



## Climate Change Advisory Council Meeting –Carbon Budgets Working Group

### Meeting 11

#### APPROVED MINUTES

**Date:** 29<sup>th</sup> February 2024

**Start time:** 09:30

**Venue:** EPA officers, Clonskeagh and Video Conference Meeting

**Present:** In person: James Murphy. On MS Teams: Brian Ó Gallachóir, Jeanne Moore, Kevin Hanrahan, Trevor Donnellan, Stephen Treacy, Kian Mintz-Woo, Emma Lynch, Hannah Daly David Styles, Mert Yakut, Niall McInerney, John Fitzgerald

**Apologies:** Yvonne Buckley, Jim Scheer

**Observers:** In person: Online: Jillian Mahon,

**Secretariat:** In person: George Hussey, Gina Kelly, Meabh Gallagher, Kieran Craven; Phillip O'Brien. Online: Ciara Hilliard,

**External presenters:** Malte Meinshausen, Miles Perry, Ciaran Maguire, Paul Deane

### 1. Opening of meeting

#### 1.1. Adoption of Agenda

The agenda was adopted by the Carbon Budgets Working Group (CBWG).

#### 1.2. Minutes for the Carbon Budgets Working Group Meeting

The minutes from the previous meeting were accepted by the CBWG.

#### 1.3 Actions

It was proposed to close Action 11 and the modellers were thanked for providing data for subsequent temperature impact analysis. Action 12 on a thematic discussion on planetary boundaries is to be investigated further with an update expected at the next meeting. Action 13 related to the provision of guidance from the Council to the CBWG for the 2nd iteration of analysis is included as a scheduled agenda item for this meeting.

## **2. Quantitative approaches to carbon budgeting**

Malte Meinshausen presented on quantitative approaches to carbon budgeting for parties to the Paris Agreement. The presentation included the establishment of the Victorian Carbon Budgets including the main considerations and temperature alignment of pathways. Considerations included the probability of achieving temperature targets, conversion of global carbon budget into a GHG emission budget, and consideration of fair share contributions. A process for translating budgets to milestone targets was presented, along with the characteristics of Victoria's emissions. The application of the simple climate model MAGICC was also highlighted.

Discussions included land sinks, global carbon budget parameters, socio-political issues, economics and the Just Transition of decarbonising the electricity sector. Changes in the LULUCF sector were also raised including changes to forest management and the incorporation of non-CO<sub>2</sub> gases in a national carbon budget. The application of metrics, including GWP100 and GWP\* under UNFCCC accounting and policy process was raised, including consequences of their use.

## **3. Energy and Power Systems Modelling**

Paul Deane presented an overview of research on Ireland's Power Sector. This included the progress of emission reduction against sectoral ceilings, the importance of decarbonisation of power systems and the need for both strategic and seasonal storage. The use of coal and electricity imports were outlined along with the future impact of demand growth. The importance of emission reductions, energy demand reduction and emission removals were stated together with the need for policy-consistent scenarios.

Discussions included interconnectors, green hydrogen, the complexity of past and future electricity imports, and the price differential of carbon in different jurisdictions. The need to balance interconnectors and storage was raised, along with the costs and benefits of decarbonised gas in the electricity system. The delay to expansion of onshore renewables and the importance of making early progress on increasing capacity was outlined. Net negative emissions and implications for both the electricity and other sectors were raised. Timelines to achieve net zero emissions in the power sector between 2030-2040 and the importance of considering investment cycles were discussed. The role of the planning system in ensuring that the grid is sufficient to facilitate decarbonisation was raised.

## **4. ESAB Scientific advice**

Miles Perry from the Secretariat of the ESAB presented on the advice provided on the EU Climate target for 2040. This included 2030 policy framework and EU climate objectives. Advisory board recommendations were outlined including targets, budgets and considerations of feasibility and fairness, with pathways identified to achieve at least 90% emissions reduction

by 2040. The importance of demand management and technology deployment was presented along with fairness and the commonalities between these pathways.

Discussions included emission reduction splits for different gases and sectors, and the relative difference between achieving emission reductions in different sectors. Scenario formation for energy systems and the fairness of allocating carbon budgets was raised. The intersections and trade-offs between feasibility and fairness of scenarios were debated.

## 5. Council feedback on first iterations

The Secretariat updated the CBWG on the additional presentations that were made by the Secretariat to the Council conveying the results from the first iteration of carbon budget modelling and temperature analysis on 11<sup>th</sup> January and 14<sup>th</sup> February. A similar process is envisaged for the second iteration of modelling. It was outlined to the group that the Council also discussed the outputs of the carbon budget modelling at their Council meeting on the 15<sup>th</sup> February.

The guidance points from the Council to the core modelling groups were conveyed to the CBWG. These included the need to widen the scope of modelling for the 2<sup>nd</sup> iteration of modelling, consideration of the European Commission's 2040 proposal for emission reductions, and the options to address the emissions gap for waste and F-gases. There was also a request for modelling teams to provide a short descriptive narrative to accompany the scenarios for the 2<sup>nd</sup> iteration of modelling.

Specific modelling requests were provided to individual modelling teams. For TIM, the approach applied for downscaling global carbon budgets was endorsed, with requests for additional carbon budgets to be explored. For FAPRI, a request was made for modelling to extend to 2050 and for scenarios that achieved additional levels of emission reduction in agriculture and incorporated variable uptake of MACC mitigation measures. For GOBLIN, the potential to incorporate new 2024 inventory emission data, and to explore additional levels of emission reductions in agriculture were requested. The possibility of additional interaction between FAPRI and GOBLIN modelling teams to align scenarios where feasible and advantageous was raised.

Discussions were had on the energy systems, requirement for negative emissions, deployment rates and feasibility. The need for Council to have a full range of scenarios for consideration, with the inclusion of commentary on implications from modelling teams was outlined. Clarification on the final output of the CBWG to Council following modelling completion was requested. The limitations of the models and projections were noted, along with the importance of expert judgement. The importance for the working group to have discussion on feasibility of scenarios, and to find metrics for common points of discussion was raised.

**New Action:** Secretariat to schedule bi-laterals with each of the Core modelling group to discuss Council feedback in more detail.

**New Action:** Request for clarification on the role of the CBWG in terms of presenting a range of scenarios for Council consideration as opposed to proposing a particular feasible pathway.

**New Action:** Request for a more detailed discussion within the CBWG on the feasibility of various scenarios.

## **6. Carbon Budgets Work Plan**

The workplan was shared with the working group with a focus on timelines for the second iteration of modelling and the core and additional modelling teams to confirm delivery timelines that align with the Carbon Budgets Workplan.

In March the CBWG meeting will include a follow-up thematic discussion on methane emissions and implications for climate neutrality from Joeri Rogelj from Imperial College London, and a discussion on potential National Transport Authority analysis to contribute to the carbon budget process. The inputs, parameters and assumptions for the 2<sup>nd</sup> iteration of core modelling is also planned to be agreed.

In April, Karl Richards from Teagasc will present on emissions reductions technologies and implications for carbon budgets, NESCI will initiate discussion on Just Transition principles and considerations in the carbon budget process, and SEAI will present on an ongoing Decarbonised Electricity System Study.

**New Action:** Core and Additional modelling teams to confirm delivery timelines that align with the Carbon Budgets Workplan.

## **7. Next Steps and Agenda for next meeting**

In March the meeting will include thematic discussion of the follow-on discussion on methane and climate neutrality, with potential for additional external invited speakers from the NTA, and agreement on the parameters for the 2<sup>nd</sup> iteration of modelling.

## **8. AOB**

The Secretariat noted there have been changes to Council membership, with three new members appointed in February. Yvonne Buckley has been appointed, so has resigned from her position on the CBWG. A new member will be appointed to the CBWG take her place, with the process ongoing. John Fitzgerald has concluded his term on the Council and is now formally staying on as a member of the CBWG. His long service to the Council was noted and his continued participation in the CBWG is greatly appreciated.

It was suggested Gary Lanigan could participate in the CBWG as he will be involved in future relevant FAPRI modelling. This request will be considered.

Presenters and participants were thanked for their continued contributions and engagement in this longer than usual CBWG meeting. Next meeting will be on the 22<sup>nd</sup> Mar.

**New Action:** Chair to consider the participation of an additional member from the FAPRI modelling team within the CBWG.

## 9. CB WG Actions Log

Action Number	Date Raised	Description	Owner	Due	Status
11	15/12/23	Modelling groups to provide projected GHG emission data for temperature analysis	CBWG core modelling groups	Dec 2023	Closed  Modelling groups provided data by 18/12/23 and shared with Joe Wheatly for temperature impact analysis
12	18/01/24	Secretariat to follow up on planetary boundaries as thematic topic	CCAC Secretariat	Mar 2024	Open
13	18/01/24	Secretariat to provide guidance from the Council with regards to the 2 <sup>nd</sup> iteration of modelling and analysis following the February CCAC meeting	CCAC Secretariat	Feb 2024	Propose to Close  Council feedback provided to CBWG in Feb meeting
14	29/02/24	Secretariat to schedule bi-laterals with each of the Core modelling group to discuss Council feedback in more detail.	CCAC Secretariat	Mar 2024	Open
15	29/02/24	Request for clarification on the role of the CBWG in terms of presenting a range of scenarios for Council consideration as opposed to proposing a particular feasible pathway.	CCAC Secretariat	April 2024	Open

16	29/02/24	Request for a more detailed discussion within the CBWG on the feasibility of various scenarios	CBWG Members	April 2024	Open
17	29/02/24	Core and additional modelling teams to confirm delivery timelines for the 2 <sup>nd</sup> iteration of modelling and analysis in line with Carbon Budgets Workplan	CBWG Members	Mar 2024	Open
18	29/02/24	Chair to consider the participation of an additional member from the FAPRI modelling team within the CBWG.	Secretariat	Mar 2024	Open