OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
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Cost Estimate of Election Campaign Proposal

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Short title: Financial support for clean technologies

Description: The CIT rate on eligible activities will be reduced in half over three years. This will reduce the tax rate on small businesses from 9 to 4.5 per cent and the general CIT rate from 15 to 7.5 per cent. Eligible activities will include but are not limited to:

- Manufacturing and installations related to renewable electricity (wind, solar, hydro, geothermal, biomass, tidal, wave);
- Production of renewable fuels (biofuels, biogas, fuels from carbon capture and use technologies);
- Manufacturing of zero emission vehicles;
- Carbon sequestration and removal technology;
- Batteries for use in zero emission vehicles and grid storage;
- Electric vehicle charging systems;
- Net zero energy homes and buildings.

Operating line(s): Income taxes: Corporate income tax

Data sources:

Variable	Source
Taxable income	T2 corporate tax return
Industries	North American Industry Classification System (NAICS) Canada 2017
GDP growth by industry	Statistics Canada Table 36-10-0487-01
Corporations' names	S&P Capital IQ Platform[1]

Estimation and projection method: We identified a list of about 20 NAICS codes (at the six-digit level) that could contain activities considered as eligible. Using anonymized microdata from corporate income tax returns, we simulated the CIT rate reduction on all corporations that identified their activities as being under one of these NAICS code. In some industries, eligible activities will represent a small share of the taxable income reported by all the corporations in that industry (for example, net zero energy homes are likely a small portion of NAICS code 236110 – Residential building construction). Therefore, we multiplied the simulated tax

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revenue forgone in each industry by using sector specific shares of eligible activities. To forecast future costs of the measure, we applied the average annual nominal GDP growth rate of each industry from 2009 to 2015. For industries where the share of eligible activities is less than 100 per cent, we also apply a growth rate in the share of eligible activities over the forecast horizon. This growth in the share of eligible activities accounts for the expectation that all else equal, the share of clean technologies in the economy is very likely to increase over time.

Since there is high uncertainty in correctly identifying eligible activities, we used a second methodology to validate our cost estimate. Using S&P's Capital IQ enterprise screening feature, we identified a list of Canadian corporations that could be eligible based on their business description. This list of corporations was then used to perform a simulation of the CIT rate reduction only for these corporations. The static cost estimate from this simulation was in the same order of magnitude as our estimate using NAICS codes.

Uncertainty assessment:

The estimate has high uncertainty.

It is difficult to identify the appropriate list of corporations that would be eligible for the rate reduction, especially since the list of eligible activities is not exhaustive. Under the NAICS code approach, a relatively small variation in the shares of clean technologies within each industry has a large impact on the cost estimate. The economic outlook of the industries that contain eligible activities might not reflect their past growth. Furthermore, corporations that would be eligible in each industry might have a different economic outlook than the rest of their industry.

Under our alternative approach, the Capital IQ database contains mostly public corporations and some private corporations (usually controlled by public corporations). Thus, the cost might be underestimated since we are likely missing many private corporations that would be eligible. We can assume that this underestimation is relatively small in the first years since many of these private corporations are likely start-ups that are not yet profitable enough to pay CIT. Another risk of underestimation comes from the fact that only about half of the corporations extracted from Capital IQ could be matched with a corporate income tax return. However, the underestimation of the cost is also likely offset by an overestimation if we assume that the reduced tax rate will only apply to the income arising from eligible activities (as was the case with the manufacturing & processing deduction). The corporations identified in Capital IQ might only have a small share of their income that would be eligible to the reduced rate, but the simulation was performed on all their taxable income.

Finally, a behavioural response should be expected, but we cannot determine its magnitude because the measure is very targeted.

Cost of proposed measures

$ millions	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029
Total Cost	3	14	33	57	67	78	92	110	132	159

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