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

Legislative Costing Note

This is an independent cost estimate of a budgetary measure contained in the federal government's Budget 2021. A list of the PBO's cost estimates of components of the Budget can be viewed on its website.

Publication Date:	2021-05-20
Short Title:	Rate Reduction for Zero-Emission Technology Manufacturers

Description:

The corporate income tax (CIT) rate on eligible zero-emission technology manufacturing and processing activities will be reduced in half. This will reduce the CIT rate on small businesses from 9 to 4.5 per cent and the general CIT rate from 15 to 7.5 per cent. The rate reduction will apply to taxation years that begin after 2021 and before 2031 (gradually phasing out between 2029 and 2031). Eligible activities will include:

- manufacturing of solar, wind or water energy conversion equipment;
- manufacturing of geothermal energy equipment;
- manufacturing of equipment for a ground source heat pump system;
- manufacturing of electrical energy storage equipment used for storage of renewable energy;
- manufacturing of zero-emission vehicles;
- manufacturing of batteries and fuel cells for zero-emission vehicles;
- manufacturing of electric vehicle charging systems and hydrogen refuelling stations for vehicles;
- manufacturing of equipment used for the production of hydrogen by electrolysis of water;
- production of hydrogen by electrolysis of water; and
- production of solid, liquid or gaseous fuel from either carbon dioxide or specified waste material.

Data Sources:

Variable	Source
Taxable income	T2 corporation income tax return
Industries	North American Industry Classification System (NAICS) Canada 2017
GDP growth by industry	Statistics Canada Table 36-10-0487-01
Industrial product price index by industry	Statistics Canada Table 18-10-0267-01
Annual generating capacity by type of electricity generation	Statistics Canada Table 25-10-0022-01

Estimation and Projection Method:

We identified a list of 12 NAICS codes (at the six-digit level) that could contain activities considered as eligible. Using anonymized microdata from T2 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, manufacturing of zero-emission vehicles are likely a small portion of NAICS code 336110 –

Automobile and light-duty motor vehicle manufacturing). Therefore, we multiplied the simulated tax revenue forgone in each industry by using sector specific shares of eligible activities.

The three sectors contributing the most to the cost of the measure are NAICS codes 336110, 237130 and 336211. The share of eligible activities in the automobile and light-duty motor vehicle manufacturing (NAICS code 336110), motor vehicle body manufacturing (NAICS code 336211) and motor vehicle electrical and electronic equipment manufacturing (NAICS code 336320) sectors was assumed to be the same as the share of ZEVs in total Canadian automobile production, which was obtained from Innovation, Science and Economic Development Canada. The share of eligible activities in power and communication line and related structures construction (NAICS code 237130) was assumed to be half the share of renewable energy electricity generation in total electricity generation. As NAICS code 237130 excludes hydroelectric generating facilities, we have excluded hydroelectricity in the computation of renewable energy electricity generation.

To forecast future costs of the measure, we applied the average annual nominal GDP growth rate of each industry from 2009 to 2017. 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 is not to account for a possible behavioural response to the lower tax rates, but simply to acknowledge that all else equal, the share of clean technologies in the economy is very likely to increase over time. We assume that administration costs are small, except those in the first year.

Sources of Uncertainty: Some NAICS code represent a large amount of taxable income and a relatively small variation in the shares of clean technologies within these industries 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. Finally, a behavioural response should be expected, but we cannot determine its magnitude because the measure is very targeted.

Prepared by: Govindadeva Bernier <Govindadeva.Bernier@parl.gc.ca>

Cost of proposed measure

$ millions	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Foregone tax revenue	-	12.6	16.1	23.7	28.3
Administrative costs	1.0	-	-	-	-
Total cost	**1.0**	**12.6**	**16.1**	**23.7**	**28.3**

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.