

Written Submission for the Pre-budget Consultations in Advance of the 2020 Budget

By the Canadian Institute of Actuaries

Recommendation 1: The Canadian government should adopt carbon-budget legislation that spells out explicit targets and requires the enactment of the necessary policy changes at least five years ahead of their planned implementation subject to an initial transition period.

Recommendation 2: The Canadian Government should use interim quinquennial targets to monitor progress. For example, if the objective is to meet the United Nations call for net zero emissions by 2050, Canada's carbon-budget legislation could aim to stabilize emissions in 2020, and then, by increments of 0.5% emissions reduction per year, aim to reach 2% emission reductions per year by 2024, 5% per year by 2030, 10% per year by 2040, and net zero emissions by 2050.

Original August 2, 2019

Amended August 16, 2019

Re: CIA Submission for the Pre-budget Consultations in Advance of the 2020 Budget

The Canadian Institute of Actuaries (CIA) welcomes this opportunity to offer input to the 2020 budget under the theme Climate Emergency: The Required Transition to a Low Carbon Economy.

Successive Canadian governments have made commitments to reduce greenhouse gas (GHG) emissions: in 1988, in 1997 under the Kyoto Accord, in 2009 under the Copenhagen Accord, and in 2015 under the Paris Agreement. The first two entailed pledges to reduce emissions by 1% per year, then the rate was raised to 2% through 2050, and again by 2% per year in Canada's 2016 nationally determined contribution. However, Canada has achieved no substantial reductions, and emissions rose from 600 Mt CO₂ in 1988 to 708 Mt CO₂ in 2016, reaching 716 Mt CO₂ currently. Over the 20 years from 1988 to 2018, emissions increased by almost 0.9% compounded annually instead of decreasing by 1% or 2% as pledged.

Overall, Canada's emissions are at 119% of 1990 levels. Current policies would achieve only a small reduction to 116% in 2030. By comparison, the UK has achieved reductions of 41%, and its current policies should achieve cumulative reductions of 52% by 2030. This difference can be largely explained by the UK's adoption of five-year carbon budgets that are legally enforceable.

Recommendation

The Canadian government should adopt carbon-budget legislation, spelling out explicit targets and requiring the enactment of the necessary policy changes at least five years ahead of their planned implementation subject to an initial transition period. The proposed budget for the first year should include the necessary appropriations and disclose estimates for the initial five-year period. A disciplined process will enable all stakeholders to coordinate more efficiently their support to the national policy.

Our recommendations are complementary and aligned to our earlier [submission to the Federal Government's Sustainable Development Strategy](#), which underlined the need for the federal government to use interim targets to measure progress. Again, we recommend using quinquennial targets to monitor progress.

To make the recommendations more concrete, the CIA has relied on available information to illustrate the level of the challenge Canada has built up by failing to control emissions over previous decades. The [UN Secretary-General is calling on countries to present concrete, realistic plans](#), compatible with the latest [Special Report on Global Warming of 1.5°C](#) by the Intergovernmental Panel on Climate Change, to [enhance their Nationally Determined Contributions by 2020](#), reduce greenhouse gas emissions by 45 per cent over the next decade, and to net zero emissions by 2050. Although the schedule described below is not the only path

that could achieve net zero emissions by 2050, it provides an explicit benchmark for the level of effort to be anticipated.

Canada's Paris Agreement target for 2030 was 511 Mt CO₂, 29% lower than current emissions. Reaching that objective over the remaining 11 years would now require reductions at a compound rate of 3% per year to make up for the years the 1% or 2% targets were not met. Feasibility considerations suggest that a more realistic target for the first five years would be to stabilize emissions in 2020 and transition gradually by increments of 0.5% to reductions of 2% per year by 2024.

Extending the same rule for the next five-year budget would result in reductions of 5% per year in 2030. If the objective is to reach net zero emissions by 2050, subsequent average reductions of 27 Mt CO₂ per year would be required, that would be an increasing percentage of decreasing emissions, reaching 10% around year 2040, and 100% by 2050 to achieve net zero emissions.

Practical and political considerations can dictate different paths, but lower reductions in the early years mean steeper ones later, unless the timeline is extended at the risk of not meeting the Paris Agreement objective of limiting global temperature rise to well below 2 degrees Celsius above pre-industrial levels.

The CIA appreciates the opportunity to provide feedback on these issues, and we would welcome further discussion with you throughout this process.

If you have any questions, please contact [Chris Fievoli](#), CIA Staff Actuary, Communications and Public Affairs, at 613-656-1927.

Sincerely,

[Original signature on file]

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President, Canadian Institute of Actuaries

The Canadian Institute of Actuaries (CIA) is the national, bilingual organization and voice of the actuarial profession in Canada. Our members are dedicated to providing actuarial services and advice of the highest quality. The Institute holds the duty of the profession to the public above the needs of the profession and its members.

Errata

Page 3, paragraph 2, line 7: Sentence should read "Over the 30 years from 1988 to 2018, emissions increased by almost 0.6% compounded annually instead of decreasing by 1% or 2% as pledged."

Note additional sources: <https://www.nationalobserver.com/2019/04/25/analysis/canada-pace-meet-paris-climate-target-two-centuries-late> and <https://www.nationalobserver.com/2019/05/21/analysis/canada-vs-uk-lessons-climate-fight>