Note

Canada's surtax on Chinese-made electric vehicles, steel and aluminum

Legislative Costing Note

Published on December 5, 2024

On October 1, 2024, the federal government implemented a 100 per cent surtax on Chinese-made electric vehicles (EVs) imported into Canada.

The federal government also implemented a 25 per cent surtax on imports of steel and aluminum products from China starting on October 22, 2024.

On October 18th, federal government launched the process to request remission of surtaxes on EVs and steel and aluminum imported from China under specific circumstances.

The Parliamentarian Budget Officer (PBO) estimates that the two measures will raise federal revenues by $473 million from 2024-25 to 2028-29.

5-Year Cost

$ millions

Fiscal year	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	Total
Total cost	-39.7	-104.8	-106.9	-109.6	-112.4	-473.3

Detailed 5-Year Cost

$ millions

Fiscal year	2024-2025	2025-2026	2026-2027	2027-2028	2028-2029	Total
Surtax on Steel & Aluminum	-93.6	-217.7	-226.6	-237.3	-249.1	-1,024.3
Surtax on Electric Vehicles	53.9	112.9	119.7	127.8	136.7	551.0
Total cost	-39.7	-104.8	-106.9	-109.6	-112.4	-473.3

- Estimates are presented on an accrual basis as would appear in the budget and public accounts.
- A positive number implies a deterioration in the budgetary balance (lower revenues or higher spending). A negative number implies an improvement in the budgetary balance (higher revenues or lower spending).
- Totals may not add due to rounding.

Estimation and Projection Method

Steel and Aluminum

Historical trade data was obtained from Trade Data Online which collects data from Statistics Canada and the U.S. Census Bureau. Data was examined by isolating the targeted International Harmonized Description and Coding System (HS) announced by the federal government. Imports from China to Canada between 2014 and 2023 were analyzed by their HS codes.

In 2023, Chinese steel accounted for 8.1 per cent of Canada's total steel imports and Chinese aluminum accounted for 21.8 per cent of Canada's total aluminum imports.[1] The share of imports from China has increased, with steel and aluminum accounting for 8.4 per cent and 9.3 per cent, respectively, in 2014.

To estimate the impact of the 25 per cent surtax on steel and aluminum, we analyzed the average import price associated with the targeted HS codes in order to identify which Chinese imports were below the world average price.

Next, we applied a 25 per cent surtax on the targeted tariff items imported from China to evaluate whether this increase would position Chinese imports above or below the industry average.

Behavioural response to the surtax

We evaluated the likelihood of whether Canadian industries would continue to import from China despite the price increase due to the surtax or if they would be more inclined to substitute their purchases with a cheaper alternative from another country.

Our estimate implicitly assumed that Chinese exporters are unwilling to accept lower margins which may imply this costing could be a lower bound estimate. We considered the average price over the last three years to help account for possible price adjustments by Chinese exporters.

In doing so, we estimated that the demand for imports of Chinese steel and aluminum to Canada would decrease by nearly 50 per cent.

On October 18th, 2024, the government announced a process for Canadian businesses to request a remission of surtaxes on steel and aluminum imported from China. We estimated the remission based on the percentage of goods in which China makes up a majority market share and therefore there would be limited substitutability. As a result, over the 5-

year period the government may receive an additional $1.02 billion in additional surtax collected, after accounting for the remission.

Economic impact

We used the Global Trade Analysis Project (GTAP) database and computable general equilibrium model to estimate the impact of the surtax on Canada's imports, prices, industries and real GDP. The 25 per cent surtax was adjusted to reflect steel and aluminum imports' share of their respective sector in the GTAP 11 database; the lowest sectoral disaggregation were ferrous (steel) and non-ferrous (aluminum) metals. The surtax coverage rate within each category of metals was computed at the 6-digit HS code level. We assumed that the United States and Mexico also levy a 25 per cent tariff on their imports of Chinese steel and aluminum.

The GTAP model simulation suggests that Canada will reduce its steel and aluminum imports from China by two-thirds, a reduction that is greater than the behavioral response we have estimated in this costing note. This difference is likely a result of the GTAP 11 database, which has a base year of 2017, potentially causing an underestimation of the recent oversupply and price competitiveness of China's steel and aluminum exports. Overall, we estimate that the 25 per cent surtax on Chinese imports of steel and aluminum will have a negligible impact on Canada's real GDP. There are, however, some important sectoral impacts.

Canadian industries respond to higher Chinese import prices by purchasing more steel and aluminum from other trading partners – notably the United States – as well as increasing domestic steel and aluminum production. We estimate that the surtax will increase domestic output of metals and utilities. Canada is also estimated to increase its steel and aluminum exports to the United States and Mexico which also substitute away from Chinese imports in response to their own 25 per cent tariff. By contrast, output is estimated to decline in manufacturing and construction as these industries face higher input costs.

Electric Vehicles

Historical trade data from 2014 to 2023 from Trade Data Online was examined by isolating the HS codes announced by the federal government which target Chinese-made EVs. In 2023, imports from Chinese-made EVs surged to $2.3 billion, up nearly 1,900 per cent from 2022 when imports from China were $116 million. The cause of this increase was mostly due to the opening of the Tesla inc. Shanghai plant.

There are few studies which examine the impact of prices on the demand for electric vehicles and luxury electric vehicles.[2] These include estimates of -2.4 (Bordley 1993), -2.37

for a Tesla Model S (Xing et al. 2021), -1.5 to -2.1 in Norway (Springel, 2021); -1.23 (Li et al., 2017), -1.02 (Zhou and Li, 2018), and -2.75 (Xing, Leard and Li, 2021) in the US.

With a 100 per cent surtax on electric vehicles imported from China, this would imply most individuals might substitute to a different vehicle. However, in a study produced by the Department of Finance on the Potential Economic Impacts of the *Select Luxury Items Tax Act*, they assumed that for the sales of vehicles above $150,000, the goods may be perfectly inelastic.

Therefore, it may be important to consider total global production of vehicles from Tesla and assess the proportion of vehicles produced in China relative to other plants located in Germany, California or Texas. This determines if there would be an excess supply of vehicles produced outside of Tesla's Shanghai plant that could be exported to Canada. In 2023 Canada ranked fifth in terms of market demand for vehicles produced by Tesla. After accounting for the market demand from countries with greater purchasing power, there would be an excess supply of vehicles available to be sold to Canada that are not produced in China. Therefore, should demand for Tesla's be more inelastic, the impact of the 100 per cent surtax on EVs from China should be relatively immaterial as it is more likely that Tesla would sell vehicles to Canada that were produced outside of China.

For the other tariff items impacted by the surtax, imports from China account for a negligible share. As a result, importers are likely to source goods from countries not subject to the 100 per cent surtax, therefore the additional revenue is expected to be insignificant.

The 100 per cent surtax is applied in addition to the Most-Favoured Nation (MFN) import tariff of 6.1 per cent. Thus, it is anticipated that the surtax will result in an annual cost to the government of $124 million per year, on average, as consumers shift their purchasing preferences away from Chinese manufactured EVs and no longer pay the MFN import tariff.

Sources of Uncertainty

Our estimate implicitly assumes that Chinese exporters are unwilling to accept lower margins which may underestimate additional revenues. We also do not assume any additional policy response from China. The surtax may result in domestic shortages of steel and aluminum which may cause importers to continue to order from China despite higher prices. Some of the imports from China may be specialty items and therefore may be less price elastic. These items may be eligible to receive a remission. We attempt to adjust for steel and aluminum items that may not be able to be sourced elsewhere. We do not consider remissions for EVs due to limited information available. This may result in an overestimate of the cost for EVs. Finally, this costing assumes the Canada-United States-Mexico Agreement (CUSMA) on free trade continues to apply.

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Data Sources

Trade Data
Trade Data Online

Growth Rates
Economic and Fiscal Outlook – October 2024

Global Trade Analysis Project (GTAP) model and database
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Elasticities (Electric Vehicles)
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Li Shanjun, Lang Tong, Jianwei Xing, and Yiyi Zhou. 2017. "The Market for Electric Vehicles: Indirect Network Effects and Policy Impacts". Journal of the Association of Environmental and Resource Economists 4 (1): 89–133.

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[1] This percentage represents the share of targeted Chinese imports for steel and aluminum under the new surtax announced by the federal government.

[2] Tesla Model S and Model X vehicles cost more than $100,000 Canadian. Therefore, they would be considered a luxury vehicle and would be subject to the *select Luxury Items Tax Act*. Subject Vehicles Under the Select Luxury Items Tax Act.

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