OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
BUREAU DU DIRECTEUR PARLEMENTAIRE DU BUDGET

# Cost estimate of Election Campaign Proposal

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Short title: Green Patent Credit

Description: Introducing a Green Patent Credit which will reduce the corporate income tax rate to 5%, which would only be applied to profits generated from green technology that was developed and patented in Canada since 2015. This new tax credit will be implemented at the beginning of the 2020-21 fiscal year.

Operating line(s): Corporate Income Tax

Data sources:

| Variable | Source |
|---|---|
| Revenue Losses from the UK Patent Box regime | Her Majesty's Revenue & Customs (HMRC) |
| Growth rates of corporate profits before taxes | PBO Election Proposal Costing (EPC) Baseline |
| Number of patents filed in the UK and Canada | World Intellectual Property Organization |
| Exchange rate information | OFX |
| Number of green technology patents granted | Canadian Intellectual Property Office |

Estimation and projection method: As this is a new program, PBO used historical revenue losses seen under the UK Patent Box regime, which is published by the UK's tax authority (HMRC). PBO projected revenue losses using growth rates for corporate profits before taxes from its EPC baseline data.

PBO converted UK revenue losses to Canadian dollars and took a proportion of these revenue losses based on the ratio of patents granted in the UK and Canada. PBO then took another proportion of these revenue losses based on the ratio of green technology patents and total patents granted in Canada.

Only the cost of new patents (represented by the incremental change in revenue losses year over year) was considered. The cost of patents granted since 2015 were rolled over to the first year of the program (2020-21). These figures were then projected based on the growth rates mentioned above.

Uncertainty assessment: The estimate has high uncertainty. PBO based its projection on historical data for the Patent Box regime in the UK. While this measure would be similar to the UK regime, there are differences for which adjustments were made. In addition to those described above, PBO made adjustments to account for phase-in rates, revenue losses for existing vs. incremental patents, patents

granted to residents and non-residents, etc. PBO assumes that all patents granted to residents will also be developed in Canada. Should this not be the case, it would impact the cost estimate.

The estimate would also be sensitive to the timing between patent approval and profitability. As PBO was unable to determine the average duration of time for a patent to generate profits, it was assumed that there would be no delays. If delays were to occur, the cost estimate would be pushed out to later years. PBO did not include behavioral responses to the measure. Including this may impact the cost estimate of the measure.

This measure would increase research and development expenditures, which may increase claims for the scientific research and experimental development (SR&ED) tax incentive. PBO does not estimate the cost of these additional claims. Profit shifting behavior by firms that face a lower effective tax rate, due to the combined effect of the patent credit regime and SR&ED incentive, is an additional behavioral response to the measure that is difficult to estimate and therefore has not been estimated.

The cost estimate is grown over the projection period using the growth rate for corporate profits before taxes. PBO assumes that growth in corporate profitability is the same as the growth in profitability of patents.

## Cost of proposed measure

| $ millions | 2019-2020 | 2020-2021 | 2021-2022 | 2022-2023 | 2023-2024 | 2024-2025 | 2025-2026 | 2026-2027 | 2027-2028 | 2028-2029 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total cost | - | 7 | 7 | 8 | 9 | 10 | 10 | 11 | 12 | 13 |

Notes:
Estimates are presented on an accruals basis as would appear in the budget and public accounts.
Positive numbers subtract from the budgetary balance, negative numbers contribute to the budget balance.
"-" = PBO does not expect a financial cost