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Select Standing Committee on
Finance and Government Services
c/o Parliamentary Committees Office
Room 224, Parliament Buildings
Victoria, BC V8V 1X4

***** BY EMAIL AT FINANCECOMMITTEE @LEG.BC.CA AND MAIL *****

Dear Sirs/Mesdames:

Re: Consideration of Climate Change in BC Budget 2019

Thank you for your hard work conducting the BC Budget consultation. Unfortunately, due to my schedule and your available presentation times, I was unable to present to you in person, but I hope that these submissions capture our submissions.

The first page of Budget Consultation 2019 acknowledges the importance of planning for financial pressures from climate change:

> There are also challenges ahead that government needs to plan for, including **financial pressures from wildfires, climate change** … With prudent fiscal management, your government is **working to address these challenges**, while investing in you, your family, and your community. [Emphasis added]

We strongly endorse the need to plan for the financial implications of climate change. However, we were disappointed by the lack of detail in the remainder of the discussion document as to whether and how these financial pressures are to be addressed in the budget.

Subsequent mentions of climate change are primarily focused on the need to build a sustainable economy, as a way of reducing our contribution to climate change, or on expenditures related to climate change and the environment. While we do support building such an economy and increasing such expenditures, this does not begin to address the financial pressures that BC communities are increasingly experiencing **as a result** of climate change.

Planning for financial pressures from climate change

The starting point for planning is reliable information. We note that climate change has increasingly given rise to economic costs to the BC government, and as a result, to BC taxpayers, and that these costs will rise in the future. Such costs include, but are not limited to:

- Massive loss in the timber value of publicly owned forests, due to Mountain Pine Beetle and other pest species that are spreading due to climate change. This loss from 2009 to 2054 has been estimated by academics at a staggering $57.37 billion.[1]
- Increased costs of fighting wildfires and flooding, disaster relief of both, and the costs of treating wildland urban interface areas and provincial infrastructure to reduce the risks of wildfires and flooding. The review of BC's 2017 floods and wildfires, conducted by George Abbott and Chief Maureen Chapman, found that there was an "undeniable impact of climate change manifested in these events."[2] The costs of fighting wildfires over the past 2 years has been in excess of a billion dollars. The government has invested $235 million so far in wildland urban interface areas, but treating all moderate and high risk areas has been estimated at $6.7 billion.[3]
- Increased road maintenance costs, and increased construction costs associated with building more climate resilient roads. To its credit, the Ministry of Transportation and Infrastructure has been on the forefront of climate adaptation planning for roads.[4] In its 2018-2021 Service Plan[5], the Ministry proposes to "Integrate climate change and seismic resilience considerations into rehabilitation design and cost." However, we do not currently have information on the level of costs associated with road maintenance or adaptation.[6]
- Increasing health care costs due to the spread of diseases due to warmer climates, increased medical concerns arising from smoke inhalation from increasing wild fires, heat-wave deaths, and other medical effects of climate change.
- Ensuring that the risks of sea level rise for BC government properties and infrastructure are appropriately evaluated and addressed, as well as protecting coastal communities from sea level rise. A 2012 report commissioned by the province identified the costs to MetroVancouver municipalities at $9.5 billion by 2100, but to our knowledge there has been no similar study of measures to protect Crown land or infrastructure over the provincial coastline.

We offer these as examples of just some of the costs which will be, and increasingly are being, incurred by the province. We think that the extent of costs that are being observed with the current level of global warming (1°C globally and higher in much of BC) should give government, and taxpayers, pause. Moreover, the coming pressures on the province's finances, particularly if the world does not move rapidly to keep the rise in global temperatures below 1.5°C, could be massive.

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1 L. J. Corbett, P. Withey, V. A. Lantz, T. O. Ochuodho; The economic impact of the mountain pine beetle infestation in British Columbia: provincial estimates from a CGE analysis, *Forestry: An International Journal of Forest Research*, Volume 89, Issue 1, 1 January 2016, Pages 100–105, **https://doi.org/10.1093/forestry/cpv042**.

2 G. Abbott and M. Chapman. *Addressing the New Normal: 21st Century Disaster Management in British Columbia*. (Victoria, BC: Province of British Columbia, 2018), p. 14.

3 Ibid., p. 7.

4 **https://www2.gov.bc.ca/gov/content/industry/natural-resource-use/resource-roads/climate-adaptation**.

5 **https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/natural-resource-use/resource-roads/fpi_tr2017n61.pdf**, at p. 11.

6 We are working with Nathan Vadeboncoeur of Smart Shores to try to identify some approximate figures in relation to municipal roads, but do not have data available at this time.

Planning for the financial impacts of climate change requires a detailed understanding of what the current financial impacts are, and how they are changing over time. Moreover, the public needs to understand how climate change is affecting our province and the choices we will need to make as a society about how to pay for the resulting costs. There could be significant implications for the public regarding the provision of government services and the effects on quality of life for community members.

Tracking costs

We are not aware of a government that comprehensively tracks costs across all its expenditures, particularly including loss of value and opportunities associated with climate change. BC would be providing great leadership in developing the financial and climate modelling necessary to calculate these costs.

However, there are a number of examples of local governments that are attempting to quantify at least some of their climate costs, which may provide some inspiration. Examples include:

- Costing climate adaptation plans and adaptation measures. The City of New York's climate adaptation plan is expected to cost approximately $20 billion.[7] More locally, Surrey has made several efforts to estimate the adaptation costs associated with sea level rise impacts on its Mud Bay and Crescent Beach.[8]

  Adaptation costs are incurred not to address a single weather event, but rather because infrequent events are becoming progressively more frequent or more intense as a result of climate change (or on the basis of modelling showing that this will occur over the lifetime of infrastructure). Current provincial guidance requires local governments to consider 1 m of sea level rise by 2100 when making decisions about managing land-use hazards from coastal flooding. More broadly, the Engineers and Geoscientists of BC requires its members to take climatemodelling into account when designing any infrastructure likely to be affected by climate change.[9] If the BC government does not develop longer term accounting associated with managing climate change impacts in the province, it will not be able to support sound decision-making regarding appropriate and timely responses in policy and asset management.

  When recent amendments to the *Greenhouse Gas Reduction Targets Act* is brought into force, BC's Ministry of Environment and Climate Change Strategies will be required, every two years,

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7 https://www.reuters.com/article/us-climate-newyork-plan/new-york-lays-out-20-billion-plan-to-adapt-to-climate-change-idUSBRE95A10120130612.

8 For example, **https://www.surrey.ca/files/CFAS-AGOptionsSelectionWorkshop.pdf**, at pp. 59-63; **https://www.surrey.ca/files/CrescentBeachClimateChangeAdaptationStudyReport2009.pdf**, at p. 94.

9 Engineers and Geoscientists of BC. A Changing Climate in British Columbia - Evolving responsibilities for APEGBC and APEGBC Registrants. (Vancouver, BC, 2014), available at https://www.egbc.ca/getmedia/a39ff60e-80a1-4750-b6a5-9ddc1d75248a/APEGBC-Climate-Change-Position-Paper.pdf.aspx.

to table an plan identifying climate change risks to BC and progress in reducing those risks.[10] This report may provide a basis for identifying some key climate costs.

- Incorporating climate change into asset management plans or infrastructure planning. Since climate costs are often associated with the management of public assets or infrastructure, it may be possible to consider climate costs based on, or as part of, plans related to assets or infrastructure. For example, the City of Powell River recently instructed its staff to "incorporate climate change adaptation and mitigation costs into the City's Asset Management Plans."[11]

- Economy-wide or region-specific estimates. Economists working with climate modellers have been able to come up with rough estimates of the impacts of climate change on a region and the savings to be achieved through adaptation measures. A notable example is the Roundtable on Environment and Economy's 2011 report, Paying the Price,[12] which estimated that climate change will cost the Canadian economy $5 billion per year by 2020 and calculated the costs savings from various adaptation measures.

- Climate planning costs. In addition to the costs of climate adaptation, it should be noted that the costs of preparing climate adaptation plans and designed may be considered to be costs arising from climate change. Similarly, the costs of developing climate modelling to inform such planning and designs are also climate costs.

Each of these approaches to climate costing, while important, is piece-meal, and we hope that future budgets may incorporate a more comprehensive approach, and one which will be more useful for financial planning.

We note that, with funding from Natural Resources Canada, corporations are working with the Chartered Professional Accountants of Canada "to recognize and anticipate the emerging financial impacts of climate change and to help their organizations better respond to the increasing demand for enhanced climate-related disclosure."[13] Corporations have recognized their responsibilities to shareholders related to understanding and managing the financial impacts of climate change.

If anything, governments such as the Provincial Government have an even greater responsibility to the public to track and manage the costs of climate change in the Provincial budgeting and financial planning processes.

We note that the scale of the province, as well as provincial infrastructure and lands, may allow for some approaches to costing climate impacts that would not work at a local government level. We are aware that the Province is in the early stages of developing a provincial flood risk management

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[10] Greenhouse Gas Reduction Targets Amendment Act, 2018, S.B.C. 2018, c. 32, s. 3.

[11] City of Powell River minutes – 15 March 2018, Agenda Item 7-7.

[12] http://nrt-trn.ca/wp-content/uploads/2011/09/paying-the-price.pdf.

[13] https://www.cpacanada.ca/en/the-cpa-profession/about-cpa-canada/media-centre/2018/september/cpa-canada-announces-climate-change-funding-agreement-with-natural-resources-canada

strategy, for example, and we hope that this will include an estimate of the costs associated with different possible management scenarios.

For example, in tracking costs due to climate change at a Provincial level, it may not always be necessary to determine whether a particular storm or weather event is directly attributable to climate change (although I note that scientists are increasingly able to do so, and this may be something for the province to explore). At a provincial level, the trends in the types of costs that would be expected to be attributed to climate change may be equally significant, and easier to link to climate change.

Recommendations

We recommend that Budget 2019 identify, even if a preliminary way, the current costs that can be linked to climate change, and that efforts be made to develop more rigorous tools for identifying climate change costs in future budgets.

We recommend that the Ministry of Finance work closely with the Climate Action Secretariat, Pacific Climate Impacts Consortium and the Pacific Institute for Climate Solutions and local governments that have experience in this area in developing the best mechanisms for tracking and reporting on these types of costs, and for estimating expected costs related to climate change during the three years covered by each budget period.

Although not necessarily contained in the 2019 Budget, we further recommend that the Ministry of Finance, again in consultation, begin examining the expected climate change costs facing the BC government and BC residents in 5, 10, 20, 30, 40 and 50 years, to aid in planning.

We further recommend that as the government begins to quantify its climate costs (and those of the province as a whole), that it begin examining the ways in which these costs can be paid. Options might involve defining the relationship between carbon tax revenue and future climate costs, as well as the potential for recovery from third parties that have contributed to climate change.

Conclusion

BC has positioned itself as a leader in climate change, but we still tend to think of climate change as something which is not yet here. Responsible fiscal leaders increasingly need to recognize the costs of climate change – both to acknowledge and address today's climate costs but also to prepare for tomorrow's costs. If we do not know what climate change is costing us now, we will be caught by surprise when those costs become impossible to ignore.

We believe that reporting on the costs of climate change may also help British Columbians understand why climate action is urgently required and why watering down climate change action is economically irresponsible. While BC is far from the most vulnerable region for climate change, even we can no longer ignore the very significant costs that the world's fossil fuel addiction is imposing upon our economy.

We applaud the government's commitment to work to address the "financial pressures due to wildfires [and] climate change." We urge you to implement the above recommendations as a means to achieving this goal.

Thank you again for the opportunity to make these submissions.

Regards,

Andrew Gage,
Staff Lawyer

cc. Carole James, Minister of Finance (by email @ *FIN.minister@gov*.bc.*ca*)

cc. George Heyman, Minister of Environment and Climate Change Strategies (by email @ *ENV.minister*@gov.*bc*.ca)