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**EPAC Reference No: EPAC-1125** 

Re: Consultation on Carbon Budgets.

# A Chara,

The Environmental Protection Agency (EPA) welcomes the opportunity to submit views on the Climate Change Advisory Council's (CCAC's) latest recommendations for the Carbon Budget periods 3 (2031-2035) and 4 (2036-2040) prior to the Minister making recommendations to government. The EPA recognises the importance of the Carbon Budgets and associated Sectoral Emissions Ceilings as a tool for Ireland to achieve its climate targets as set out in the Climate Act<sup>1</sup> and its international obligations under EU Regulations and the Paris Agreement.

Six key points addressed in the response below are:

- Fairness/Feasibility
- Consideration of Methane and other Short-lived Climate Forcers (SLCFs)
- Need for Carbon Dioxide Removals

<sup>&</sup>lt;sup>1</sup> https://www.irishstatutebook.ie/eli/2021/act/32/enacted/en/print

- Accounting for LULUCF
- Necessity for a scale up in implementation
- Revision of Carbon Budgets as necessary

The EPA participated on the CCAC's Carbon Budget Working Group (CBWG) with its primary roles being:

- Provision of data related to EPA greenhouse gas emission Inventories and Projections
- Guidance in the use or interpretation of emissions data provided by the EPA
- Sharing of relevant research and insights available to the EPA
- Critique and assessment of the evidence and modelling provided to the CBWG

As a result of this involvement the EPA is satisfied that the budget proposals have taken account of the Agency's reports as required, in particular the Provisional Greenhouse Gas Emissions 1990-2023<sup>2</sup> and Ireland's Greenhouse Gas Emissions Projections 2023-2050<sup>3</sup>.

The EPAs detailed observations on the Carbon Budget process to the CBWG Secretariat are published in a short report, published on the CCAC website,<sup>4</sup> and we take the opportunity to highlight below and further add to the key considerations and their implications.

# Fairness/Feasibility

• It is important that Ireland's carbon budgets are ambitious to ensure that Ireland is doing its fair share in meeting its international obligations as well as being technically feasible.

There is no internationally agreed definition of what Ireland's 'fair share' of the remaining Global Carbon Budget should be and many 'fair share' budget proposals may not be technically feasible for Ireland. While the EPA agrees with the overall fairness/feasibility assessment underpinning the proposed carbon budget, we recommend a regular re-appraisal of Ireland's 'fair share' in setting and revising of carbon budgets. This could take an approach similar to that recommended by the European Scientific Advisory Board (ESAB) in relation to the EU's 2040 targets<sup>5</sup>, namely that the smallest feasible budget or very close to it is selected. This improves the fairness of the EU's contribution, and the ESAB deemed that addressing the feasibility/fairness shortfall was important as part of the EU's commitment to the Paris Agreement temperature goal.

# Consideration of Methane and other Short-lived Climate Forcers (SLCFs)

 The proposed Carbon Budgets are now based on the concept of stabilising Ireland's warming impact and imply a 2050 target for Ireland that is different from the EU net zero greenhouse gas emission target.

<sup>&</sup>lt;sup>2</sup> https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-provisional-greenhouse-gas-emissions-1990-2023.php

<sup>&</sup>lt;sup>3</sup> https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2023-2050.php

<sup>&</sup>lt;sup>4</sup> https://www.climatecouncil.ie/carbonbudgets/carbonbudgetsworkinggroup2023-2024/

 $<sup>\</sup>frac{5}{https://climate-advisory-board.europa.eu/reports-and-publications/scientific-advice-for-the-determination-of-an-eu-wide-2040}$ 

This is a different approach to the first carbon budgeting process. It is important that the
emission reduction expectations for all GHGs are clearly communicated, including
transparency on the range of percentage cuts anticipated in methane and nitrous oxide
emissions.

The latest carbon budget proposals from the CCAC represent a different approach compared to the first carbon budgeting process in the treatment of Short-lived Climate Forcers (SLCFs), and in particular methane given its contribution to Ireland's total greenhouse gas emissions. As highlighted in the CCAC Budget Proposal Report, "the Council considered temperature neutrality pathways rather than constraining Ireland to meeting net zero emissions in  $GWP_{100}$ ". This has resulted in a 9 Mt  $CO_2$  eq. increase in the Council's final proposal for CB3 (2031-2035) compared to the initial budget proposal (from 151Mt  $CO_2$  eq. to 160 Mt  $CO_2$  eq.).

This approach implies a definition of climate neutrality in 2050 that is different form that currently underpinning the EU long-term goal of which is enshrined in the European Climate Law<sup>6</sup> and states:

"Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter."

While the new approach is consistent also with Ireland's long-term strategy, it will be important if the budget proposal is adopted, in the context of setting Sectoral Ceilings and targets, to be transparent on what the range of expected cuts in methane and nitrous oxide emissions are from the modelled scenarios.

#### **Need for Carbon Dioxide Removals**

- There is a need to develop policies and legislative frameworks to support the implementation of Carbon Dioxide Removal for a number of key sectors (e.g. the production of cement).
- Land use will play an important future role, both in relation to greenhouse gas removals
  and the mitigation of emissions. The national Land Use Review has a vital role to play in
  identifying land use opportunities and constraints and stakeholders need to be engaged in
  decisions that impact them.

All 15 scenarios from the CCAC report that achieved temperature neutrality by 2050 require deployment of carbon dioxide removal (CDR), including nature-based and technological solutions. Scenarios for CDR include afforestation, harvested wood product carbon storage and Biomass with Carbon Capture and Storage (BECCS). The Carbon Budget scenarios anticipate BECCS installation in cement manufacturing from 2030 to decarbonise emissions, however, the roadmap to achieving this is currently unclear. Scenarios modelled based on current planned policy (eg. the EPA Projections) do not include any CDR technologies before 2040 at present. This highlights the need to urgently develop the policy framework to support the implementation of CDR technologies in order to achieve the necessary level of removals.

It is clear that Land could play a much stronger role than at present in reducing emissions, by moving from being a net source of emissions to a sink, including through a combination of enhanced afforestation on mineral soils and rewetting of drained organic soils. We can use our land in ways that support climate action, nature restoration, protection of water quality and a sustainable

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<sup>&</sup>lt;sup>6</sup> REGULATION (EU) 2021/1119

economy, taking a holistic and integrated view across all the social, economic, and legislative demands we have for Ireland's land. The national Land Use Review has a vital role to play in identifying land use opportunities and constraints and stakeholders need to be engaged in decisions that impact them.

### **Accounting for LULUCF**

Accounting for emissions and removals from the Land Use, Land Use Change and Forestry (LULUCF) sector in EU and international targets has evolved rapidly over the last decade (described in the EPA's special topic bulletin on LULUCF<sup>7</sup>). While the initial Effort Sharing Regulation targets for 2030 did not include LULUCF in the headline target, subsequently the LULUCF Regulation has put in place country specific targets in relation to LULUCF emissions/removals. Also relevant to Irelands carbon budgets are the EU 2040 target proposals currently being negotiated<sup>8</sup> that do include LULUCF in an overall 90% net emissions reduction goal, as a stepping stone to climate neutrality by 2050. Given the long lead time for actions in the LULUCF sector to reach their maximum potential, it is important that clarity is provided as soon as possible on the role the LULUCF sector is expected to play, both in carbon budgets and Sectoral Emissions Ceilings.

# Necessity for a scale up in implementation

• The EPA's Projections show that Ireland is not on a trajectory to achieve our European and National emission reduction targets and highlights the scale of effort required to achieve the required reductions across all sectors of our economy.

The latest EPA Projections from May 2025<sup>9</sup> show that full delivery of all climate action plans and policies could deliver a 23 per cent reduction in greenhouse gas emissions (compared to the 51 per cent reduction target). Although emissions trends are going in the right direction, the gaps to our European and National emission reduction targets are now projected to be larger than last year.

The EPA's projections indicate that the carbon budget for period 1 (2021-2025) of 295 Mt  $CO_2$ eq is projected to be exceeded by between 8 to 12 Mt  $CO_2$ eq (In WAM and WEM scenarios respectively). It is an obligation under Section 6D(5) of the Climate Act that, where the total greenhouse gas emissions for a preceding budget period exceed the carbon budget for that period, the excess greenhouse gas emissions (from the preceding budget period) are carried forward to the next period. The carbon budget for the next period is then decreased by the amount carried forward.

As a result, budget 2 from 2026-2030 would decrease by 12 Mt  $CO_2$ eq in the WEM scenario to 188 Mt  $CO_2$ eq and decrease by 8 Mt  $CO_2$ eq in the WAM scenario to 192 Mt  $CO_2$ eq. With this carryover, Budget 2 is projected to be exceeded by 114 Mt  $CO_2$ eq in the WEM scenario and by 77 Mt  $CO_2$ eq in the WAM scenario. Based on these projections and the current rate of projected emissions reductions, there is likely to be no carbon budget remaining for the fourth carbon budget period (2036-2040), with the provisional 120 Mt  $CO_2$ eq budget already used up by 2035. This highlights that the attainment of the budgets will become increasingly unfeasible without a very immediate increase in the pace and scale of mitigation action.

<sup>&</sup>lt;sup>7</sup> <a href="https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/land-use-land-use-change-and-forestry-bulletin.php">https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/land-use-land-use-change-and-forestry-bulletin.php</a>

<sup>&</sup>lt;sup>8</sup> https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2040-climate-target\_en

<sup>&</sup>lt;sup>9</sup> https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-greenhouse-gas-emissions-projections-2024-2055.php

The EPA projections noted that if the amount of emissions savings associated with the excluded measures were realised in 2030, the percentage reduction in emissions achieved in total would be approximately 43% by 2030 relative to 2018. However, this includes projected savings of 26 Mtonnes of CO<sub>2</sub>eq associated with "unallocated savings" which need to be urgently detailed.

The Projections also highlight that at a sectoral level, only the Sectoral Emissions Ceiling (SEC) for the "Other" sector is projected to be met for 2030, with the SEC for Agriculture no longer aligned with the reduction target for the sector, mainly due to the impact of updated science to the Agricultural inventory in 2023.

#### **Revision of Carbon Budgets as necessary**

It is imperative that new research and information is incorporated into carbon budgets and sectoral ceilings.

The Climate Act provides for the revision of Carbon Budgets and Sectoral Emission Ceilings where "there are significant developments in scientific knowledge in relation to climate change". An example of this is the incorporation of updated science in the Agricultural inventory for 2023 as detailed in the latest National Inventory Document (NID).<sup>10</sup> In line with new research, the EPA refined the information underpinning the agricultural figures in the Inventory and Projections which has led to a reduction in the overall agriculture emission estimates.

The proposed carbon budgets for CB3 and CB4 reflect this new science in relation to agriculture emissions estimates which is positive. However, given that it is not reflected in carbon budgets CB1 and CB2, it is important that those carbon budgets and associated SECs are revised as appropriate. This will support the achievement of the National Climate objective of a 51% emissions reduction by 2030 and also ensure that the Agriculture SEC remains aligned with the national reduction target for the sector of 25%.

If you require any additional information in relation to points raised in this submission, the EPA would be happy to meet the relevant team to discuss further.

Yours sincerely,

Einean Cotten

Eimear Cotter, Director, Office of Evidence and Assessment

 $<sup>^{10}\,</sup>https://www.epa.ie/publications/monitoring--assessment/climate-change/air-emissions/irelands-national-inventory-submissions-2025-1.php$