%. While Covid has posed a clear challenge, we are concerned about this rate of delivery and, working with colleagues from other Departments, are seeking to identify cross-cutting challenges to implementation and ways to address any impediments to the successful delivery of the agreed measures.

From Roinn an Taoisigh's perspective, this focus on implementation is now critical. A number of actions have been committed to in the Climate Action Plan for this year to better identify and address barriers to timely implementation within Departments and across the public sector and also to ensure that necessary systemic supports are in place for Departments to fulfil the climate leadership role that is expected of them.

I thank the Committee for inviting me and I am happy to answer any questions.

Opening Statement for Joint Oireachtas Committee on Environment and Climate Action
on Department of Transport's Plans to Deliver Carbon Reductions
in line with Climate Act 2021

Thank you Chair and Committee members for the opportunity to outline the Department of Transport's plans to deliver on the commitments set in the Climate Act and further elaborated in the Climate Action Plan which was published in November last. I head up a new Climate Engagement Division in the Department with responsibility for coordinating the various elements of Climate action within the Department and for engaging and communicating across the system on the climate challenge for transport. I am also joined this morning on the transport team by Aoife O'Grady and Andrea Lennon. Aoife heads up our Climate Delivery Division which includes EV and demand management policies. Andrea heads up our Energy, Air and Adaptation Division which includes policies in relation to renewables and biofuels for transport.

As you know, the transport sector accounts for approximately 18% of Ireland's greenhouse gas emissions (c. 12.2 MtCO₂eq) in 2020 based on latest EPA inventory. Covid-19 had a temporary suppressing effect on emissions from transport, which does not lessen the need for fundamental changes to the transport system.

Transport behaviour is deeply embedded in how and where we live and work. This makes the challenge in delivering the required reduction in transport a systemic and challenging one. But the prize is worth it. There are many significant co-benefits for all of us from more sustainable travel – a higher quality of life and societal health benefits. It will result in quieter streets and neighborhoods – free from noisy traffic and fossil fuel fumes, and more livable towns and cities with better air quality and less urban congestion.

In transport, the *Climate Action Plan 2021 (CAP21)* sets out a roadmap to deliver a range of between 42 and 50% in carbon reduction by 2030. The pathway for decarbonizing transport is multi-layered combining significant behavioural change and technology adoption. It is premised on the Avoid, Shift and Improve approach to achieve the level of transformation required over the longer term. It requires individual choices and action on a daily basis – no less than a mindset shift about how we travel.

The pathway for the next decade focuses on the following measures:

- Firstly, a significant modal shift to sustainable transport modes, away from fossil fuelled cars to public transport and active travel modes;
- Secondly, accelerating the electrification of road transport, particularly the private car and public transport; and
- Thirdly, increased use of biofuels.

Modal shift to sustainable mobility will be achieved through a significant increase in public transport and active travel infrastructure and services allied with the introduction of measures to disincentivize the use of the traditional fossil-fuelled vehicles – so-called demand management measures. This final category of sustainable mobility and demand management measures will deliver the greatest impact over the longer term. These measures will require significant buy-in across the system, working closely with stakeholders

including other Government Departments, local authorities, the enterprise sector, the political system but particularly the citizen.

The electrification of the passenger car fleet is ambitious and necessary. The climate action plan envisages a future where Ireland's roads are ultimately free from fossil fuel cars. In this regard we are leading the way with public sector fleets and providing supports for private car users to make the switch. There are acknowledged challenges on this journey but the destination is clear.

Increased use of biofuels in existing technologies will continue to make a significant contribution to decarbonizing transport in the medium term, while we transition to lower and zero-emission transport modes.

There are over 70 actions set out in the transport chapter of CAP21, many of which fall within the policy remit of the Department of Transport and its agencies. There are also actions across CAP21 which will support and facilitate the decarbonization of transport – particularly in terms of planning, energy, enterprise and taxation.

As part of the National Development Plan, there is a significant level of Exchequer investment ring-fenced for transport (€35bn) – focusing in particular on public transport, active travel and EV infrastructure - which will mobilised to support our carbon reductions targets.

The pathway set out will be very challenging for the sector. The Department will ensure delivery is accelerated where possible in order to maximise the overall carbon reduction impacts in a manner that is timely, fair and equitable.

Just to note – as signalled in the Climate Action Plan published in November - the Department will review and refine the measures required to deliver an additional c. 0.9 MtCO₂eq. reduction by 2030 to address anticipated growth in travel demand. This will help inform decisions on the nature and timing of any further measures that will be required in subsequent iterations of the CAP to deliver the required change in a fair and equitable manner.

This recognizes the fact that the decarbonization of transport will impact in different ways on different cohorts of the population and sectors of the economy. Optimising the wider economic and societal benefits as we move forward is critical.

As a final point, the Department will continue to focus resources on cross-Government and cross-sectoral collaboration in modelling and research. It is clear that the assumptions we make now on the pathways to the decarbonization of transport may not hold and will need to evolve as technology and behaviours change over time.

As I said, more than happy to be here today and to field questions on the Department's plans.

Thank you

Briefing Note for Joint Oireachtas Committee on Environment and Climate Action
on Department of Transport's Plans to Deliver Carbon Reductions
in line with Climate Act 2021

Transport accounts for approximately 18% of Ireland's greenhouse gas (GHG) emissions (c. 12.2 MtCO₂eq) based on latest EPA inventory. Projected growth in employment and economic activity will lead to increased transport demand. Meeting climate action targets in this context will be challenging and requires radical and systemic change over the longer term.

The *Climate Action Plan 2021 (CAP21)* sets out a detailed sectoral roadmap to deliver an overall 51% reduction in GHG emissions by 2030. This requires a significant step-up in effort across society and economy. For transport, *CAP21* proposes a range of 42-50% emissions reductions. The Climate Advisory Council has proposed carbon budgets. These will be agreed this year through the process set out in the Climate Act and subsequently translated into specific sectoral ceilings for each of the 5 year budget cycles.

The decarbonization pathway in transport is multi-layered and premised on the Avoid, Shift and Improve approach in order to achieve the level of transformation required over the longer term.

The pathway for the next decade focuses on the following measures:

- a modal shift to sustainable transport modes (ie public transport and active travel);
- accelerating the electrification of road transport, particularly the private car and public transport; and
- increased use of biofuels.

The table below, extracted from *CAP21*, sets out the potential metrics modelled to reduce transport emissions to 2030. Much of the heavy lifting in the short term will be done through the electrification of the passenger car fleet. Increased use of biofuels in existing technologies will also make a significant contribution. Finally, modal shift to sustainable mobility will be achieved through a significant increase in public transport and active travel infrastructure and services allied with the introduction of measures to disincentivize the use of the traditional fossil-fuelled vehicles (demand management measures). This final category of measures will deliver the greatest impact over the longer term.

The pathway set out will be very challenging for the sector. It is expected that much of the carbon impact of the measures will only be realized in the second half of the decade given the lead in time for many of investments involved. That said, the Department will ensure delivery is accelerated where possible in order to maximise the overall carbon reduction impacts in a manner that is fair and equitable.

There are over 70 actions set out in the transport chapter of *CAP21*, many of which fall within the policy remit of the Department of Transport and its agencies. There are also actions across *CAP21* which will support and facilitate the decarbonization of transport – particularly in terms of planning, energy, enterprise and taxation.

| Key Metrics | 2018 | 2025 | 2030 (Based on CAP 2021) | Additional Abatement Impact, MtCO ₂ eq. |
|---|------------|---|---|--|
| Core Measures | | | | |
| Sustainable Transport Journeys and Demand Management Measures⁴¹ | N/A | 125,000 additional public transport and active travel journeys, and the rolling out of sustainable demand management measures | 500,000 (14%) additional public transport and active travel journeys per day Reduce ICE car kilometres by c. 10% | c. 1.4 |
| Electrification of Passenger Cars | c. 2000 | 175,000 | 845,000 with a focus on BEVs | c. 2.7 |
| Transition to Low Emission Vans | c. 85 | 20,000 | 95,000 with a stronger focus on BEVs | c. 0.2 |
| Improved HGV Technology | c. 20 | 700 | 3,500 low emission HGVs | c. 0.3 |
| Increased Bio-fuel Blend Rate | E5 B4.5 | E10 B12 | E10 B20 | c. 1.1 |
| Electrify Mass Transportation | N/A | 300 EV buses and expanding electrified rail services | 1,500 EV buses and expanding electrified rail services | c. 0.3 c. 0.1 |
| Further Measures | | | | |
| Undertake a programme of work which will review progress and further refine measures that will seek to deliver the additional c. 0.9 MtCO ₂ reduction by 2030 in a fair and equitable manner | | | | c. 0.9 |

The modelling work done for the Climate Action Plan 21 estimates that approximately €51 billion in investments will need to be mobilised in key technologies in transport to achieve these targets, most of which relates to the purchase of EVs. As part of the National Development Plan, there is a significant level of Exchequer investment ring-fenced for transport (€35bn) – focusing in particular on public transport, active travel and EV infrastructure - which will mobilised to ensure our carbon reductions targets can be achieved.

Finally, the Department has begun a programme of work to review and refine the measures required to deliver an additional c. 0.9 MtCO₂eq. reduction by 2030. This work will help inform decisions on the nature and timing of any further measures that will be required in subsequent iterations of the CAP to deliver the required change in a fair and equitable manner. This recognizes the fact that the decarbonization of transport will impact in different ways on different cohorts of the population and sectors of the economy. As such, in delivering the reductions required, policy measures should minimise the impact on the most vulnerable and optimise wider economic and societal benefits.

The following sections give a more detailed overview of D/Transport's policies and measures which are designed to achieve the Government's overall emissions reduction targets.

Sustainable Mobility Policy

CAP21 sets out a variety of actions which will contribute to a significant modal shift towards more sustainable modes of transport. The Department has already set out significant commitments in relation to investment in public transport and active travel in the National Development Plan. One of the key actions in CAP21 for transport is a new Sustainability Mobility Policy which will be published shortly. The new policy will set a framework that better supports:

- a shift away from the private car to greater use of active travel and public transport;
- travel by greener and safer transport; and
- comfortable and affordable journeys to and from work, home, education and leisure.

The *SMP* will primarily focus on measures to promote and facilitate active travel and public transport for all and, in doing so, encourage less private car dependence nationally to support our climate commitment. As well as embracing initiatives in relation to public transport and active travel programmes such as Bus Connects, Connecting Ireland and the significantly increased ambition for walking and cycling, it will also include actions in the areas of behavioural change, demand management, and transport-led development which will complement and support the systemic changes set out in the *National Planning Framework* and CAP21 which will ultimately contribute to a low carbon and climate resilient society.

Demand Management

CAP21 makes it clear that we need to reduce fossil fuelled passenger vehicle kilometres by up to 10% to fully achieve 2030 emissions reduction targets. Demand management measures will be critical here and will complement the Sustainable Mobility Policy objectives to encourage modal shift.

The Department recently published the *Five Cities Demand Management Study*. The purpose of the Study is to identify transport demand drivers in Dublin, Cork, Waterford, Limerick and Galway, and to assess the impact and suitability of an array of different demand management measures for each city.

The Study focused on addressing four main challenges facing our cities: decarbonisation, air quality, congestion, and improving the overall urban environment. The Study is evidence-based using insight from an extensive international best practice review, national and local stakeholder engagement and supported by detailed qualitative (Phase 1) and quantitative (Phase 2) appraisal.

While the Study has identified that the introduction of congestion charges can prove effective, the Study also found that there are a variety of alternative measures that can be pursued with greater effect. The three priority measures that have been recommended for implementation across the five cities are:

- Develop and embed the concept of 15-minute neighbourhoods through national and local plans and strategies, providing resources to incentivise their implementation through national funding/grants schemes.
- Enhance delivery of the National Planning Framework.
- Public Parking Controls.

Importantly, the Study has also made clear that there is no single solution to tackling the challenges facing our urban environments. Utilising an integrated Travel Demand Management approach to policy development, planning and delivery of our land use and transport systems will be fundamental to addressing these challenges in the coming years.

In line with *CAP21* commitments, D/Transport, the NTA, and the Regional Assemblies are engaging to identify a pathway for the implementation of suitable demand management measures at national and local level, and to advancing these measures by 2025.

Electric Vehicle Policy

Electric vehicles (EVs) play a central role in *CAP21*. Electrification of the vehicle fleet offers a pathway to zero tailpipe emissions, with several co-benefits such as improved air quality, reduced noise pollution, and less fossil fuel dependence. However, the pace of uptake must increase over the coming years to achieve our fleet electrification targets.

D/Transport has forecasted an estimated trajectory for EV share of the fleet on a year-on-year basis to 2030, to support policy monitoring and evaluation. An increase of approximately 25,000 new registrations or 42,540 registered EVs on Irish roads was forecasted as required in 2021. As of 30th November 2021, over 47,500 EVs had been registered in the State.

The number of new electric vehicles registered to end-November 2021 was 16,402 (including BEVs and PHEVs), with EVs now representing 15.69% of total car registrations. This is a year-on-year increase of 215%. As a direct result of the volume of sales, the SEAI has received 15,057 grant applications from January to November 2021, which is a 307% increase from the same period in 2020.

EV sales will further accelerate over the coming years due to a wider range of models coming onto the Irish market, a greater charging network, as well as the generous incentives available. Over time, these sales will help develop the second-hand market, and we can expect that the second-hand market for EVs will develop significantly over coming years.

Budget 2022 has seen a significant funding increase in supporting the switch to electric vehicles and improving the associated recharging infrastructure. €100m will now be provided over the course of 2022, which represents more than a tripling of the original 2021 allocation for EVs, and will support the:

- ❖ continuation of the purchase grant scheme for fully electric passenger cars

- ❖ continuation and expansion of the home charging infrastructure scheme to include multi-unit dwellings
- ❖ continuation of a grant scheme for taxi and hackney drivers
- ❖ continuation of an alternatively fueled heavy goods vehicles purchase grant scheme
- ❖ continuation of the Low Emission Vehicle Toll Incentive Scheme
- ❖ introduction of a revised scheme for public point charging
- ❖ introduction of a new scheme for electric vans
- ❖ introduction of a new scheme for destination charging

The Department convened the Electric Vehicle Policy Pathway (EVPP) Working Group to produce a roadmap to achieving the 2030 EV target. The EVPP Working Group comprises senior officials and has considered regulatory, financial, and taxation policies to help drive a significant ramp-up in passenger EVs and electric van sales. The recommendations of the EVPP Working Group were published in September 2021 (available from: <https://www.gov.ie/en/press-release/a6a2f-government-approves-electric-vehicle-policy-pathway-report/>).

The Working Group examined the issue of price parity between EVs and ICE vehicles. The Report finds that there is divergence within the research community as to when TCO in economic terms cost parity will be achieved with some studies estimating that it is likely to occur in the middle of this decade, driven by falling battery prices and savings due to economies of scale, while others argue that the cross-over point may not occur until towards the end of the decade.

In the meantime, to support the transition to EVs, the Group recommended that the generous suite of EV supports already in place in Ireland should be retained until at least end-2022. Additional measures to further incentivise EVs and/or disincentivise fossil-fuelled vehicles will also be necessary.

As per recommendations from the EVPP report, An Office for Low Emission Vehicles will be established, to co-ordinate the implementation of existing and future EV measures and infrastructure. The new Office will also take charge of developing and launching an extensive communication and engagement campaign, whole of Government in coverage, to drive the availability and understanding of key information regarding EVs, tailored to household, business and public sector consumers.

Overall, the Department is acutely aware that the cost of electric vehicles remains an issue for many consumers. To this end, electric vehicle policy is being kept under continuous review to endeavour to make low emission vehicles affordable.

In support of EV adoption, a National EV Charging Infrastructure Strategy is in development which will seek to prioritise the delivery of fast and rapid charge point infrastructure over the next 5 years. Having an effective and reliable recharging network is essential to enabling drivers to choose electric. Charging at home is the most convenient and cheapest way to recharge. Targeting the installation of smart home chargers is a priority as we look to moving towards more energy efficient and sustainable ways to charge.

There is also a need for a seamless public charging network that will provide for situations or instances where home charging is not possible such as on-street and residential charging, destination charging, and workplace charging.

Overall, the expedition of electric vehicles take up is a key priority. To this end, electric vehicle policy and expenditure is kept under continuous review to endeavour to make low emission vehicles a realistic option for individuals purchasing a vehicle.

Renewable Fuels

The blending of sustainable biofuels into road transport fuels, supported by the statutory biofuel obligation since 2010, has been the primary mechanism to date used to reduce emissions in transport. In 2020, approximately 520kt CO₂eq. transport emissions were avoided through the deployment of biofuels.

In order to meet the overall decarbonisation in transport by 6-7MtCO₂eq by 2030, 16-18% of this carbon emission reduction (c. 1.1MtCO₂eq.) will be achieved through an increase in biofuels in diesel and petrol. The *CAP21* target is to increase the proportion of biofuels in diesel to 20% (from the current B7 to a B20 blend) and the proportion of ethanol in petrol to 10% (from the current E5 to an E10 blend) by 2030.

The Minister for Transport published the *Renewable Fuels for Transport Policy Statement* in November 2021 (addressing *CAP21* Action 280). The *Policy Statement* sets out the pathway for increasing the supply and use of renewable fuels in transport, including extending the biofuel obligation currently applied to road transport fuels to rail by 2024. The *Policy Statement* also addresses Ireland's obligation under European directives to require increased supply of renewable fuels used in transport, such as hydrogen or biomethane.

The *Policy Statement* includes the following key elements,

- In support of the climate action plan target for 2030, the indicative trajectory of annual increase in the biofuel blending obligation rate to 2025, as well as the proposed increase in the buy-out charge applied if the biofuel obligation is not met through blending.
- Incentivising the transition to E10 (bioethanol blend in petrol) by 2023 (recognizing that the UK applies an E10 mandate since 2021 and intends to extend it to Northern Ireland in 2022).
- Further incentives from 2023 to develop the supply of advanced renewable fuels such as biomethane and green hydrogen.
- The commitment to ensure maintenance of the highest standards of sustainability of biofuel supply from source, including a review of the sustainability of biofuels and work being undertaken at European level to implement the REDII database to enable the tracing of liquid and gaseous transport fuels.
- A more robust enforcement regime for non-compliance with the Fuel Quality Directive requirement to achieve 6% carbon intensity reduction in fuel supply for transport use.

Implementation of further the changes signaled in the Renewable Fuel for Transport Policy Statement, will also require enabling legislation to be made in 2022.

Other work on hand, which is relevant to delivery of the *CAP21* target for biofuels, includes:

- An assessment concerning the future availability and sustainability of biofuels and renewable fuels, to be commenced in Q1 2021 (addressing *CAP21* Action 288)
- A public information campaign concerning the transition to E10 (10% Ethanol in petrol) by 2023, and,
- A further consultation in 2022 on the suite of measures for GHG reduction from 2023 onward in line with the high-level objectives of the Climate Action Plan and EU obligations.

Biofuels will remain a core transitional measure for medium-term reduction of greenhouse gas emissions in road transport. This is particularly so for hard-to-abate sectors such as heavy-duty vehicles, as alternative transport energy and technology are in the early stage of development.

Research and Modelling

The Department of Transport recognises the importance of timely research for evidence-based policymaking to ensure the most effective response to climate change, to maximise opportunities for innovation and employment, and to avoid future technological lock-in.

Throughout the development of *Climate Action Plan 2021 (CAP21)*, the Department of Transport has engaged with DECC's modelling and research outputs as well as transport agency expertise most notably through the NTA's Regional Modelling System and also TII's models for the national road network. The NTA model provides a robust and comprehensive basis for modelling transport patterns and determining the effectiveness of measures to achieve the desired carbon emission reductions.

In addition, specific research actions in *CAP21* for decarbonising transport include:

- A planned study will seek to map further refinement of the pathways to achieve remaining 0.9 MT and the relative socio-economic impacts of each (Action 295)
- The recently published demand management study, which will assist in advancement of demand management measures for decarbonising transport (Action 252)
- a planned review of the supply of renewable transport fuels in Ireland, such as biofuels, advanced biofuels, e-fuels, synthetic fuels, green hydrogen and biogas (Action 288)
- Planned research supporting the development of a roadmap for review and transition away from fossil fuel tax subsidies in transport sector (Action 259)

Longer-term research activity will also inform and guide future policy development as envisaged under *CAP21*. Three such research projects are co-funded and led by the SEAI:

- Experimental testing and assessment of behaviour change intervention concerning EV uptake and concerning modal shift.
- A comparative study of decarbonisation options for the heavy-duty vehicle HDV sector in Ireland.

Regarding the longer-term policy direction for green hydrogen fuel use as set out in *CAP21*, the Department in collaboration with the Department of the Taoiseach, through co-funding under the shared

Island Fund, will shortly commission a study concerning the regulation of hydrogen for use in transport. These projects will form a substantial evidence base for longer-term decarbonisation strategy and policies.

The Department will continue to focus resources on cross-Government and cross-sectoral collaboration in modelling and research. It is clear that the assumptions we make now on the pathways to the decarbonization of transport may not hold and will need to evolve as technology and behaviours change over time. For that reason, the Department is committed to ensuring we continue to involve wider academic and review international best practice to inform our policies.

Opening Statement by Paul Lemass, Assistant Secretary, Housing Policy, Legislation and Governance Division, Department of Housing, Local Government and Heritage

Chair, Members.

Good morning and thank you for the opportunity to address the Joint Committee on Housing, Local Government and Heritage on this topic of carbon budgets. I am joined by my colleagues, from the Planning Division and Climate Action Policy Units in the Department.

Housing for All sets a target of an average of 33,000 dwellings per annum. The State plans to invest 20 billion euro in the next 5 years which is the largest investment in the History of the state.

Over its lifetime, Housing for All seeks to eradicate homelessness and promote social inclusion.

Housing for All takes account of our Climate Action targets through the following policies:

- The implementation of **Nearly Zero Energy Buildings** through our building regulations – which will ensure that whilst we achieve more energy efficient buildings we also build healthy, sustainable and durable buildings suitable for the Irish Climate both today and into the future.
- The **DHLGH retrofitting programme** for Local Authority Housing is an essential measure to target climate justice – DHLGH plan to retrofit approximately 40% of local authority dwellings not currently performing to a Building Energy Rating of “B2” to “B2” or cost optimal level by 2030.
- The **National Planning Framework** objective to promote Compact Urban Growth and Town Centres First.

As set out in the Climate Action and Low Carbon Development (Amendment) Act 2021 the Climate Change Advisory Council published proposed carbon budgets in Oct. 2021. These proposed Carbon Budgets are planned be presented to the Oireachtas and approved by Government in the coming months. The Government will then set sectoral emissions ceilings determining how each sector of the economy will contribute to the achievement of the Budgets.

DHLGH is implementing a range of ambitious decarbonisation actions for housing, planning, marine and natural heritage protection and analysis of Ireland's climate. In 2021 we worked with the Department of Environment, Climate and Communications and a range of other Departments and agencies to publish the Climate Action Plan 2021.

At the outset Chair, I would like to give the Committee an overview of the many areas this Department is working on to achieve our shared goals of achieving net-Zero emissions no later than 2050, and a 51% reduction in emissions by the end of this decade.

- The statutory **National Marine Planning Framework**, established in 2021, sets out objectives and policies, including in relation to climate change adaptation and mitigation, which must be considered in relation to all programmes, plans or policies; and consenting, approvals or regulations, in Ireland's maritime area.
- Management of Ireland's maritime area is being reformed through the **Maritime Area Planning Act** signed by President Higgins on 23rd Dec., and the emerging plan-led system will provide a foundation for climate measures, such as meeting renewable energy targets through offshore renewable energy installation, and identifying ways that all activities in the maritime area can contribute to carbon reduction and adaptation measures.
- I am also pleased to advise that with Climate Action Plan 2021 aligns closely with the Housing for All Strategy in areas such as compact growth, Nearly Zero Energy Buildings and retrofit of social housing.
- Whilst the retrofitting of the existing buildings is the responsibility of the Department of Environment, Climate Action and Communications, DHLGH are showing public sector leadership in our ambitious programme of **retrofitting of social housing**. My Department has made a submission to the National Development Plan that 36,500 Local

Authority owned housing will be retrofitted to a BER of “B2” by 2030 at an estimated cost of 1.2 billion euro. In 2022, the Energy Efficiency Retrofitting programme will see a significant increase in funding support to local authorities to €85 million, allowing approximately 2,400 homes nationally to be upgraded to a B2 or equivalent standard.

- The **National Planning Framework (NPF)** puts Climate Action and the national objective to transition to a low carbon and climate resilient society by 2050 as a central outcome. In addition the National Planning Framework includes particular, compact growth. The overall NPF strategy is for a better balance of development between the regions, a greater focus on Ireland’s cities, where 50% of development overall is targeted, with 50% of that growth to be supported to take place in the four cities other than Dublin.
- The introduction of **Nearly Zero Energy Buildings (NZEB)** and major renovations performance requirements in Building Regulations by my Department in 2019 are already making a very significant contribution to these targets. Central Statistics Office analysis show that 97% of new dwellings have an “A” rated Building Energy Rating (BER) and the BER database shows that 80% of new dwellings built to these 2019 regulations have installed heat pumps.
- Measures to protect **biodiversity** are also a welcome inclusion in the plan, as are measures to restore and rehabilitate Ireland’s peatlands which can provide a low cost natural solution for climate mitigation.
- The **restoration of our protected raised bogs** is an action for this Department in Irelands Climate Action Plan. Returning peatlands to more natural conditions will deliver a range of climate benefits through reduced carbon emissions, long-term carbon storage, increased carbon sequestration, and enhanced resilience to the locked-in impacts of climate change. The improvements to peatlands will enrich Ireland’s natural capital, increase ecosystem services, strengthen biodiversity, and improve water quality and storage attenuation, as well as developing amenity potential.

- The Department has accelerated significantly its programme of restoration for **raised bog Special Areas of Conservation** and Natural Heritage Areas in recent years with assistance from the Carbon Tax Fund (in 2020/2021 and again in 2022) and exchequer funding for my Department. The programme has allowed for the creation and sustainment of a number of jobs in the Midlands region in particular, in Bord na Móna and with local contractors and services.
- My Department are currently drafting the **4th National Biodiversity Action Plan** and seeking progress updates for a final review of the 3rd Biodiversity Action Plan.
- As the department with responsibility for water quality, including the Good Agricultural Practices for the **Protection of Waters Regulations**, the inclusion of measures in the Climate Action Plan to address inputs from agriculture, such as reducing the usage of chemical fertiliser, will bring benefits to both the quality of our rivers and lakes and for Climate Change.
- A key commitment in the programme for government is to publish a strengthened **River Basin Management Plan** in 2022. This plan will advance Ireland's commitment to ensuring a robust and effective policy for water services and water quality through the implementation of the EU Water Framework Directive (WFD). In developing the final plan and its programme of measures the department will seek to identify those measures that will deliver multiple benefits for water, biodiversity and climate change.
- **Met Éireann** have also provided significant actions which will deliver climate services as enablers of climate action in areas such as water, transport, energy and biodiversity, will continue to help us improve our understanding of Ireland's changing climate, will deliver flood forecasting capability, will support the communication of climate information and will support the coordination of national actions and ensure the benefits of international initiatives for Ireland are realised and national capacity is developed.

In addition to these major actions which will make significant impacts on carbon emissions, DHLGH also has a number of supporting actions which are critical to the reductions. These include Wind Energy Guidelines, measures to support the reduction of embodied carbon in construction materials and implementation of requirements for Electric Vehicle recharging infrastructure. The sectoral contributions of these actions will be captured in other sectors.

Specific actions under all of these policy areas are outlined in the Climate Action Plan and the Department is working hard to implement all of these.

We are working very hard to meet housing demand, both in relation to new build and in the private rented sector. We have ambitious targets in terms of the quantity, type and location of homes to be delivered and we are also ambitious for climate action including energy efficient housing. Through our building regulations we are ensuring that the quality of the homes we are building for future generations continues to achieve the high standards we are setting for decarbonising our built environment.

We are happy to address any questions the Committee may have.

Thank you.



Joint Committee on Environment and Climate Action

Leinster House,

Dublin 2

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Dear Chair,

Thank you for your invitation to this Committee. Officials have been in contact with the Clerk in this regard. This Department looks forward to outlining our policies and legislation which will contribute to the target of a reduction in overall greenhouse gas emissions over the next decade, and to achieving net zero emissions by 2050.

As set out in the Climate Action and Low Carbon Development (Amendment) Act 2021 the Climate Change Advisory Council published proposed carbon budgets in October 2021. These proposed Carbon Budgets are planned to be presented to the Oireachtas and approved by Government in the coming months. The Government will then set sectoral emissions ceilings determining how each sector of the economy will contribute to the achievement of the Budgets.

DHLGH will make a significant contribution to facilitating the achievement of climate budgets to provide for a reduction of 51% in emissions by 2030. Housing for All sets a target of an average of 33,000 dwellings per annum. The state plans to invest 20 billion in the next 5 years which is the largest investment in the history of the State. Over its lifetime, Housing for All seeks to eradicate homelessness and promote social inclusion. The ambition outlined in this plan will require a vibrant and innovative construction sector that supports the development of its existing workforce, and presents an attractive and

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sustainable career for those preparing to enter the labour force.

Housing for All takes account of our Climate Action targets through the following policies:

- The implementation of Nearly Zero Energy Buildings through our building regulations – which will ensure that whilst we achieve more energy efficient buildings we also build healthy, sustainable and durable buildings suitable for the Irish climate both today and into the future.
- The DHLGH retrofitting programme for local authority housing is an essential measure to target climate justice – DHLGH plan to retrofit approximately 40% of local authority dwellings not currently performing to a Building Energy Rating of “B2” to “B2” or cost optimal by 2030.
- The National Planning Framework objective to promote Compact Urban Growth and Town Centres First.

The retrofitting of existing residential and non-residential buildings is the responsibility of the Department of Environment, Climate Action and Communications, and DHLGH supports this policy through our Actions in Housing for All and Climate Action Plan 2021.

A key measure to enable achievement of targets in the renewable energy sector is the Marine Planning Bill. This Bill establishes in law a new planning regime for the maritime area and will be critical to enabling the establishment of an offshore renewable industry and meet the objective that up to 80% of Ireland’s electricity will be sourced from renewables by 2030.

As well as mitigation DHLGH makes important contributions to adaptation measures in the areas of Water, Local Government and Planning. Met Éireann, a division of DHLGH, also provides research and climate services in Climate Change.



As Heritage is now within the remit of the Department, measures to protect biodiversity are also a welcome inclusion in the Climate Action Plan as are measures to protect Ireland's peatlands and to return degraded peatlands to carbon sinks or carbon neutral systems.

In addition to these major actions which will make significant impacts on carbon emissions, DHLGH also has a number of supporting actions which are critical to the reductions. These include Wind Energy Guidelines, measures to support the reduction of embodied carbon in construction materials and implementation of requirements for Electric Vehicle recharging infrastructure. The sectoral contributions of these actions will be captured in other sectors.

Specific actions under all of these policy areas are outlined in the Climate Action Plan and the Department is working hard to implement all of these.

Yours sincerely,

Graham Doyle
Secretary General



Cumann Lucht Bainistíochta Contae agus Cathrach
County and City Management Association

Presentation to Joint Committee on Environment and Climate Action re. carbon budgets

Submitted on behalf of the CCMA Climate Action,
Transport and Networks committee

14/1/2022

On behalf of the City and County Management Association (CCMA) I welcome the opportunity to meet with the Joint Committee on Environment and Climate Action and help inform your consideration of the carbon budgets.

The Climate Action and Low Carbon Development (Amendment) Act, 2021 frames Ireland's legally binding climate ambition in delivering a reduction in greenhouse gas emissions of 51% by 2030.

More recently, the Climate Action Plan 2021 has set specific objectives for the public sector, which includes local government, regarding energy efficiencies and emission reduction, that include:

- Improving the energy efficiency from the 33% target in 2020 to 50% by 2030
- Delivering a 51% reduction in carbon emissions by 2030 from local government operations
- Upgrading of the local authority housing stock to B2 or better through the Local Authority Retrofit Programme
- Retrofitting the national public lighting stock
- Reducing emissions from the local authority fleet and taking a leadership role in low emission transport options
- Developing a decarbonisation zone within its administrative area that will become the focus for a range of climate mitigation, adaptation and biodiversity measures
- Preparing a Local Authority Climate Action Plan at least once every five years, containing both mitigation and adaptation measures.

Under the system of carbon budgeting established by the Act, the Climate Change Advisory Council has proposed three five-year economy-wide carbon budgets, covering the periods 2021-2025, 2026-2030 and 2031-2035, to assist the State in achieving its national climate objectives and greenhouse gas emissions targets agreed by the European Union.

The CCMA recognises and agrees with the approach to “balance the urgency for era defining change and practical feasibility whilst also providing a 51% reduction in the total amount of greenhouse gas emissions from 2018 by 2030.”

These carbon budget proposals look to align with the specific objectives and targets set out for the local government sector in the Climate Action Plan 2021.

By 2019, local authorities had saved 28%, or 563 GWh, over the 2009 baseline, which is equivalent to 123,000 tonnes of avoided CO₂ emissions¹. Local authorities are building on these successes and working towards the new national 50% energy efficiency and 51% emission reduction targets for the public sector.

¹ [Local Authorities Energy Consumption | Monitoring and Reporting | SEAI](#)

We are committed to adhering to our carbon budgets through improvement works to our public lighting, offices, housing stock, leisure centres, infrastructure and transport fleet, and by prioritising green procurement, the circular economy and investing in decarbonisation projects.

We are also committed to providing appropriate Climate Action training, with the support of the Department of Environment, Climate and Communications to all of our 29,000 employees and our 942 Elected Members.

Operationally, it is important to note that while local authorities are generally responsible for less than 5% of our administrative area's emissions, we are well positioned in our communities with already established engagement in climate action to also take on a broader role of influencing and facilitating others to meet their own targets.

Local authorities are committed to engage with and empower local communities and enterprises to embrace climate action by using existing and enhanced local authority structures, operations and networks.

The Local Authority Climate Action Charter, which was signed by all local authorities in October 2019, confirms the sector's commitment to scale up efforts and play a key leadership role locally and nationally in delivering effective climate action.

What is increasingly clear is that responsibility for climate action extends across several government departments and organisations, but, as a sector local government can act as a conduit to lead a just transition locally to ensure a coordinated local response to climate change bringing our communities, businesses and staff along with us.

Set against the backdrop of an evolving and increasing ambition of national climate policy in recent years, the sector has developed *Delivering Effective Climate Action 2030*, a strategy to deliver on the commitments of the Climate Action Charter and to maximise the 31 local authorities collective impact on Ireland's national climate action targets.

In *Delivering Effective Climate Action 2030*, an overarching commitment on leadership is highlighted to ensure a coherent approach to climate action across the administrative and political structures of all 31 local authorities.

Vision

The sectoral vision identified in this strategy is to leverage the capability, reach and resources of local authorities to effectively lead and coordinate climate action across Ireland.

Mission

The mission of local government is to deliver transformative change and measurable climate action across our cities and counties and within our own organisations, through leadership, example and mobilising action at a local level.

Key Goals

1. Foster governance, leadership, and partnerships for climate action
2. Achieve our carbon emission and energy efficiency targets for 2030 and 2050
3. Deliver on climate adaptation and climate resilience
4. Mobilise climate action in local communities
5. Mobilise climate action in enterprise, support the transition to a net zero and circular economy
6. Achieve a just transition.

Delivering Effective Climate Action 2030 has identified a number of additional resources required within the sector to deliver on our climate action ambitions, and to work with stakeholders to ensure that actions for emission reductions, building climate resilience and behavioural change are designed to be inclusive and make it a transition for all.

Dear _____

We welcome the opportunity to meet with the Joint Committee on Environment and Climate Action and help inform their consideration of the carbon budgets .

The Climate Action and Low Carbon Development (Amendment) Act, 2021 frames Ireland's legally binding climate ambition to delivering a reduction in greenhouse gas emissions of 51% by 2030. More recently, the Climate Action Plan 2021 has set specific objectives for the public sector, which includes local government, regarding energy efficiencies and emission reduction, that include,

- Improving the energy efficiency from the 33% target in 2020 to 50% by 2030
- Delivering a 51% reduction in carbon emissions by 2030 from local government operations
- Achieving a 51% emissions reduction and 50% energy efficiency targets for our public buildings with at least a 50% overall contribution from renewable space heating (heat pumps, biomass, and district heating) by 2030.
- Upgrading of the local authority housing stock to B2 or better through the Local Authority Retrofit Programme.
- Reducing emissions from the local authority fleet and taking a leadership role in low emission transport options
- Developing a decarbonisation zone within its administrative area that will become the focus for a range of climate mitigation, adaptation and biodiversity measures.
- Preparing a Local Authority Climate Action Plan at least once every five years, containing both mitigation and adaptation measures

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By 2019, local authorities had saved 28%, or 563 GWh, over the 2009 baseline, which is equivalent to 123,000 tonnes of avoided CO₂ emissions¹. Local Authorities are building on these successes and working towards the new national 50% energy efficiency and 51% emission reduction targets for the public sector.

We are committed to adhering to our carbon budgets through improvement works to our offices, housing stock, infrastructure and transport fleet, and by prioritising green procurement, the circular economy and investing in decarbonisation projects.

Operationally, it is important to note that local authorities are generally responsible for less than 5% of their administrative area's emissions but are well positioned in their communities with already established engagement in climate action to also take on a broader role of influencing and facilitating others to meet their own targets.

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What is increasingly clear is that responsibility for climate change extends across several government departments and organisations, but, as a sector local government can act as a conduit to lead a just transition locally to ensure a coordinated local response to climate change bringing our communities, businesses and staff along with us.

Set against the backdrop of an evolving and increasing ambition of national climate policy in recent years, the sector has developed a strategy to deliver on the commitments of the Climate Action Charter and to maximise the 31 local authorities collective impact on Ireland's national climate action targets. In *Delivering Effective Climate Action 2030*, an overarching commitment on leadership is highlighted to ensure a coherent approach to climate action across the administrative and political structures of all 31 local authorities.

Delivering Effective Climate Action 2030 has identified a number of resources required within the sector to deliver on our climate action ambitions and to work with stakeholders to ensure that actions for emission reductions, building climate resilience and behavioural change are designed to be inclusive and make it a transition for all.

We look forward to expanding on these ambitions and commitments on the 18th January.

Yours etc.

ⁱ [Local Authorities Energy Consumption | Monitoring and Reporting | SEAI](#)

1. - how they developed the Paris Test

The “Paris Test” was developed from insights from multiple lines of evidence arising from robust understanding of the physical science basis. This included the IPCC AR6 WG1 report, 2021, estimate of the human contribution to global warming from the pre-industrial era to 2019, the remaining distance to Paris Agreement thresholds of 1.5°C and 2.0°C of warming, and the global carbon budget as assessed by IPCC associated with these thresholds. This established the current distance to target with respect to emissions and warming globally.

The CCAC decided that an accessible way to communicate the potential impact of the emissions scenarios explored in the bottom-up approach to national carbon budgets was to estimate the impact on temperature and to then scale up these estimates to a global level, based on Ireland’s current proportion of global population. This is consistent with evidence supporting previous CCAC work on Carbon Budgeting undertaken in 2019¹². The estimate of the temperature impact of emissions followed the insights provided at the International Expert meeting hosted by the CCAC on 22nd June, and published in the paper by Lynch, et al. 2020 and documented in the background paper on the CCAC website.^{3,4}

The CCAC wanted to demonstrate that for the proposed carbon budgets to be consistent with the temperature goals of the Paris Agreement, that it is not simply a matter of achieving the 51% and net zero emissions targets, but also consistency depends on the specific actions taken to address emissions of the different greenhouse gases. This is because different gases have different warming potentials and very distinct lifetimes with some acting as stock forcers (CO₂, N₂O) and others as flow forcers (CH₄). For stock forcers, on human lifetimes, it is the cumulative emissions that matter whereas for flow forcers it is the rate of emission that matters. The impact on temperature therefore varies depending on the mix and timing of reductions across different gases (even where the overall impact on annual carbon dioxide equivalent emissions in Ireland at some future point in time is the same).

Further details on the approach are provided in the Technical Report and in the background paper “Note on approaches to consistency with Paris Agreement and Global Carbon Budgets” available on the CCAC website. The analysis is also consistent with the approach in the independent report from Foster et al 2021 presented to the New Zealand Climate Change Committee “Climate science considerations of global mitigation pathways and

¹ [Zero carbon energy system pathways for Ireland consistent with the Paris Agreement \(tandfonline.com\)](https://www.tandfonline.com)

² <https://www.climatecouncil.ie/councilpublications/climatechangeadvisorycouncilseminarpresentations/>

³ <https://www.climatecouncil.ie/carbonbudgets/carbonbudgetscommittee/backgrounddocuments/>

⁴ <https://iopscience.iop.org/article/10.1088/1748-9326/ab6d7e>

implications for New Zealand mitigation pathways” included in the background documents on the CCAC website for reference.⁵

2. - the detail of its assumptions and calculations

The basic expressions used to estimate the potential impact of the emissions scenarios on temperature are derived from the paper by Myles Allen to the Expert Meeting hosted by the CCAC in June 2021;

$$\Delta T_l = \kappa(\overline{E}_L \Delta t)$$

for warming associated with long-lived gases (e.g. CO₂, N₂O)

The temperature response to an emission of short-lived greenhouse gases (e.g. methane) is estimated using the expression

$$\Delta T_s = \kappa(\gamma H \Delta E_s + \gamma H \rho \overline{E}_s \Delta t)$$

Where ΔT is the change in temperature; E_L and E_s are the average emissions of long-lived gases and short-lived gases in terms of GWP₁₀₀; ΔE_s is the change in emissions of short lived gases over the time interval Δt .

κ = “Transient Climate Response to Emissions” ≈ 0.45 °C per TtCO₂

$\gamma H = 85$, and $\gamma H \rho = 0.28$ based on standard values published in the AR5.

A number of assumptions are necessary as follows:

- The impact on global temperature is a reasonable indicator of the impact of emissions on climate, and that the temperature impact can be estimated on the basis of transient temperature equilibrium (TCRE).
- Ireland successfully achieves net zero emissions in the Energy sector by 2050 including the successful deployment of carbon capture and storage to mitigate residual emissions from the energy sector
- Ireland successfully deploys sufficient changes in the Land Use sector to reduce current emissions to a level where residual emissions of greenhouse gases from the sector are balanced by additional carbon sequestration due to changes in other land use activities (e.g forestry, grassland management etc.). Ireland successfully deploys sufficient additional carbon sequestration and storage within the Land Use sector to balance residual national emissions of nitrous oxide by 2050 (with significant emissions reduction). These emissions are largely associated with agriculture. It is assumed this deployment of carbon sinks is ramped up in a linear manner post 2030.
- Methane emissions are managed such that they do not contribute to additional warming. This implies an on-going rate of emissions reduction post 2030 of approximately 0.3% per annum.
- In order to provide context and comparability between Ireland’s emissions and the global challenge, the CCAC opted to scale the impact of Ireland’s emissions to a global

⁵ <https://www.climatecommission.govt.nz/get-involved/sharing-our-thinking/climate-science-considerations-of-global-mitigation-pathways-and-implications-for-aotearoa>

scale on the basis of the current proportion of global population. This approach represents the minimum necessary normative assumptions in terms of Ireland's share of global emissions and associated climate impacts.

3. -why they chose 2020 as a base year for given that it is not 2015 (as with Paris) nor 2018 (as with 51%) but rather a slightly anomalous year (with Covid dip)

The base year for this iteration of the "Paris Test" informed by the most recent authoritative estimate of global carbon budgets, published in the IPCC AR6 report in August 2021, which extend from 2020. These represent an update on the global carbon budgets from 2015 published in the IPCC Special Report on 1.5°C. The updated global carbon budgets differ from those that would have been extrapolated on the basis of earlier IPCC reports, but the assumption is that the latest assessment represents the most up to date understanding based upon a broad range of underlying publications on the topic over recent years.

As regards the "COVID-dip" in emissions, official estimates of emissions for 2020 were not available to inform the analysis. The CCAC used projected "With Additional Measures" figures for 2020 published by the EPA in 2021. Notwithstanding this point, the temperature impact estimated for the "Paris Test" is only marginally impacted by changes in emissions in any given year. The output from the temperature analysis is dominated by the cumulative impact of emissions of long-lived greenhouse gases (including CO₂ and N₂O) and the impact of a sustained changes in the rate of emissions of short-lived gases (including methane).

The base year for the 51% emissions reduction by 2030 target is 2018, however, the national carbon budgets commence from 2021. The purpose of the "Paris Test" was to explore and communicate the estimated additional impact on temperature of the set of illustrative national emissions scenarios used in determining the viability of the proposed Carbon Budgets relevant to their period of implementation.

4. - how is this compatible with the principles of common but differentiated responsibility and respective capacity" under Paris Article 4.1

The UN Framework Convention on Climate Change and its Paris Agreement do not define how a party to the convention may take actions so as to be consistent with the principles of common but differentiated responsibility and respective capabilities. In cooperation with our EU partners, Ireland has communicated our collective ambitions on climate action in the EU Nationally Determined Contribution. Emissions reduction is an important component of Ireland's commitment to climate action. However, as noted in the technical report, Ireland's engagement on climate finance, knowledge and technology transfer and in other aspects of the Paris Agreement are arguably equally important contributions to global efforts to address climate change and should be guided by the same principles.

In the absence of agreement globally or nationally on these principles the Council took an approach that made the minimal number of possible value judgements. Were either international or, more plausibly, national consensus to be reached on what common and differentiated responsibilities were to imply for Ireland's share of remaining emissions it would be possible to update the calculations based upon the principles agreed, but these are inherently normative political choices and not matters of science per se.

5. - why they had not used the UNEP calculations of 7.6% average reductions being required for 50% chance of staying under 1.5 degrees

The UNEP Emissions Gap Report 2019 stated that globally “to get in line with the Paris Agreement, emissions must drop 7.6 per cent per year from 2020 to 2030 for the 1.5°C goal and 2.7 per cent per year for the 2°C goal.” The report did not provide analysis or recommendations on emissions trajectories appropriate for individual countries. Nor did the 2019 report provide insight into the emissions trajectories appropriate for each of the greenhouse gases included in their assessment. As such the UNEP 2019 report was of limited utility to the CCAC in considering its mandate under the Climate Action and Low Carbon Development Act 2021 (the Act).

The UNEP Emissions Gap Report 2020 report did not reiterate or revise the analysis of the percentage per year estimate of global emissions reduction required for the 1.5 or 2.0°C goals. The analysis in the 2020 report was updated and revised to be consistent with the methodology adopted in the IPCC Special Report on 1.5°C. With the publication of the IPCC AR6 WG1 report in August 2021, the analysis in the IPCC Special Report on 1.5 has been superseded. The calculations by the Council were based upon this most recent IPCC assessment report.

6. whether the projections made average at 6% or 7% reduction per annum and how that can be considered consistent with equity principle under Paris agreement given UNEP calculations.

The CCAC used a set of illustrative scenarios to explore the impact of carbon budgets on climate, the economy, just transition etc. as required under the Act. Specifically, in all scenarios it was necessary to reach a reduction of 51% in emissions relative to 2018 in 2030. It is important to stress that these were not projections and should not be interpreted as such. The CCAC is constrained under the legislation to consider the projections published by the EPA where relevant.

In the scenarios considered by CCAC, the average rate of emission reduction over the ten-year period covering the first two carbon budgets, 2021-2025 and 2026-2030, is approximately 5.7% per annum. However, this figure is very sensitive to assumptions regarding the finalised estimates of emissions in 2020 and estimates of the rebound in emissions in 2021 following limited easing of Covid-19 restrictions.

The CCAC and CBC members are aware of previous analysis in the public domain related to the Programme for Government ambition of emissions reductions of 7% per annum. The CCAC was careful to fulfil the explicit mandate in the Act, which while including the requirement that carbon budgets are consistent with a 51% emissions reduction by 2030, did not mandate that carbon budgets achieve emissions reductions of 7% per annum.

7. any other models of projection or calculation they used

It should be noted that the ‘Paris test’ was solely and exclusively applied to assess the possible impact of the five scenarios of carbon budgets modelled for the Committee; it was not itself an input to these scenarios. As detailed in the Technical Report, these scenarios

were informed by substantive modelling by Teagasc, TIM and UL⁶ to consider the plausibility of different emissions pathways in a national context and hence support the final carbon budgets being proposed and how they met all requirements set forth in the Act .

8. - Any other mechanisms or calculations they applied or tested when considering compatibility with Paris Article 2 and 4.1 and the 1.5 degree temperature goals and they results of that

The Committee considered a variety of different approaches to communicating the findings that the proposed carbon budgets can be consistent with the Paris Agreement provided the emissions trajectories of the different greenhouse gases are taken into account, particularly the trajectory of methane emissions. Alternative approaches considered included the use of alternative emissions metrics such as modified Global Warming Potential (GWP*)⁷, and various formulations of National Carbon Quota (Price et al 2021)⁸.

The CCAC concluded that the more accessible “Paris Test” conveyed the major finding without the complex technical description required for the other approaches and involving the minimum number of normative assumptions.

9. What other mechanisms they are intending to apply in the future, particularly in relation to the question of "fair share or "common but differentiated responsibility and respective capacities"

The CCAC will be guided by peer reviewed literature, scientific evidence, relevant international policy developments, and any government guidance on the appropriate definitions and applications of these concepts to apply in future work on carbon budgets.

⁶ Other modelling that informed the Carbon Budget considerations included work by inter alia EPA, SEAI, McKinsey, UCD, TCD and ESRI

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<https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/Andrew%20Smith%20Carbon%20Budgets%20Literature%20Review.pdf>

⁸ <https://www.climatecouncil.ie/media/climatechangeadvisorycouncil/Paul%20Price%20Pre-publication%20CCAC%20literature%20review%20with%20Weblinks.pdf>

IFA response to question from Senator Alice-Mary Higgins following presentation to the Joint Oireachtas Climate Action Committee on the Carbon Budgets

“The witnesses mentioned that the scientific solutions will not deliver in the next decade. Obviously, we need to invest in them. That is most important. Given they will not deliver in the next decade, they mentioned that is an argument for later action, but in fact it is almost an argument for early action because we do not know if they will deliver. In that context, would the witnesses agree we need to look at early action, for example, that we maybe cannot afford a derogation from the nitrates directive or herd expansion within the carbon budget for agriculture? In that context, what of other incentives, because we have that access to funding and we have more flexibility on funding than we have on carbon budgets?”

There are major research programmes ongoing both in Ireland and Internationally with some of the research already demonstrating significant reductions in biogenic methane per animal. For example, there has been success with feed additives such as Bovaer, an organic compound that inhibits cows’ methane production. Researchers have found that adding tiny amounts to a cow’s daily diet can reduce methane production by between 30% and 90% depending on the feed type.

There are dozens more livestock methane interventions under development, but only a handful – including Bovaer have reached the market to date. Even here, there’s still fine-tuning to be done. Other solutions may still be years from commercialisation such as anti-methane vaccines. There is also the challenge of how to scale these up cost-effectively without putting extra pressure on farmers already operating on tight margins.

In Ireland, the Irish Cattle Breeding Federation (ICBF) is working with Teagasc and UCD to identify livestock that are naturally low-methane emitters for future breeding. ‘RumenPredict’ is the first large-scale measurement of methane emissions in Irish beef cattle. It is also one of the largest conducted worldwide. Animal breeding that exploits natural variation in methane emissions is an additional mitigation solution that is cost-effective, permanent, and cumulative. This research is showing positive results and demonstrates the future potential to breed beef cattle with lower methane emissions.

It is for this reason and the potential offered by the significant body of research that is underway in Ireland and Internationally, and the potential it offers the sector to significantly reduce methane emissions that IFA is seeking a late trajectory for emission reduction target for the sector.

The Irish nitrates derogation, which has been in place since 2005, allows farmers to stock their farms to their productive capacity and recognises the unique characteristics of Ireland’s grass-based livestock production systems. It facilitates a more efficient use of grass produced on these farms and is a key feature of our grass-based agricultural economy, particularly in the dairy sector.

Removal of the nitrates derogation would have a massive negative impact on the economic and social sustainability of thousands of Irish farmers. It would significantly erode their financial viability and would also lead to a major disruption of the land market, which would have an indirect impact on all farming sectors. It is also important to note that the Nitrates Action Plan (NAP) also places significant additional regulations on farmers availing of the nitrates derogation. These include the compulsory use of Low Emissions Slurry Spreading (LESS), liming of soils, incorporation of clover into swards, reduced crude protein content in concentrate feeds in the April to September period and environmental training.

To support the Agriculture sector to deliver on climate action it will be necessary to create direct incentives for the adoption of mitigation measures.

While 25% of the funding under the CAP has been set aside for Eco Schemes this is not additional funding. It is deducted from every farmer's Direct Payment.

It is vital that the Government enter into meaningful dialogue with farmers as a matter of urgency to develop a workable plan. It must be supported by a budget to deliver to the emission reduction targets for the sector, while protecting the economic and social sustainability of the sector.

Ends.



Deputy Brian Leddin,
Chair, Oireachtas Committee on Environment & Climate Action,
Leinster House
Kildare Street,
Dubin 2.

January 25, 2022

Re Carbon Budget Hearings

Dear Deputy Leddin

I am contacting you in respect of the recent series of hearings on Carbon Budgets organised by the Oireachtas Committee on Environment & Climate Action.

On behalf of the Irish Congress of Trade Unions, I would like to thank you and the members of the Committee for the invitation to participate in what were quite inclusive, instructive sessions on the challenges we face with respect to the wider carbon transition.

I would also like to record our thanks for the key role and invaluable assistance of Committee staff in this process.

In the course of the hearings, it was stated that the Committee would welcome any additional or supporting information on issues that arose in the context of the hearings.

During our engagement on January 13, it became evident that there remains a significant deal of confusion with respect to both the concept and definition of Just Transition and, therefore, its role in the process of change confronting us.

In our experience, a core problem to date is that policymakers and commentators have borrowed the language of Just Transition, but not the substance.

This may well explain the disconnect between policy aspiration and the lived reality for many on the frontline of the transition process, thus far.

Differing interpretations around key concepts are normal in any policy debate, but not to the point where they become divorced from their actual meaning and sense.

Such a lack of precision and clarity can make it virtually impossible to arrive at a shared understanding or consensus on the way forward.

From a Congress perspective it is therefore worth restating that the concept of Just Transition emerged from within the global trade union movement in response to rapid changes in the resource sector, as highlighted by President Higgins in 2020.¹

Thus, it embraces a very specific series of policy goals and actions in response to the transition process, the cornerstone of which is the involvement of affected workers and communities in the unfolding process by way of early, proactive and structured engagement and social dialogue.

To date, the most comprehensive and accessible definition of a Just Transition is provided by the International Trade Union Confederation (ITUC), by way of its pioneering Just Transition Centre. This defines a Just Transition as one which:

“...secures the future and (the) livelihoods of workers and their communities in the transition to a zero-carbon economy. It is based on social dialogue between workers and their unions, employers, government and communities. A plan for Just Transition provides and guarantees better and decent jobs, social protection, more training opportunities and greater job security for all workers affected by global warming and climate change policies.”

The same essential principles run through the agreed, global framework on the carbon transition, as seen in the Paris Agreement, the Silesia Declaration, the UN’s *Our Common Agenda* report and the COP 26 Just Transition pledge - all of which were endorsed by Irish governments.

This entire framework is underpinned by the crucial *ILO Guidelines for a Just Transition*, that have been agreed globally by unions, employers and ILO member states.²

Congress would therefore urge the Committee to utilise the opportunity afforded by the recent hearings to bring far greater clarity to the key measures and components that comprise a genuine Just Transition and to ensure that all policy in this area is in accordance with the agreed ILO guidelines.

As an essential first step, Congress believes the proposed national Just Transition Commission must be established without delay.

Yours Sincerely,

Macdara Doyle,

Irish Congress of Trade Unions

¹ <https://president.ie/en/diary/details/president-gives-keynote-address-at-conference-on-just-transition/speeches>

² https://www.ilo.org/wcmsp5/groups/public/@ed_emp/@emp_ent/documents/publication/wcms_432859.pdf

Noeleen Kelly

From: O'CIARUAIN Caoimhin <CaoimhinO'CIARUAIN@transport.gov.ie>
Sent: Wednesday 26 January 2022 13:53
To: Climate Action
Cc: HOLOHAN Aisling
Subject: Follow up response to JOC on Env & Climate Action meeting 18 January 2022

Dear Gina,

Further to the recent Joint Committee on Environment and Climate Action meeting of 18 January 2022 on Carbon Budgets, I undertook to provide some additional information in response to the Committee's question regarding the breakdown of the 500,000 additional public transport and active travel journeys per day by 2030.

The Climate Action Plan 2021 includes potential metrics to deliver further abatement in transport. In relation to sustainable transport and demand management measures, this includes a 2025 target metric of 125,000 additional public transport and active travel journeys per day, increasing to 500,000 by 2030. The increased number of daily sustainable journeys will be achieved by providing more attractive active travel and public transport options to promote a radical modal shift away car usage. In addition, the reduced use of fossil-fueled cars over that time will be achieved through various demand management and behavioural change measures.

The modelling used to underpin these metrics estimates an overall increase in both walking, cycling and public transport journeys as investment ramps up and these modes become more attractive. The bulk of the modal shift will be achieved through increased public transport where the share daily journeys on public transport is estimated to increase from 12% to 21% by 2030. The proportionate split in the increased daily sustainable journeys is estimated at around 3:1 between public transport and active travel modes respectively.

I hope this is helpful.

Yours sincerely,
Caoimhin O Ciaruain

Caoimhín Ó Ciaruáin
Head of Climate Action Division

An Roinn Iompair
Department of Transport

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Tá eolas sa teachtaireacht leictreonach seo a d'fhéadfadh bheith príobháideach nó faoi rún agus b'fhéidir go mbeadh ábhar rúnda nó pribhléideach ann. Is le h-aghaidh an duine/na ndaoine nó le h-aghaidh an aonáin atá ainmnithe thuas agus le haghaidh an duine/na ndaoine sin amháin atá an t-eolas. Tá cosc ar rochtain don teachtaireacht leictreonach seo do aon duine eile. Murab ionann tusa agus an té a bhfuil an teachtaireacht ceaptha dó bíodh a fhios agat nach gceadaítear nochtadh, cóipeáil, scaipeadh nó úsáid an eolais agus/nó an chomhaid seo agus b'fhéidir d'fhéadfadh bheith mídhleathach.

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Noeleen Kelly

From: Claudia Zelli
Sent: Friday 28 January 2022 08:31
To: Climate Action
Subject: FW: Joint Committee on Environment and Climate Action | Public Lighting Retrofit Programme

Follow Up Flag: Follow up
Flag Status: Completed

From: Jennifer Geoghegan <jgeoghegan@lgma.ie>
Sent: Thursday 27 January 2022 17:12
To: Claudia Zelli <Claudia.Zelli@oireachtas.ie>
Cc: Peter Burke <PBurke@lgma.ie>; Eleanor Ryan <eryan@lgma.ie>; Paula Butler <pbutler@lgma.ie>
Subject: Joint Committee on Environment and Climate Action | Public Lighting Retrofit Programme

Dear Claudia,

At the recent Joint Committee on Environment and Climate Action, our representative on the day, Mr Paddy Mahon, Chairperson of the CCMA Climate Action and Transport Network Committee, was requested to provide some additional information on the ongoing Public Lighting Retrofit Programme. I would be grateful if you could bring the information below to the attention of the Committee.

Kind regards,
Jennifer

Thank you for the opportunity to meet with the members of the Joint Committee on Environment and Climate Action. At the meeting I was asked if I could provide the committee with a baseline of how many public lighting lanterns are converted from legacy technologies to LEDs and how many are to be.

Since 2020, this information has been published as part of the Annual Performance indicators Report by the National Oversight and Audit Commission, [home - National Oversight & Audit Commission \(noac.ie\)](https://www.noac.ie). The most recent report for 2020 is available on their website [Report 44: NOAC Performance Indicator Report 2020 - National Oversight & Audit Commission](#) and is set out under indicator E6 = Public lighting. At a high level 38.8% of the total public lighting stock were fitted with LED luminaires (lamps) at the end of 2020. This compares to approximately 9% in 2016. NOAC will continue to report on lighting over the coming years with the 2021 figures currently being collated. NOAC will publish these once this process is complete. I have attached a breakdown from the report. I would anticipate that these figures will improve significantly across the sector as the Public Lighting Energy Efficiency Project and other initiatives are completed during 2022-2024.

Your sincerely,
Paddy Mahon
Chair CCMA, Climate Action and Transport Network Committee,
Chief Executive, Longford County Council

E6: Public Lighting

| Authority | A. Total billable wattage of the public lighting system | B. Average billable wattage of the public lighting system | C. Percentage of the total system that LED lights represent |
|---------------------------|---|---|---|
| Carlow County | 2629 | 90 | 37.06 |
| Cavan County | 2871 | 92 | 49.97 |
| Clare County | 5734 | 92 | 38.54 |
| Cork City | 10153 | 99 | 20.00 |
| Cork County | 15138 | 105 | 13.80 |
| Donegal County | 5787 | 77 | 46.25 |
| Dublin City | 20407 | 105 | 22.00 |
| Dún Laoghaire Rathdown | 9800 | 81 | 66.00 |
| Fingal County | 7016 | 56 | 77.80 |
| Galway City | 3353 | 83 | 46.94 |
| Galway County | 4579 | 92 | 30.60 |
| Kerry County | 5426 | 100 | 32.51 |
| Kildare County | 8010 | 84 | 34.40 |
| Kilkenny County | 3559 | 76 | 53.00 |
| Laois County | 3181 | 80 | 60.00 |
| Leitrim County | 1893 | 99 | 24.10 |
| Limerick City and County | 9159 | 94 | 45.26 |
| Longford County | 1997 | 81 | 54.58 |
| Louth County | 6809 | 113 | 35.00 |
| Mayo County | 6839 | 97 | 30.34 |
| Meath County | 8404 | 99 | 23.19 |
| Monaghan County | 1532 | 59 | 89.50 |
| Offaly County | 3355 | 91 | 35.65 |
| Roscommon County | 2910 | 86 | 41.72 |
| Sligo County | 4323 | 114 | 23.94 |
| South Dublin County | 9568 | 107 | 46.00 |
| Tipperary County | 7484 | 105 | 24.60 |
| Waterford City and County | 6574 | 101 | 6.80 |
| Westmeath County | 4797 | 97 | 31.55 |
| Wexford County | 3166 | 54 | 84.00 |
| Wicklow County | 6039 | 96 | 31.30 |
| Totals | 192,491 | 2,805 | |
| National % | | | 38.80 |

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agus chun úsáide an té a sheoltar an ríomhphost seo agus aon comhad atá nasctha leis. Má bhfuair tú an ríomhphost seo trí earráid, déan teagmháil leis an seoltóir a luaithe is féidir. Ní hionann na tuairimí luaite sa ríomhphost seo agus tuairimí An Gníomhaireacht Bainistíochta Rialtais Áitiúil Deimhnítear leis an bhfo-nóta seo freisin go bhfuil an teachtaireacht ríomhphost seo agus aon comhad atá nasctha leis scuabtha le bogearraí frithvórais chun vórais ríomhaire a aimsiú agus is cosúil go bhfuil siad glan. Bí cinnte an ríomhphost seo a mionscrúdú, mar ní ghlacann An Gníomhaireacht Bainistíochta Rialtais Áitiúil freagracht faoi aon damáiste a dhéanfaí le do chórais ríomhaireachtaí.

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