

Assessment of Cost Estimates Prepared for Bill S-212: An Act to Amend the Excise Tax Act (Tax Relief for Nunavik)

Ottawa, Canada December 9, 2010 www.parl.gc.ca/pbo-dpb The *Parliament of Canada Act* mandates the Parliamentary Budget Officer (PBO) to provide independent analysis to the Senate and House of Commons on the state of the nation's finances, the estimates and trends in the national economy and to estimate the financial cost of any proposal that relates to a matter over which Parliament has jurisdiction.

Key Points:

- Consistent with its legislative mandate, the PBO was asked to prepare a cost estimate of proposed legislative amendments to the *Excise Tax Act* that would:
 - o provide for a 0% GST tax rate on the supply of goods and services in Nunavik; and,
 - exempt petroleum products and fuels sold or purchased in Nunavik from certain excise and consumption taxes.
- As a starting point for this analysis, the PBO was asked to assess the reasonableness of cost estimates on an earlier iteration of the proposal, which were presented to the Senate National Finance Committee in September 2009 by the Government and Library of Parliament.
- Drawing on publicly available data, peer-reviewed publications and consultations with knowledgeable parties, it is estimated that the proposed legislative amendments are likely to result in forgone annual revenues to the federal government of between \$9 million and \$15 million.
 - The difference between the low and high estimates is primarily determined by assumptions regarding the level of consumer expenditure among Nunavik communities, as compared to other provinces and territories.
- This cost estimate does not encompass behavioural impacts that could arise from the proposed tax changes.

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^{*}Comments are welcome. Contact Jason Jacques (e-mail: jacquj@parl.gc.ca) for further information.

I. Introduction

This note responds to the request of August 2010 by the Honourable Charlie Watt, Senator for Quebec (Inkerman), regarding the potential costs arising from legislative amendments to the *Excise Tax Act* (ETA) that would eliminate the Goods and Sales Tax (GST) on all goods and services purchased or sold in Nunavik, as well as eliminate the federal excise tax on petroleum products¹.

The costing primarily relies on data, analysis and assumptions generated by government agencies and peer-reviewed publications. We have also undertaken consultations with several organizations and experts with knowledge of the influence of price changes on consumption patterns.

Summary of Proposal

Several key assumptions have also been provided by the office of the Honourable Charlie Watt,

Senator for Quebec (Inkerman), which are identified in the assessment and may have a material

impact on the cost estimate presented in this note.

The ETA stipulates that a consumption or sales tax is imposed on the sales price or volume sold of virtually all goods and services². The precise tax rate will differ depending on the type of good or service. For instance, while most items attract a basic rate of 5 per cent, gasoline incurs an additional levy of 10 cents per litre.

The proposed legislative amendments to the ETA would effectively eliminate the GST payable on all goods and services that currently incur a 5 per cent rate in Nunavik, as well as eliminate federal excise taxes on petroleum products and fuels sold in Nunavik³. In addition to gasoline, the latter taxes also include a 4-cent per litre charge on sales of diesel fuel and an 11-cent per litre charge for aviation fuel.

Regarding the 14 northern Quebec communities that comprise Nunavik, including selected income characteristics, are presented in Annex B.

The technical aspects of the proposal are summarized in Table 1.

¹ <u>http://www2.parl.gc.ca/content/Senate/Bills/403/public/pdf/s-212_1.pdf</u>. Accessed in October 2010.

² <u>http://laws.justice.gc.ca/PDF/Statute/E/E-15.pdf</u>. Accessed in October 2010.

³ More precisely, Bill S-212 would "zero rate" the GST in Nunavik, meaning that retailers and wholesalers would remain eligible for GST input credits, but not need to charge on the final sale of their goods and services. While this is an important technical distinction regarding how the proposed legislative amendments would be implemented, it is largely tertiary to preparation of a cost estimate.

Table 1. Key Features of Proposed Tax Amendments

APPLICABILITY	 All goods and services purchased or sold in the 14 communities of Nunavik.
MAXIMUM VALUE	5 PER CENT OF THE VALUE OF GOODS AND SERVICES THAT CURRENTLY ATTRACT THE GST.
	PLUS
	 TOTAL FEDERAL EXCISE TAXES PAYABLE ON CONSUMPTION OF PETROLEUM PRODUCTS AND FUELS SOLD IN NUNAVIK.

II. Cost Estimate

Relevant Costs

The principal cost to the federal treasury would be forgone GST and federal excise tax revenues currently collected on goods and services (including petroleum products) sold in Nunavik⁴.

Second round effects arising from the influence of the new tax levels on induced consumption are outside of the scope of this analysis⁵.

The time period of analysis is the assumed promulgation point, January 2011 onward.

<u>Analysis</u>

The previous estimates of an earlier iteration of this proposal (Bill S-227) were presented to the Senate Standing Committee on National Finance in September 2009. At that time, the version of the legislative proposal considered by the Committee had a broader purview, and included the amendments contemplated in Bill S-212, as well as an increase to the Northern Resident's Tax Deduction⁶.

Witnesses from the Department of Finance Canada indicated that Bill S-227 would result in forgone revenues to the federal treasury of approximately \$30 million per annum, with the two parts of the Bill having equal expenses (*i.e.* \$15 million for the Northern Resident's Deduction and \$15 million for amendments to the ETA). Witnesses appearing with the Bill's sponsor, Senator Watt, offered a competing estimate of \$8.4 million per annum in forgone revenues to the federal treasury for the entire package of

⁴ As noted in Annex D (Canadian Taxes on Petroleum Products) the GST is applied on the final retail price that includes federal excise taxes. As such, the relevant costs for these products would be forgone excise taxes, GST revenues and the product of GST revenues and excise taxes. For example, in Ontario this *tax-on-tax* effect would amount to 0.05 cents per litre (10 cents per litre in federal excise taxes x 5% GST).

⁵ Evidence suggests that inducement effects are expected to be relatively modest given the level of mean after-tax incomes among residents of Nunavik, the relatively small percentage change in affected goods and services and relatively inelastic price elasticity estimates for gasoline. These data are presented in the 2006 Census (Statistics Canada), the Nunavik Comparative Price Index (Duhaime et al., University of Laval, 2000) and Transportation Elasticities: How Prices and Other Factors Affect Transportation Behaviour (Litman, T. Victoria Transport Policy Institute, 2008).

⁶ http://www2.parl.gc.ca/content/Senate/Bills/402/public/pdf/s-227_1.pdf.

legislative amendments. These witnesses cited research prepared by the Library of Parliament's Parliamentary and Information Research Service (PIRS)⁷.

PBO staff have reviewed the methodology used to prepare each cost estimate. Details regarding the Finance Canada figures are presented in Annex C. Overall, this estimate uses a "top down" approach to infer the likely loss of tax revenues based on the federal ETA revenues arising from the provinces and territories, and then estimates the forgone revenues of the legislative amendments by assuming similar per capita estimates for the Nunavik population (*i.e.* a citizen of Nunavik will pay similar amounts of federal excise taxes as a citizen of the Northwest Territories). Overall this approach is reasonable and the results are determined to be robust based on sensitivity analysis performed by PBO staff.

The Library of Parliament's PIRS has shared all documentation pertaining to their cost estimate presented to the Committee. Their estimate also relies on a "top-down" approach, but focuses on personal income tax paid by residents of Nunavik. As such, it provides limited guidance regarding the potential impact of amendments to the ETA on the federal treasury.

PBO Approach

The PBO approach is similar to that employed by Finance Canada, using a "top down" methodology that has three parts:

- 1. Identify the total annual federal revenues for the GST and excise tax pertaining to fuels;
- 2. Impute the shares of revenues attributable to each province and territory; and,
- 3. Estimate the range of potential forgone revenues in Nunavik based on per-capita calculations.

In addition, as a test of reasonableness, the PBO also obtained actual fuel consumption data from Nunavik distributors. These time series data are used to calculate the actual amount of federal excise taxes levied on fuel sold in Nunavik and is a useful secondary check on whether the allocation model will produce reasonable results.

Calculations

The total annual federal revenues arising from the GST and excise tax on fuels are collated from the Public Accounts of Canada and presented in Annex E⁸. Overall, GST revenues have decreased 9.5 percent over the past five years to \$26.9 billion in 2009-10, primarily owing to decreases in the applicable rate (from 7 percentage points to 5 percentage points). Excise tax revenues attributable to gas, diesel and aviation fuels have risen 2.4 percent over the past five years to \$5.2 billion, owing to increased consumption⁹.

The shares of GST revenues imputed to each province and territory are calculated using the actual 2008 retail trade figures. The shares of federal excise taxes are imputed using the 2008 estimates of personal

⁷ http://www.parl.gc.ca/40/2/parlbus/commbus/senate/Com-e/fina-e/pdf/11issue.pdf.

⁸ http://www.tpsgc-pwgsc.gc.ca/recgen/txt/72-eng.html.

⁹ Given the cyclical impact of the recent economic downtown on federal tax revenues, PBO analysis uses the 2008-09 fiscal year as the base year for valuation of the total tax pools.

expenditures on motor fuels and lubricants. Both data sets are provided by Statistics Canada. The calculations are presented in Annex F.

Estimates of Nunavik tax shares are prepared assuming constant per capita GST and excise tax contributions in other jurisdictions. For example, Nunavik's population is approximately 0.2% of the size of Quebec's, suggesting that if Nunavik also paid 0.2% of Quebec's GST and federal excise tax revenues the total forgone federal tax revenues arising from the legislative amendments would be approximately \$11 million per annum. Similar calculations are presented in Annex F for two other northern territories (the Northwest Territories and Nunavut), with results ranging from \$9 million to \$15 million per annum.

Calculations of actual amounts of federal fuel taxes collected on fuels sold in Nunavik are presented in Annex G. Based on data for 2009, the federal government collected approximately \$0.93 million of excise taxes on gasoline and diesel sales. This is lower than the estimates generated using the allocation methodology presented in Annex F, which ranged from \$1.3 million to \$1.8 million. It suggests that the overall cost of Bill S-212 is closer to the lower end of the range calculated using the allocation approach.

Finally, this cost estimate assumes that the Canada Revenue Agency is able to appropriately administer the proposed tax amendments without undue cost.

Based on consultations with the office of the Honourable Charlie Watt, Senator for Quebec (Inkerman), it is assumed that the Canada Revenue Agency (CRA) will incur no additional administrative cost as a result of the proposed legislative amendments.

Summary

Overall, the proposed amendments to the ETA are estimated to result in forgone federal tax revenues of between \$9 million and \$15 million per annum¹⁰.

Table 10. Summary of Total Cost Estimate (\$M, per annum)¹¹

	Low	Нідн
TOTAL FORGONE REVENUES	9	15
GST	7	13
Excise Tax on Fuel	1	2

¹⁰ It should be noted that while both PBO and the Department of Finance Canada use a "top-down" approach to estimate the financial cost of the proposed legislative changes, there are small differences in the two results primarily owing to differences in the base year (2005 for Finance Canada, 2008-09 for PBO). Overall, these differences are not believed to be material. ¹¹ Numbers do not add due to rounding.

Annex A: Terms of Reference



COST ESTIMATE FOR BILL S-212: AN ACT TO AMEND THE EXCISE TAX ACT (TAX RELIEF FOR NUNAVIK)

Issue

A Member of Parliament has requested a cost estimate of Bill S-212: An Act to Amend the Excise Tax Act (Tax Relief for Nunavik). Bill S-212 would provide for a 0% GST rate on the supply of goods and services in Nunavik and exempt petroleum products and fuels sold or purchased in Nunavik from certain excise and consumption or sales taxes.

Relevant Costs

The proposed amendments to the *Excise Tax Act* could result in impacts to Government of Canada's Fiscal Framework. The principal impact would occur as a result of reduced tax revenues generated from existing consumption levels in Nunavik, due to lower tax rates.

The dynamic effects of the changes to the tax rates (*i.e.* changes in consumption patterns as a result of S-212) are not expected to result in further impacts on federal revenue flows. As such, these effects would be outside the purview of analysis.

Proposed Approach

There are two proposed phases.

• Phase I: Consultation with External Experts

The staff of the PBO will engage in external consultations, which will include the Department of Finance Canada.

Phase II: Preparation and Review of Existing Cost Estimates

The staff of the PBO would prepare a cost estimate based on the Phase I consultation and literature review. This would include a review of the costing model used to prepare the estimates, as well as the related assumptions, with selected external experts.

Resources & Timeline

This costing estimate would require the work of 1.0 full-time equivalent (FTE) over two months. A final product could be provided to the member by October 2010.

As work progresses, staff of the PBO may consult with the Member from time-to-time to confirm assumptions required to prepare the costing estimate.

The final report would be presented and reviewed with the Member, as well as subsequently be posted on the PBO website (see below).

Confidentiality Provisions

- It is understood that to complete the proposed terms of reference, the Member would be required to waive parts of their confidentiality rights. Specifically, staff of the PBO:
 - Would disclose that a request had been received from a parliamentarian to analyse this issue.
 - May share an estimated timeline for project completion with collaborators (*i.e.* autumn 2010).
- The name of the requestor would not be released, unless explicitly permitted.

Communications

All external consultations pertaining to this product would cease in the event of a federal election. Publication of the final report on the PBO's web site would be performed with the concurrence of the Member.

Annex B: Economic Overview of Nunavik

The 14 Communities of Nunavik						
	Population	Median Income ¹	Median After-tax Income ¹			
Kuujjuarapik	568	\$17,984	\$17,280			
Umiujaq	390	\$18,987	\$18,432			
Inukjuak	1,597	\$18,368	\$17,728			
Puvirnituq	1,457	\$19,392	\$18,867			
Akulivik	507	\$16,811	\$16,320			
Ivujivik	349	\$16,448	\$16,448			
Salluit	1,241	\$18,400	\$17,984			
Kangiqsujuaq	605	\$23,808	\$22,016			
Quaqtaq	315	\$21,536	\$20,640			
Kangirsuk	466	\$24,896	\$22,720			
Aupaluk	174	N/A	N/A			
Tasiujaq	248	N/A	N/A			
Kuujjuaq	2,132	\$36,032	\$31,424			
Kangiqsualujjuaq	735	\$14,560	\$14,560			
NUNAVIK TOTAL ²	10,784	\$22,449	\$20,965			
CANADA	31,612,897	\$25,615	\$23,307			

1. Persons 15 years of age and over.

2. Median income and median after-tax income are weighted by population

Source: Statistics Canada. Census 2006.

Annex C: Finance Canada Calculations



Department of Finance (Canada C Deputy Minister S Ottawa, Canada K1A OGS

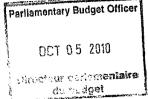
Ministère des Finances Canada Sous-ministre

SEP 3 0 2010

Dear Mr. Page:

2010FIN330567

Mr. Kevin Page Parliamentary Budget Officer Library of Parliament Ottawa, ON K1A 0A9



Thank you for your correspondence of September 13, 2010, in which you request any data or information that the Department of Finance has regarding the Department's cost estimate of foregone revenues from the Goods and Services Tax (GST) and the federal excise tax on fuel relief proposed in Bill S-212. The cost estimate for the GST and the federal excise tax on fuel, which was provided to the Senate National Finance Committee on September 15, 2009, was \$15 million annually.

I am attaching a document that describes the data used by the Department to arrive at this cost estimate.

Yours sincerely,

Michael Horgan

Enclosure

Canadä

Table 1. The Finance Canada Methodology (2005 Data)								
	Quebec NWT Nunavik							
Population	7,546,131	41,464	10,784					
GST Revenues (\$M) ¹	\$7,382	\$55	N/A					
Federal Fuel Tax(\$M) ²	\$999	\$17	N/A					

Note: Figures may not add due to rounding.

1. http://www.statcan.gc.ca/pub/13-018-x/2009002/tab-eng.htm#qc

2. http://www.statcan.gc.ca/pub/13-018-x/2009002/t/tab1224-eng.htm

Table 2. PBO Calculations Using Finance Canada Methodology				
	Quebec	NWT		
Nunavik Population as % of	0.001	0.260		
Inferred GST Revenues as % of Population	\$11	\$14		
Inferred Federal Fuel Tax Revenues as % of Population ²	\$1	\$4		
TOTAL	\$12	\$19		

Note: Figures may not add due to rounding.

1. http://www.statcan.gc.ca/pub/13-018-x/2009002/tab-eng.htm#qc

2. http://www.statcan.gc.ca/pub/13-018-x/2009002/t/tab1224-eng.htm

Annex D: Canadian Petroleum Taxes

Taxes on Petroleum Products - January 2008

			cents p	er litre	
	Gasoline	Diesel	AVGas/ Turbo	Propane ¹	Heating Oil/ Natural Gas
Federal Taxes					
Excise Tax	10.0	4.0	11.0/4.0		
Goods and Services Tax	5%	5%	5%	5%	5%
or Harmonized Sales Tax ²	13%	13%	13%	13%	13%
Provincial Taxes					
Newfoundland and Labrador	16.5	16.5	0.7	7.0	
Prince Edward Island ³	15.8	20.2	0.7	17.0	
Nova Scotia	15.5	15.4	2.5	7.0	(4)
New Brunswick	10.7	16.9	2.5	6.7	
Quebec	15.2	16.2	3.0		
Quebec additional taxes ⁵	7.50%	7.50%	7.50%	7.50%	
Ontario	14.7	14.3	2.7	4.3	
Manitoba	11.5	11.5	3.2	3.0	
Saskatchewan	15.0	15.0	1.5	9.0	
Alberta	9.0	9.0	1.5	6.5	
British Columbia	14.5	15.0	2.0	2.7	
Yukon	6.2	7.2	1.1		
Northwest Territories ⁶	10.7/6.4	9.1	1.0		
Nunavut ⁶	10.7/6.4	9.1	1.0		
Other Transportation Tax	es ⁷				
Montreal	1.5				
Vancouver	6.0	6.0			
Victoria	2.5	2.5			

Notes:

1. The propane tax applies on fuel used in motor vehicles.

2. In Newfoundland and Labrador, New Brunswick and Nova Scotia, the Goods and Services Tax (GST) and the provincial retail sales taxes are replaced by a single, harmonized value-added tax, the Harmonized Sales Tax (HST), applicable on all petroleum products.

3. Since April 2005, gasoline and diesel taxes in Prince Edward Island are adjusted on the first day of the month. For the most current taxes visit their Tax and Land Information website.

4. Nova Scotia has a point of sale tax rebate of 8% on furnace oil.

In Quebec, gasoline, diesel and propane taxes are reduced by varying amounts in certain remote areas and within 20 kilometres of the provincial and U.S. borders. The Quebec provincial retail sales tax (QST) applies to all products. In Montreal and surrounding municipalities an urban tax of 1.5 cents per litre is also added to gasoline.
 In the Northwest Territories and Nunavut gasoline is taxed at 6.4 cents per litre in communities not served by a highway system.

7. In Greater Vancouver and Victoria there are additional transportation taxes of 6.0 cents per litre and 2.5 cents per litre, respectively, on gasoline and diesel. There is also a 1.5-cent per litre tax on all sales of gasoline on the Island of Montreal.

Source: Natural Resources Canada: http://nrcan.gc.ca/eneene/sources/pripri/taxpet-eng.php

Annex E: Federal Tax Revenues

Federal Fuel Excise and Goods and Services Tax Revenues (\$ millions)							
	<u>2003-04</u>	<u>2004-05</u>	<u>2005-06</u>	<u>2006-07</u>	<u>2007-08</u>	<u>2008-09</u>	<u>2009-10</u>
Goods and Services Tax	28,286	29,758	33,019	31,296	29,920	25,740	26,947
Excise Tax - Gas, Diesel and Aviation	4,952	5,054	5,076	5,127	5,140	5,161	5,178

Source: Public Accounts of Canada, Table 4a

Annex F: Detailed Calculations from the PBO Approach

Table 1. Provincial and Territorial Shares of Retail Trade and Personal Expenditures (\$M)

	Retail Trade ¹	% of National Total	Personal Expenditure on Non-Durable Goods ²	% of National Total	Personal Expenditure on Motor Fuels and Lubricants ³	% of National Total
Newfoundland and Labrador	7,009	1.6%	3,654	1.7%	578	1.7%
Prince Edward Island	1,703	0.4%	1,008	0.5%	210	0.6%
Nova Scotia	12,089	2.8%	6,708	3.1%	1,046	3.1%
New Brunswick	10,018	2.3%	5,204	2.4%	908	2.7%
Quebec	94,086	22.0%	50,724	23.4%	7,022	21.0%
Ontario	151,672	35.5%	81,387	37.6%	13,124	39.3%
Manitoba	14,980	3.5%	7,814	3.6%	1,217	3.6%
Saskatchewan	14,673	3.4%	6,950	3.2%	1,254	3.8%
Alberta	61,614	14.4%	25,173	11.6%	4,009	12.0%
British Columbia	57,783	13.5%	27,036	12.5%	3,973	11.9%
Yukon	535	0.1%	235	0.1%	29	0.1%
Northwest Territories	706	0.2%	401	0.2%	36	0.1%
Nunavut	309	0.1%	168	0.1%	21	0.1%
ΤΟΤΑ	- 427,176		216,462		33,426	

Source: 1. Statistics Canada's Retail Trade 2008. http://www40.statcan.gc.ca/l01/cst01/trad17a-eng.htm 2. Provincial Economic Accounts 2008. http://www.statcan.gc.ca/pub/13-018-x/2009002/t/tab0210-eng.htm 3. Statistics Canada estimates. 2008.

Table 2. Estimates of Provincial and Territorial Tax Shares (\$M)

	Retail Goods and Services Tax	Excise Tax on Gasoline
Newfoundland and Labrador	442	89
Prince Edward Island	107	33
Nova Scotia	763	162
New Brunswick	632	141
Quebec	5,935	1,088
Ontario	9,568	2,033
Manitoba	945	189
Saskatchewan	926	194
Alberta	3,887	621
British Columbia	3,645	615
Yukon	34	5
Northwest Territories	45	6
Nunavut	19	3
TOTAL	26,947	5,178

Source: PBO calculations using federal tax bases for 2008-09 (Annex E) and provincial and territorial consumption shares in 2008 for retail trade (for the GST) and personal expenditure on Motor Fuels and Lubricants (for the federal excise tax).

Table 3. Estimates of Nunavik Tax Shares (\$M)						
ASSUME: NUNAVIK POPULATION GROWS AT HISTORICAL TREND FROM PREVIOUS CENSUS						
Nunavik Population in 2005 ¹			10,784			
Trend Growth from 2000 to 2005, compounded 1						
Projected Population by 2011			12,746			
ASSUME: CONSTANT PER CAPITA SHARES OF GST	AND EXCISE TAX PA	AYMENTS				
	Тах	Incidence Ratios				
<u>Quebec</u> <u>NWT</u> <u>Nunavut</u>						
Per-Capita GST ²	\$766	\$1,019	\$616			

Total	11,548,365	14,596,032	9,174,689
Inputed Nunavut Shares:	\$1,788,679	\$1,613,084	\$1,318,634
Per Capita Excise Taxes ²	\$140	\$127	\$103
Inputed Nunavut Shares:	\$9,759,686	\$12,982,948	\$7,856,055
Per-Capita GST ²	\$766	\$1,019	\$616

Sources: 1. Census 2006. Statistics Canada. 2. Statistics Canada Population Estimates. 2008. http://www.statcan.gc.ca/pub/91-215-x/2010000/tablelist-listetableaux1-eng.htm and PBO Calculations.

Annual Fuel Consumption in Nunavik (<i>'000 Litres</i>) ¹						
Gas						
	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	
FCNQ Petro	3,729	3,714	3,838	4,194	4,640	
Nunavik Petro Inc.	N/A	N/A	N/A	2,510	2,651	
total				6,704	7,291	
Federal Excise Taxes (\$M)				0.67	0.73	
Diesel						
	2005	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	
FCNQ Petro	2,370	2,146	1,838	1,951	2,752	
Nunavik Petro Inc.	N/A	N/A	N/A	N/A	2,150	
total					4,902	
Federal Excise Taxes (\$M)					0.20	
TOTAL FEDERAL EXC	ISE TAXES	COLLECTE	D (\$M)		0.93	

Annex G: Calculation of Actual Incidence of Federal Excise Tax on Fuels in Nunavik

1. Data regarding actual fuel consumption provided by La Fédération des coopératives du Nouveau-Québec (FCNQ)