

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).

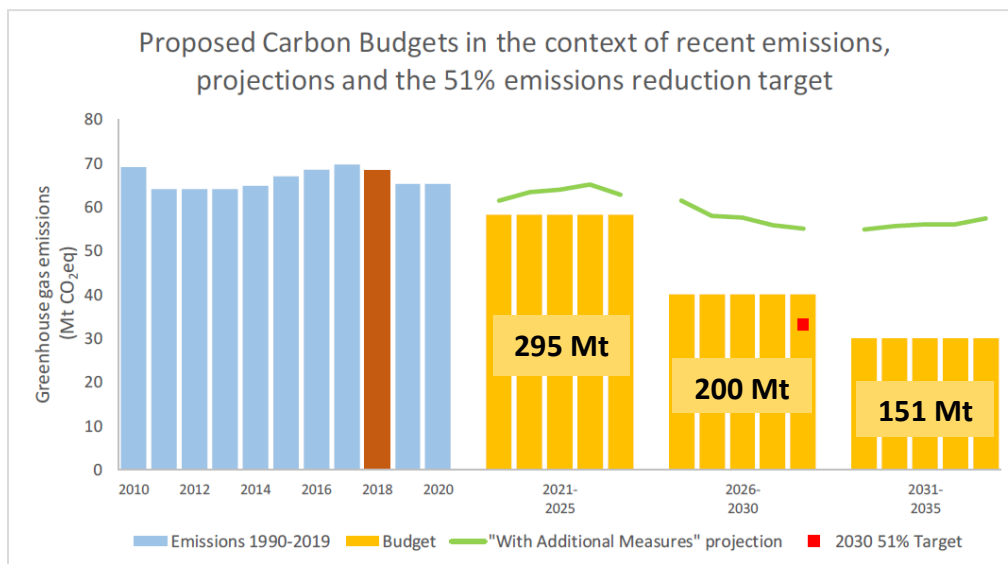


Figure 1 Proposed carbon budgets in the context of recent GHG emissions trends and projections

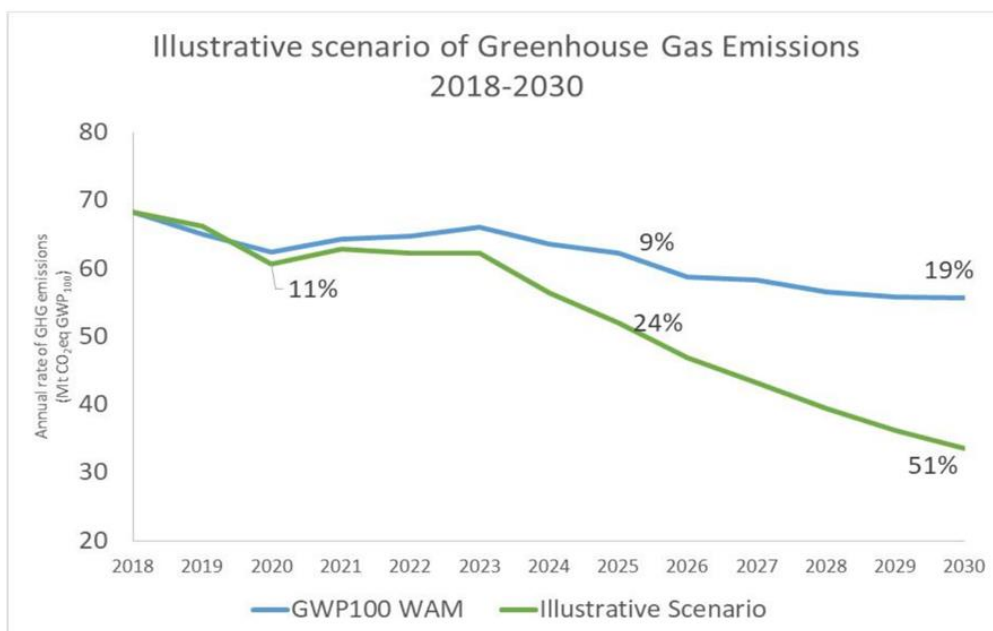


Figure 2 Total greenhouse gas emissions 2018 - 2030 in illustrative scenario that meets carbon budgets. Also shown are EPA 'with additional measures' projection for comparison

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.