

Cost Estimate of Election Campaign Proposal

Publication date:	2019-09-29	
Revised:	2019-10-07	
Short title:	Supporting home retrofits and zero emission homes	
Description:	<p>The first component entails providing a free energy or flood audit to interested homeowners to assess available options. Following this, homeowners can access an interest-free loan of up to \$40,000 with a 10-year repayment term, as well as a cash grant valued between \$250-\$750 for these installations and renovations (i.e. retrofits). The second component entails providing a cash grant of \$5,000 to all homebuyers of NetZero homes as defined by Natural Resources Canada. Both components will be for a 5-year period with an option for renewal.</p>	
Operating line(s):	Other Fiscal Arrangements	
Data sources:	EcoEnergy Retrofit Program statistics	Natural Resources Canada (NRCan)/CBC
	Cost of audits (Energy/Flood)	NRCan Federal Buildings Initiative Audit Standards Guidelines/ Intact Centre on Climate Adaptation Canada
	Number of homes at risk of flooding in Canada	Insurance Bureau of Canada, "Options for Managing Flood Costs of Canada's Highest Risk Residential Properties", June 2019
	Expected flood mitigation costs	Intact Centre on Climate Adaptation Canada, "Water on the rise: protecting Canadian homes from the growing threat of flooding", April 2019
	Number of NetZero homes	Canadian Home Builders Association (CHBA)
	Distribution of renovation spending	Survey of Household Spending 2017, Statistics Canada
	Interest costs	PBO Public Debt Charges calculator
	Consumer Price Index (CPI)	PBO EPC Baseline
	Growth in housing stock	PBO EPC Baseline
Estimation and projection method:	<p>The cost of energy and flood protection audits are based on per-audit costs multiplied by the number of homeowners who are assumed to register for the program. The per-audit costs were projected using the PBO's CPI projections.</p> <p>The number of audits is based on the fraction of registrants of the EcoEnergy retrofit program who obtained an audit. This fraction was determined via an NRCan document obtained through Access to Information and Privacy request by the CBC in 2013. The number of flood audits was derived by combining the</p>	

number of homes in high-risk flood zones multiplied by the yearly probability of flooding.

The total cost of the cash grants (incentives) was estimated based on the average amount of the grants (\$437) multiplied by the number of homeowners undertaking retrofits. This number is calculated by multiplying the number of audits by the fraction of homeowners who undertook retrofits after obtaining an audit in the EcoEnergy program.

The cost of the interest-free loans is taken from the PBO's public debt charges calculator. The distribution of loan amounts was based on the distribution of spending on selected items in the *Betterment expenses and Repair & Maintenance expenses* of households in Statscan's Survey of Household spending 2017.

The total cost of the NetZero grants is determined by the number of NetZero homes, using information from the CHBA's website, assumed to be built each year in Canada multiplied by the amount of the cash grant. The number of new NetZero homes available each year is based on the growth rate of the stock of homes in the PBO's baseline model.

Uncertainty
assessment:

This estimate has high uncertainty. Take-up for this program is based on the number of registrants for the EcoEnergy retrofit program in the year 2009-2010, which was grants based. Although grants are given, the primary element of this measure are interest-free loans. Thus, the actual take-up rate may differ. The distribution for the loan amounts people would borrow is based on previous spending. The program may incite people who would not have renovated their homes to renovate and to undertake more expensive renovations. The estimate does not take such behavioural responses into account. The costs of flooding prevention used in the estimate are assumed to be low cost measures that reduce their risk of basement flooding. This may underestimate the loans required for homeowners facing high risks of flooding.

The number of NetZero homes relies on third-party data that was accessed online. Although the CHBA's criteria for these homes is the same as NRCan's, there is no delineation of the number of homes under construction, on the market, or sold. PBO assumes all NetZero homes listed on the CHBA website are the new number of homes built this year.

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	-	300.2	342.4	378.3	411.8	442.5	151.9	138.2	124.1	109.5

Supplementary information

	Description	2019- 2020	2020- 2021	2021- 2022	2022- 2023	2023- 2024	2024- 2025	2025- 2026	2026- 2027	2027- 2028	2028- 2029
Cost elements	Audit costs	-	137.9	140.6	143.4	146.3	149.3	-	-	-	-
	Cash incentive costs	-	127.5	127.5	127.5	127.5	127.5	-	-	-	-
	Interest costs	-	34.3	73.7	106.8	137.4	165.1	151.9	138.2	124.1	109.5
	NetZero grant costs	-	0.6	0.6	0.6	0.6	0.6	-	-	-	-
Total cost		-	300.2	342.4	378.3	411.8	442.5	151.9	138.2	124.1	109.5

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