



**Corresponding author:** Prof. Barry McMullin, [barry.mcmullin@dcu.ie](mailto:barry.mcmullin@dcu.ie)

**9th August 2022**

To: **An Taoiseach  
Micheál Martin TD**

Government Buildings  
Merrion Street Upper  
Dublin 2

**An Tánaiste  
Leo Varadkar TD**

Department of  
Enterprise, Trade  
and Employment  
Kildare Street  
Dublin 2

**Minister  
Eamon Ryan TD**

Department of the  
Environment, Climate and  
Communications  
29-31 Adelaide Road  
Dublin 2

**Re: Sectoral Emissions Ceilings under the first Carbon Budget Programme**

A Thaoiseach, a Thánaiste agus a Aire,

We are active researchers in the domains of climate science, environmental law, and energy system decarbonisation, with substantial records of academic publication in these fields. We write to you now in relation to the process of determining *sectoral emissions ceilings* (SECs) as required under the [Climate Action and Low Carbon Development Act 2015 \(as amended\)](#). We note the [press release from the Department of the Taoiseach of 28 July 2022 \(updated 29 July 2022\)](#) announcing a decision by the Government on the setting of SECs under the first Carbon Budget Programme.

We very much welcome the evident intention of the Government to progress the SEC process, as these ceilings play a pivotal role in the execution of the entire carbon budget governance framework laid out in the Act. However: having studied this announcement very carefully, we have serious concerns that the approach currently being adopted by the Government is flawed both in law and in science and carries grave risks of critically undermining the overarching objectives of the Act.

In summary, our concerns are as follows:

## 1. The figures announced by the Government are not Sectoral Emissions Ceilings as defined in the Climate Act

First, and most seriously, the purported “SECs” indicated in the Government’s press release simply do not meet the very clear definition of *sectoral emissions ceilings* given in the Act, s. 6C(1):

*The Minister shall prepare, within the limits of the carbon budget, the maximum amount of greenhouse gas emissions that are permitted in different sectors of the economy **during a budget period** (in this Act referred to as a ‘sectoral emissions ceiling’)... [emphasis added]*

“Carbon budget” is defined as “*the total amount of greenhouse gas emissions that are permitted during the budget period*” (s. 1), and “budget period” is defined as “*the period of five years commencing on 1 January 2021 and ending on 31 December 2025 and ... each subsequent period of five years*” (s. 6A(1)).

Given that the [first budget programme has already been adopted by the Oireachtas](#), defining economy-wide budgets for three five-year periods (2021-2025, 2026-2030 and, provisionally, 2031-2035), s. 6C of the Act clearly requires that the Minister must bring forward (and the Government agree) maximum limits for the *total emissions (in MtCO<sub>2</sub>e) for each sector over each budget period*. (Since the third budget (2031-2035) remains provisional, we have not focused on it in this letter.)

In other words, having agreed a total carbon budget for each five-year budget period (295 MtCO<sub>2</sub>e for 2021-2025; 200 MtCO<sub>2</sub>e for 2026-2030; and, provisionally, 151 MtCO<sub>2</sub>e for 2031-2035), the Government must share out that total between sectors. Instead, the sectoral limits actually announced by the Government were only for *annual* emissions in one discrete year, 2030 (with corresponding percentage reductions indicated, relative to annual emissions in 2018). This *very clearly* does not meet the section 6C obligation to prepare and approve sectoral emissions ceilings on “... the maximum amount of greenhouse gas emissions in different sectors of the economy *during a budget period*”.

It is important to emphasise that *there is no determinate way to infer actual sectoral ceilings* (in the required, five-year budget, sense) from the (2030) limits given in the announcement. That is, having provided only a sectoral split for annual emissions in 2030, the Government’s announcement contains *nothing at all* by way of SECs for the first budget period, covering 2021-2025. For the second budget period, covering 2026-2030, the announcement specifies the maximum amount sectors may emit in the year 2030, but says nothing at all about the sectoral share of emissions over 2026-2029. While we have an estimate of what emissions actually were in 2021 (from the [2021 provisional inventory recently released by the EPA](#)) and the Government announcement sets out what the maximum annual emissions should be in each sector in 2030, these pairs of data points for each sector do not and cannot determine the *pathways* for the eight years in between. So they do not determine, [or even meaningfully constrain](#), the cumulative total amounts for each sector over each five-year period, as required by the Act. It is of course the cumulative totals that are of most relevance scientifically, since there is a near-linear

relationship between global *cumulative* CO<sub>2</sub> emissions and the increase in global surface temperature.

Thus, not only are the numbers given in the Government announcement not sectoral emissions ceilings in themselves, they are not meaningfully *equivalent* to such ceilings through any process of determinate calculation.

## **2. The “sectoral emissions ceilings” announced by the Government do not amount to a sharing out of the agreed carbon budgets**

This brings us to our second major concern, which relates to the further separate provision of s. 6C(1):

*The Minister shall prepare, within the limits of the carbon budget, the maximum amount of greenhouse gas emissions that are permitted in different sectors of the economy during a budget period (in this Act referred to as a ‘sectoral emissions ceiling’)... [emphasis added]*

The requirement here is that, for any budget period, the sum of the sectoral emissions ceilings, across all sectors, must be less than or equal to the *total carbon budget already set for that period*. This is, of course, central to the whole motivation for sectoral ceilings in budget-based climate action governance: absent this requirement there could be no confidence that sectoral measures premised on sectoral ceilings would indeed be adequate to ensure compliance with the economy-wide national carbon budgets.

Clearly, given that the figures in the Government announcement are not properly expressed as sectoral emissions ceilings in the sense of the Act, as explained in point 1 above, it is currently not possible to assess compliance with this statutory constraint.

It is perhaps useful to consider the problem by the simple analogy of financial budgeting, and switching the units of discussion from MtCO<sub>2</sub>e to (notional) millions of euros. We would then know that the total budget for all sectors of the economy from 2021-2025 is €295 million and for 2026-2030 it is €200 million. All of the sectors want to know how much money they can spend between 2021 and 2030 within these overall budget limits. Instead of providing them with this information, the Government simply tells them that in 2030 the electricity sector will have a budget of €3 million, the transport sector €6 million, buildings (commercial and public) €1 million, buildings (residential) €4 million, industry €4 million, agriculture, €17.25 million, other (F-gases, petroleum refining, and waste) €1m, and LULUCF (Land Use, Land-use Change and Forestry) will have an amount to be determined 18 months from now, giving a total annual budget for 2030 of €36.25 million (excluding LULUCF). The sectors will naturally ask “Thanks, but who gets what from the €295 million budget from 2021-2025, and who gets what from the remaining €163.75 million from 2026-2029 (€200 million less the €36.25m)?” Failing to provide them with this information would almost certainly mean that the overall national budgets would be exceeded, given that the sectors would be otherwise free to spend (emit) as they please between now and 2030.

### **3. The purported “sectoral emissions ceilings” announced by the Government do not cover all of the required sectors**

Even if the Government corrects the general issue raised in points 1 and 2 above, by now stating five-year sectoral ceilings (in MtCO<sub>2</sub>e) for each of the sectors covered in its announcement, *that would still be insufficient to meet the central requirements of the Act.*

As highlighted in our analogy above, the sectors itemised by the Government do not span the full (domestic economy-wide) sectors of anthropogenic greenhouse gas emissions, because the LULUCF (Land Use, Land-use Change and Forestry) sector has been explicitly excluded (deferred for at least 18 months). Such selective omission of one or more sectors from the sectoral emissions ceilings process runs counter to the requirement that the ceilings be *collectively* set “within the limits of the carbon budget”: that is, the absence of a ceiling for the deferred sector throws into question the purported ceilings for the others (even if those were five-year ceilings), since the setting of the missing ceiling may impact the size of the others set earlier, in order to stay collectively within the overall budget (“no ceiling can be agreed until all are agreed”). Further, the *inclusion* of the LULUCF sector in the budget process under the Act has been explicitly stipulated under [S.I. No. 531 of 2021](#) (Greenhouse Gas Emissions Regulations 2021).

Clearly the deferral of the setting of a ceiling for LULUCF means that s. 6C of the Act has not at this point in time been fulfilled. At some point in time, however, delayed fulfilment of this provision must be considered unlawful. As to any argument that the omission of the LULUCF sector is temporary, even if the delay is only 18 months as stated, this means that the LULUCF ceiling would be deferred to c. January 2024 i.e., after fully three years of the first five-year budget period 2021-2025 would have already elapsed. This would clearly not be consistent with effective, timely, management of compliance with the “economy-wide” budget for that five-year period. Rather, it would in our view arguably infringe the requirement in s. 6B(13), which requires a Minister of the Government, in so far as practicable, to perform his or her functions in a manner consistent with a carbon budget, and s. 3(3) of the Act, which requires that the Minister and the Government must, in respect of SECs, carry out their functions in a manner consistent with the objective of the UNFCCC and the steps specified in Articles 2(1) and 4 of the Paris Agreement.

### **4. Contrary to prudential carbon budget governance, the Government has provided for “unallocated emissions reductions” as an integral part of the sectoral ceilings process**

The Government has proposed the incorporation of significant “unallocated emissions reductions” as an integral part of the sectoral emissions ceilings process. The Government announcement states, without any supporting argument, that such an approach is “consistent” with the requirements of the Climate Action and Low Carbon Development (Amendment) Act 2021. We can find no basis for this in the text of the Act itself. On the contrary, as explained above: s. 6C(1) requires that the sectoral ceilings be set “within the limits of the carbon budget” for each budget period; s. 6B(13) requires a Minister of the Government, in so far as practicable, to perform his or her functions (e.g. the proposed approach to SECs) in a manner consistent with a carbon budget; and s. 3(3) requires the Minister and the Government to perform their functions consistently with the objective of the UNFCCC and the steps specified in Articles 2(1) and 4 of the Paris Agreement. While the Programme for Government and the Climate Action Plan 2021 refer to unallocated savings, the carbon budgets do not. It is true that s. 4(8)(h) of the Climate Act 2015 (as

amended) requires the Minister and the Government to have regard to “the fact that the means of achieving a climate neutral economy and other measures to enable the State to pursue the national climate objective may not yet be fully identified and may evolve over time through innovation, evolving scientific consensus and emerging technologies”. However, this relates specifically to the preparation and approval of the annually-updated climate action plans and national long-term strategies. It does *not* provide for the Government to set carbon budgets or SECs that bake-in unallocated, speculative, savings.

In practice, making a provision for notional “unallocated emissions reductions” could only reasonably be expected to have the effect that the sum of the sectoral ceilings is deliberately allowed to *exceed* the limits of the affected carbon budget(s) by an arbitrarily determined amount. Thus, such a provision would be positively *inconsistent* with the explicit provisions of s. 6C(1) of the Act. Further, quite aside from this legal point, it is just as plausible that events may lead to unanticipated *increases* in emissions as opposed to emissions *reductions*. Thus, from the perspective of *prudential* budget governance, the appropriate approach would be the exact opposite to that proposed by the Government: namely providing for an unallocated *carbon budget contingency reserve*, whereby the sectoral emissions ceilings are constrained to add up to *less* than the applicable economy-wide budget amount in each budget period.

## 5. Urgent need to address these points

Finally, we would like to emphasise the *urgency* of addressing the points raised above. This urgency obviously arises firstly from the increasingly severe impacts of climate change on a global basis that have become manifest, as well as the projected future impacts. However, there is also a specific *legal* urgency arising from the provisions of the Climate Act as amended. As already noted, the proper functioning of the national framework for governance of climate action defined in the Act relies *critically* on the setting of the sectoral emissions ceilings.

This arises explicitly in the provisions of s. 4(2)(b) for the annual updating of the Climate Action Plan to identify sufficient measures to ensure compliance “with the carbon budget *and each sectoral emissions ceiling*” and, indeed, to “address any failure, or projected failure, to comply with the carbon budget and *sectoral emissions ceiling*”.

Further, and even more imminently, s. 12 of the Act places specific obligations on the Climate Change Advisory Council, that, in preparing its statutory Annual Review, it *shall*, from 2022, comment on progress made in “complying with the carbon budget and *each sectoral emissions ceiling*”; provide “a projection of future greenhouse gas emissions in each sector of the economy to which a *sectoral emissions ceiling applies*”; and provide recommendations on “sector specific actions ... to address any failure, or projected failure, to comply with a *sectoral emissions ceiling*”. This 2022 review is to be submitted to Government by the Council no later than 30th October. Clearly then, the continuing delay by Government in agreeing and publicising *properly constituted* sectoral emissions ceilings, within the meaning of the Act, is now impairing the ability of the Council to discharge its own legal obligations, and undermining the overall statutory process for timely review and updating of the Climate Action Plan.

Much of the public commentary following the Government’s announcement has focused on the need to move beyond sectoral haggling and to advance swiftly on to implementation and delivery of emissions reductions. Nonetheless, and in spite of the

clear provisions of the Climate Act, sectors and society as a whole simply have not yet been told who is to have what share of the agreed national carbon budgets to 2030, and thus have not been provided with the clarity and certainty required to enable effective action towards a shared goal. This is not in any way to suggest delay or procrastination in any of the measures already identified (via the Climate Action Plan 2021); rather we are emphasising that, under the Act, *ongoing dynamic governance (monitoring, assessment, review, updating)* of these measures is essential to achieving the intended outcomes, and this is possible *only* if SECs are properly constituted and published, on a *timely* basis, and in the specific manner provided for, in detail, under the Act.

We therefore look forward to an early response to clarify the Government's intentions to discharge the obligations arising under the Act with *due urgency*.

Of course, we would be happy to provide more detailed analysis on request or address any further issues arising from this correspondence.

Le gach dea-ghuif,



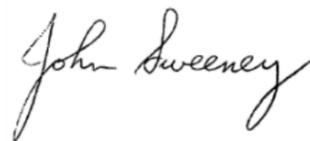
**Barry McMullin**  
Faculty of Engineering and Computing  
Dublin City University



**Andrew Jackson**  
Sutherland School of Law  
University College Dublin



**Paul R. Price**  
Faculty of Engineering and Computing  
Dublin City University



**John Sweeney**  
Maynooth University (emeritus)