



**Rapid
Decarbonization
Group**

Submitted by **Anthony Garoufalidis-Auger, executive director**

To the Standing Committee on the Environment and Sustainable Development,
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I. FROM AN ADVISORY BOARD TO A CROSS MINISTERIAL ADVISORY COUNCIL

Countries are beginning to acknowledge the inextricable link between economic planning and climate, and are moving towards using climate policy as the guiding principle that all other economic decisions must respect. In the United States, the Biden administration has announced its intention to create a government meta-agency (the ‘National Climate Task Force’) that will make climate goals central to domestic policy and foreign affairs strategies. The Trudeau government has made similar remarks acknowledging the need for climate policy to be integrated into all levels of decision-making but has not put in place similar measures to coordinate an integrated government-wide climate strategy. Its most recent climate plan lacks specific institutional reforms that would accomplish what the Biden administration has recently set out to do. While such institutional reforms may be outside the scope of Bill C-12, elements of this bill, particularly around the scope of the advisory board, could help move us in this direction.

Recommendation #1 We recommend that the advisory board should be changed to a inter-ministry advisory council that would work to advise all government ministries.

Recommendation #2 We recommend that this council have specific advisory boards for each government ministry.

Recommendation #3 We recommend that the council have a high level advisory board that advises on horizontal policy development across ministries.

For example, providing advice on how Health Canada, Environment and Climate Change Canada, Agriculture and Agri-food Canada could co-develop a sustainable food system policy.

II. IMMEDIATE AND NEAR-TERM AMBITION

According to the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C (SR15):

“Less CO₂ emission reductions in the near term would require steeper and deeper reductions in the longer term in order to meet specific warming targets afterwards. This is a direct consequence of the quasi-linear relationship between the total cumulative amount of CO₂ emitted into the atmosphere and global mean temperature rise.”¹

¹ Intergovernmental Panel on Climate Change (2018). Special Report on Global Warming of 1.5°C (SR15). IPCC. Ch 2.

In other words, the longer mitigation is delayed, the more drastic future mitigation will need to be. It is therefore paramount that there be specific measures in place in Bill C-12 to maximize emissions cuts in the immediate and near-term as failing to sufficiently reduce emissions immediately will require steeper cuts the following years. The current wording of the bill does not take into account this scientific reality. **It is our assessment that medium (2030) and longer-term targets (2050) are irrelevant because these will likely need to change based on whether we reduce emissions drastically in the short-term as well as on new scientific knowledge informing how quickly emissions need to be reduced globally to avert irreversible climate breakdown.**

The window is rapidly closing on 1.5°C. According to the IPCC, as of January 2018, the world cannot exceed emissions of more than 420 billion tonnes (Gt) of carbon dioxide (CO₂) to have a ‘likely’ (≥66%) chance of limiting warming to 1.5°C. These budgets also exclude Earth system feedbacks like permafrost thawing which could release an additional 100 GtCO₂. In 2018, 2019, and 2020, the world emitted 42.5 GtCO₂, 42.2 GtCO₂, and 39 GtCO₂ respectively, leaving only 296.3 GtCO₂ remaining of the 1.5°C (≥66%) carbon budget as of January 2021.

If emissions stay at current levels, the world will exhaust the 1.5°C carbon budget within less than 8 years. To remain within the 1.5°C (66%) carbon budget as of January 2021, global emissions would have needed to start falling exponentially by 12 per cent per year starting at the beginning of 2021 or go down linearly to reach zero emissions by 2035. These are, however, global reduction rates and are not sufficiently ambitious for Canada or other developed nations, since aligning national emissions trajectories with the global average represents unacceptably low ambition on Canada’s part to contribute to global efforts to limit warming to 1.5°C, which will increase the risk of collective failure and cement inequitable outcomes.

III. ANNUAL SCIENCE-BASED CARBON BUDGETS

To address the need for ambitious immediate and near-term mitigation, we propose the adoption of annual carbon budgets. These would set annual caps on Canadian CO₂ and other GHG emissions, setting an upper limit on how much could be emitted in a given year.

As such, Canada’s annual carbon budgets ought to be determined by the objective of:

- (a) Limiting the global mean temperature increase to well below 2°C and to aim to limit it to 1.5°C compared to pre-industrial levels;
- (b) respecting the principles set out in the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement including Canada’s and other countries’—
 - (i) historical emissions;
 - (ii) common but differentiated responsibilities; and
 - (iii) respective capabilities, considering national circumstances.

To determine the effort required to limit warming to 1.5°C and well below 2°C (often defined as 1.75°C), the bill should reference the global remaining carbon budget estimates of the IPCC to have a 66% chance of limiting warming to those temperature goals. We would advise against referencing a specific IPCC report such as the Special Report on Global Warming of 1.5°C since the IPCC revises carbon budget estimates periodically based on the latest research in the scientific literature. Instead, wording such as “the latest IPCC estimate” could be used.

Recommendation #4

We recommend that Section 6 and 7 be amended to replace the 2030 and 2050 targets with establishment of annual carbon budgets for the next ten years starting with the year 2022 and that the rest of the bill be changed to reflect this.

Recommendation #5

We recommend that the carbon budgets be established using a science-based approach that makes specific reference to latest IPCC global remaining carbon budgets (66% chance) estimates for 1.5°C and 1.75°C and the principles enshrined in the UNFCCC and the Paris Agreement.

Recommendation #6

We recommend that Section 8 include a sub-section requiring the Minister of the Environment to provide a written and verbal report explaining how their current and future emission reduction targets are in line with the IPCC carbon budgets and the principles of the UNFCCC and of the Paris Agreement, and requiring that the advisory council provide a written response to this report outlining how the government's claims stack up to the literature.

Recommendation #7

We recommended that Section 9 (2) be amended to include that all government ministries produce their own emission reduction plans on how they will contribute their share of mitigation effort needed to keep national emissions within the 2022 carbon budget.

IV. SEPARATE NEGATIVE EMISSIONS FROM EMISSION REDUCTIONS

According to the IPCC, Carbon Dioxide Removal (CDR) technologies such as bio-energy with carbon capture, storage (BECCS) and afforestation have not been proven to work scale. It further states that:

“CDR deployed at scale is unproven, and reliance on such technology is a major risk in the ability to limit warming to 1.5°C.”²

The report goes on to further state that:

² Intergovernmental Panel on Climate Change (2018). Special Report on Global Warming of 1.5°C (SR15). IPCC. Ch 2.

“Concerns have been raised that building expectations about large-scale CDR deployment in the future can lead to an actual reduction of near-term mitigation efforts. The pathway literature confirms that CDR availability influences the shape of mitigation pathways critically.”³

The authors of this brief believe that researching these should be of the highest societal priority given the potentially significant role they could play. However, this should not be taken as a licence to include these technologies in the assumptions that underlie the establishment of short, medium, and long term reduction targets. Instead, CDR should be considered separately of mitigation.

Recommendation #8

We recommend that Section 10 be amended to include provisions that ensure emission reduction plans and targets not rely on Carbon Dioxide Removal or offsets for reducing emissions and that these be treated separately.

V. INTERNATIONAL AVIATION AND SHIPPING

Currently, emissions from international aviation and shipping are not included in our national inventory totals, although these are reported as memo items in our annual inventory submission to the UNFCCC. Furthermore, the responsibility to develop mitigation plans for these have been relegated to the International Civil Aviation Organization and the International Maritime Organization. While domestic aviation emissions have remained stable since 1990, emissions from outbound international aviation flights have more than doubled over that period, and are likely to continue to grow under ICAO’s CORSIA scheme. Canada should follow the example of the 2008 UK Climate Act which includes an entire section on international aviation and shipping. The UK’s Climate Change Committee has also recommended that international aviation and shipping be included in the government’s climate target.

Recommendation #9

We recommend that the wording of the bill includes mention that international aviation and shipping will be covered by the government’s emission reduction targets.

Recommendation #10

We recommend that the bill be amended to expand the mandate of the advisory council to include research and consulting aimed at mitigating emissions from international aviation shipping.

VI. CONSUMPTION-BASED EMISSIONS

Current emission reduction targets do not address consumption-based emissions, that is, the amount of emissions associated with the consumption of goods and services in Canada along their entire lifecycle, including those emitted outside the country. Monitoring consumption-based emissions helps countries and subnational actors limit their “carbon leakage,” which occurs by displacing emissions-intensive industries

³ Intergovernmental Panel on Climate Change (2018). Special Report on Global Warming of 1.5°C (SR15). IPCC. Ch 2.

like manufacturing outside their jurisdiction while continuing to consume the products once produced within their territories. The inclusion of consumption-based emissions is nothing controversial and is already being adopted by municipal governments across the country, including Montreal, Toronto, and Vancouver.

Recommendation #11

We recommend that the bill's scope includes consumption-based emissions and that targets and plans be established for these.

Rapid Decarbonization Group is a climate policy advocacy and scientific communication non-profit based in Montreal. RDG brings sound science- and equity-based policy proposals to the climate policy debate. Our work includes advising government and non-government actors on climate mitigation options that respect the Paris Agreement. We also specialize in communicating climate science to different audiences.

Daniel Horen Greenford is a PhD candidate at Concordia University (Montreal, Quebec), under the supervision of Damon Matthews. He looks for ways for Canada to do its fair share of international climate efforts while respecting the latest scientific insight.

Anthony Garoufalidis-Auger is a political advocate and climate campaigner. He works with groups looking to shift the discourse from incrementalism to immediate action needed to stop the climate crisis and build a safer and fairer world.