PORT of vancouver

Gateway Infrastructure Fee

Annual Report

For the year ended December 31, 2017

Canada

Executive Summary

This GIF Annual Report has been prepared in line with a commitment that the Vancouver Fraser Port Authority ("VFPA") made to industry during the Gateway Infrastructure Fee ("GIF") consultation process in 2010, when VFPA stated that the GIF would only be used as a cost recovery mechanism and that the program would be transparent.

VFPA developed the Gateway Infrastructure Program ("GIP") to invest in supply chain improvements beyond traditional port activities and lands. The GIP is comprised of 17 projects that make up a $717 million dollar capital investment program that brings benefits to industry and local communities surrounding the port. The projects included in the GIP were developed in consultation with port stakeholders and supported by independent analysis.

Benefits to industry include enhanced efficiency and safety of rail operations, and increased ability for the port to accommodate anticipated growth in trade-related traffic. Additionally, through prefunding the industry portion, VFPA has secured $3 million from other agencies for every $1 million VFPA and its industry customers and stakeholders are investing. Local communities also benefit from GIP in a number of ways, including improved local traffic flows, improved traffic safety, better emergency vehicle access, reduced train whistling, and reduced vehicle idling at level crossings. The citizens of Canada benefit as the port will be able to improve Canada's national trade competitiveness and increase economic growth.

The 17 projects were led by a variety of funding partners from both industry and government and all projects were substantially completed in 2016. In 2017, costs were incurred to bring most projects to full completion with the remainder expected to be fully complete in 2018. These infrastructure projects have provided increased goods movement efficiencies for communities and have increased the safety of drivers, cyclists and pedestrians as a result of improvements to roads and intersections. Port tenants, port workers, trucking and local communities are experiencing the benefits of reduced congestion and improved travel time reliability.

During the development of the GIP, VFPA agreed to pre-fund $167 million of costs on behalf of industry. VFPA will contribute 10 per cent towards the overall industry component of the GIP projects and will recover the remaining 90 per cent from industry stakeholders through the GIF. The fee is being collected by all 19 of VFPA's terminal partners across three trade areas.

GIF rates were based on a series of assumptions, including total GIP spending, volumes of goods moving through the trade corridors, interest rates, and others. The 2019 GIF rates shown in this year's report (see page 10) reflect lower project costs and higher cargo volumes than originally forecasted.

VFPA will continue to prepare and distribute GIF Annual Reports going forward to ensure that the fee remains transparent to stakeholders and customers.

Gateway Infrastructure Fee Update

The GIP is a $717 million dollar capital investment program that consists of 17 projects designed to bring important benefits to the Port industry and the communities surrounding the Port. Further information on the GIP projects can be found at:

[Port of Vancouver Port Development webpage]

Current Rates

VFPA officially announced the implementation of the GIF on October 29, 2010. In that announcement, VFPA established rates covering a four year time horizon, from January 1, 2011 to December 31, 2014. GIF rates are shown below including the rates for 2015-2018. Additional information can be found in VFPA's Fee Document at:

www.portvancouver.com/about-us/port-fees/

Containerized Cargo Rates:

Gateway Infrastructure Fee - Fee Payable per TEU						
Trade Area	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
North Shore Trade Area	$ 1.00	$ 1.00	$ 1.33	$ 0.92	$ 0.71	$ 0.77
South Shore Trade Area	$ 1.00	$ 1.00	$ 1.84	$ 1.86	$ 1.64	$ 1.59
Roberts Bank Rail Corridor	$ 0.60	$ 0.60	$ 0.55	$ 0.53	$ 0.46	$ 0.53

Non-Containerized Cargo Rates:

Gateway Infrastructure Fee						
Trade Area	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
North Shore Trade Area						
-Breakbulk lumber rates per MFBM	$ 0.14	$ 0.14	$ 0.11	$ 0.11	$ 0.11	$ 0.11
-Breakbulk log rates per MFBM-Scribner	$ 0.38	$ 0.38	$ 0.31	$ 0.31	$ 0.31	$ 0.31
-Other cargo rates per metric tonne	$ 0.10	$ 0.10	$ 0.08	$ 0.08	$ 0.08	$ 0.08
South Shore Trade Area						
-Cargo rates per metric tonne	$ 0.10	$ 0.10	$ 0.18	$ 0.19	$ 0.17	$ 0.17
Roberts Bank Rail Corridor						
-Cargo rates per metric tonne	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.05	$ 0.06

VFPA's GIF rates were set to enable it to recover 90% of the costs that it expected to contribute on behalf of industry to the GIP. GIF rates were based on a series of assumptions, including total GIP spending, volumes of goods moving through the trade corridors, interest rates, and others.

2017 Volumes and Revenues

The following tables show how VFPA's expectations for trade corridor volumes, fee revenues and program spending in 2017 compare to actual results.

Table A – VFPA 2017 Volumes Subject to GIF

	Total Metric Tonnes (in 000s)		
Trade Area	**Actual**	**Forecast** (A)	**Variance**
North Shore	34,782	20,598	14,184
South Shore	24,912	17,558	7,354
Roberts Bank	41,864	29,840	12,024
Total	**101,558**	**67,996**	**33,562**

(A) Equal to average actual volumes from 2008-9.

Table B – VFPA 2017 GIF Revenues (in $000s)

Trade Area	Actual(A)	Forecast	Variance
North Shore	$2,751	$2,060	$691
South Shore	$4,160	$1,800	$2,360
Roberts Bank	$2,077	$1,813	$264
Total	**$8,988**	**$5,673**	**$3,315**

(A) Taken from Note 19 of the VFPA's 2017 Audited Financial Statements.

Actual trade corridor volumes were higher than originally estimated in 2010 due to growth in both containerized and non-containerized traffic. As a result of this growth, revenues also exceeded expectations.

2017 Expenditures

In 2017, VFPA continued to fund a number of the GIP projects as they neared full completion.

Table C – VFPA 2017 GIP Expenditures (in $000s)

Trade Area / Project	Actual	Forecast	Variance
North Shore			
Lynn Creek Rail Bridge			
Brooksbank Avenue Underpass			
Low Level Road Project – combined project	$122	$11	($111)
Phillip Avenue Grade Separation(A)			
Western Low Level Route Extension to Marine Drive(A)			
Subtotal(B)	**$122**	**$11**	**($111)**
South Shore			
South Shore Corridor Project	$103	$5	($98)
Powell Street Grade Separation	$1,293	($1,373)	($2,666)
Subtotal(C)	**$1,396**	**($1,368)**	**($2,764)**
Roberts Bank			
41B Street Rail Overpass			
80th Street Rail Overpass			
152nd Street Rail Overpass	$0	$36	$36
Panorama Ridge At-Whistle Cessation	$0	$0	$0
192nd Street/54th Avenue/196th Street Overpass ("Combo projects")	$0	$1,709	$1,709
64th Avenue/Mufford Crescent Overpass	$0	$0	$0
232nd Street Overpass	$0	$786	$786
Rail Crossing Information System(A)			
Subtotal	**$0**	**$2,531**	**$2,531**
Total	**$1,518**	**$1,174**	**($344)**

(A) A GIP project, but VFPA is not a funding partner.
(B) Includes approximately $29K in VFPA property insurance premiums.
(C) Includes approximately $153K in VFPA property insurance premiums.

Spending in 2017 was over forecast as higher costs were incurred to bring most projects to full completion.

For the Powell Street Grade Separation project, the City of Vancouver (delivery agent) estimated the value of the land expropriation costs and land sales proceeds at 2015 values, from which VFPA anticipated a proportionate net refund of approximately $1.37 million. Through the expropriation process, a third party assessment was undertaken in 2017 which reduced the refund due to VFPA to $156,000. In addition, there were also incremental costs to bring the project to substantial completion which resulted in a net 2017 spending of $1.29 million.

VFPA contributed land to the North and South Shore Trade Area projects that has significant value. Therefore, VFPA will recover 90 percent of the value of its land contributions to the GIP, as was originally proposed. VFPA's land contributions were originally estimated at $14 million. However, due to changes to project designs and requirements, VFPA's land contributions are now expected to be approximately $22 million.

Table D - VFPA Land Contributions to GIF Projects (in $000s)

Trade Area / Project	Description	Value	Year Allocated
South Shore			
South Shore Corridor	Estimated loss of lease payments from existing tenants for road widening and relocation.	$3,514	2012
	License with the City of Vancouver to use portion of Victoria Drive road works on Stewart Street.	$21	2012
	Estimated loss of lease payments from existing tenants for land that VFPA contributed for future rail tracks.	$3,434	2014
	License with the City of Vancouver to use portion of Victoria Drive for pedestrian overpass.	$107	2014
Subtotal		**$7,075**	
North Shore			
Low Level Road	Land exchange with City of North Vancouver.	$2,780	2012
Lynn Creek / Brooksbank	Land development by VFPA.	$12,245	2016
Subtotal		**$15,025**	
Total		**$22,100**	

For the Lynn Creek / Brooksbank project, VFPA was required to acquire and develop land in the Lynnwood South area of North Vancouver. The value of VFPA contribution is based on 2014 appraised value net of future rental income.

Gateway Infrastructure Fee Rate Outlook

In mid-2010, VFPA established GIF rates for the 2011 to 2014 period. Overall, GIF rates are calculated so that, by trade area, VFPA recovers, over a 30 year period, GIP expenditures equal to 90% of the amounts that it funds to the GIP projects. Rates for 2011-2014 were set at levels that were projected to gradually step up to the levels required to recover 90% of the GIP capital investments as well as financing and operating costs over the 30 years. Rates were set conservatively low over this four year time horizon so that, in the event the GIP projects were delivered under budget or volumes moving through the trade areas were greater than projected, VFPA would not be overcharging industry. Rates were also set for 4 years to give industry some certainty of initial costs. Rates for 2015 and beyond take into account prior volumes and GIF revenues and are set at levels that only allow VFPA to recover the remainder of the GIP amounts by 2040.

Program Spending

In order to set the original GIF rates, VFPA needed to make a number of assumptions about the future. One was the amount of capital spending required to deliver the 17 GIP projects, two of which are accounted for in the Low Level Road combined project. The table below compares VFPA's original assumptions back in 2010 about total GIP project spending to revised forecasts as at December 31, 2017.

Table E – Gateway Infrastructure Program Total Spending (in $000s)

Trade Area / Project	Project Lead	Original GIP Budget	Current Estimate	Variance
North Shore Trade Area				
Lynn Creek Rail Bridge	Vancouver Fraser Port Authority	$21,000	$16,714	$4,286
Brooksbank Avenue Underpass	Vancouver Fraser Port Authority	$24,900	$25,423	($523)
Low Level Road Project – combined project	Vancouver Fraser Port Authority	$107,500	$104,380	$3,120
Phillip Avenue Grade Separation (A)	District of North Vancouver	$42,600	$37,400	$5,200
Western Low Level Route Extension to Marine Drive (A)		$86,800	$86,800	$0
	Subtotal	**$282,800**	**$270,717**	**$12,083**
South Shore Trade Area				
South Shore Corridor Project	Vancouver Fraser Port Authority	$79,500	$82,075	($2,575)
Powell Street Grade Separation	City of Vancouver	$47,500	$50,000	($2,500)
	Subtotal	**$127,000**	**$132,075**	**($5,075)**
Roberts Bank Rail Corridor				
41B Street Rail Overpass	BC Ministry of Transportation	$24,000	$14,945	$9,055
80th Street Rail Overpass	Corporation of Delta	$19,000	$13,053	$5,947
152nd Street Rail Overpass	City of Surrey	$41,000	$33,000	$8,000
Panorama Ridge At-Whistle Cessation	City of Surrey	$24,000	$17,700	$6,300
192nd Street/54th Avenue/196th Street Overpass ("Combo projects")	City of Surrey	$117,000	$123,989	($6,989)
64th Avenue/Mufford Crescent Overpass	BC Ministry of Transportation	$51,000	$51,000	$0
232nd Street Overpass	Vancouver Fraser Port Authority	$25,000	$25,500	($500)
Rail Crossing Information System (A)	Translink	$1,000	$2,200	($1,200)
Program general	Translink	$5,000	$3,500	$1,500
	Subtotal	**$307,000**	**$284,887**	**$22,113**
	Total	**$716,800**	**$687,679**	**$29,121**

(A) A GIP project, but VFPA is not a funding partner.

Overall, GIP program spending is expected to be approximately $29 million under budget. These cost savings are expected to flow through to GIP funding partners, including VFPA and the stakeholders it is pre-funding. Table F below compares the pre-funding contributions VFPA originally expected to make to the GIP projects to its current forecast.

Table F – VFPA Pre-Funding Amounts (in $000s)

Project	Original Forecast	Current Update	Variance
North Shore Trade Area	$59,000	$57,265	$1,735
South Shore Trade Area	$58,000	$63,188	($5,188)
Roberts Bank Rail Corridor	$50,000	$40,835	$9,165
Total	**$167,000**	**$161,288**	**$5,712**

VFPA's land contributions to the South Shore Trade Area projects are higher than originally estimated. Therefore, GIP program spending is approximately $5.2 million over budget for the South Shore Trade Area. VFPA's current forecast of its overall pre-funding contributions is about $5.7 million below its original forecast.

Volumes and Recovery

Another important projection VFPA made in 2010 when establishing GIF rates was the amount of cargo that was expected to move through the three GIP trade areas. Table G below compares VFPA's original cargo and TEU volume assumptions made in 2010 to its current assumption.

Table G – VFPA 2014-2019 Forecast of Volumes Subject to GIF

	Year	2014	2015	2016	2017	2018	2019
Cargo Tonnage (000's Metric Tonnes)	Prior Estimate (A)	49,735	57,218	57,218	57,218	57,218	57,218
	Current Estimate (B)	74,575	74,963	72,293	76,666	76,666	76,666
	Variance	**24,840**	**17,745**	**15,075**	**19,448**	**19,448**	**19,448**
Laden Containers (000's TEUs)	Prior Estimate (A)	1,909	2,485	2,485	2,485	2,485	2,485
	Current Estimate (B)	2,471	2,536	2,529	2,690	2,690	2,690
	Variance	**562**	**51**	**44**	**205**	**205**	**205**

(A) 2014 prior estimates based on average 2008-2009 actual volumes. 2015-2019 prior estimates based on forecast prepared in 2010.
(B) 2014-2017 are actual volumes. Current estimates for 2018-2019 based on 2017 actual volumes.

Higher than originally estimated volumes between 2014 and 2019 will increase GIF recovery over those years (see Table H below). Higher recovery in the initial years of the program will reduce the required recovery and the rates beyond 2018, compared to original estimates.

Table H – GIF Estimated Recovery 2014-2019

YEAR	2014	2015	2016	2017	2018	2019
Prior Recovery Estimate(A)	$5,673	$6,706	$8,316	$8,316	$8,316	$8,316
Current Recovery Estimate(B)	$8,143	$9,301	$9,288	$8,988	$8,806	$8,823
Variance	**$2,470**	**$2,595**	**$972**	**$672**	**$490**	**$507**

(A) 2014 prior estimate based on average 2008-2009 actual volumes. 2015-2019 estimate based on forecast prepared in 2010.
(B) 2014-2017 are actual. Current estimate for 2018-2019 based on actual 2017 actual volumes. 2019 estimate based on rates in Tables I and J.

Ongoing Financing and Operating Costs

VFPA's ongoing financing and operating costs incurred on the GIP projects are to be recovered through the GIF. The financing costs that VFPA is recapturing from the GIF are equal to those that would accrue on 90% of the amounts that VFPA is contributing to the GIP projects. The interest rate being used to calculate these financing charges is the 4.63% rate that applies to VFPA's $100 million 10 year bond that was issued in April 2010. This 4.63% rate is the one being used for the purposes of calculating GIP financing charges until VFPA's bond matures in April 2020. When VFPA's current bond expires, the financing cost will be calculated by applying VFPA's then current borrowing rate. VFPA's assumptions about GIP financing costs have not changed since 2010.

VFPA will be responsible for maintaining some of the GIP projects over the course of their 30 year estimated lives. VFPA estimated these maintenance costs to be $50,000 per annum over the final 20 years of the GIP projects. Works constructed under the GIP that will be owned and operated by VFPA upon completion will be insured for property losses. The cost of insurance is calculated as a fixed percentage of the replacement value of the works. The fixed percentage is VFPA's current property insurance rate of 0.17%. Premiums are expected to be approximately $184,000 in 2018 and change in future years depending on insurance market conditions.

2019 Rates

The following tables show GIF rates in place for 2013-2018, plus 2019 GIF rates expected to be announced officially in the 4th[th] quarter of 2018. The 2019 GIF rates are based on actual 2017 cargo volumes and up to date projections for project expenditures.

Table I - Gateway Infrastructure Fee Rates per TEU – Containerized Cargo

Trade Area	**2013/ 2014**	**2015**	**2016**	**2017**	**2018**	**2019 (Current Est.)**
North Shore Trade Area	$1.00	$1.33	$0.92	$0.71	$0.77	$0.82
South Shore Trade Area	$1.00	$1.84	$1.86	$1.64	$1.59	$1.46
Roberts Bank Rail Corridor	$0.60	$0.55	$0.53	$0.46	$0.53	$0.46

Table J - Gateway Infrastructure Fee Rates per Metric Tonne – Non-Containerized Cargo

Trade Area	**2013/ 2014**	**2015**	**2016**	**2017**	**2018**	**2019 (Current Est.)**
North Shore Trade Area						
Breakbulk lumber rates per MFBM	$0.14	$0.11	$0.11	$0.11	$0.11	$0.11
Breakbulk log rates per MFBM-Scribner	$0.38	$0.31	$0.31	$0.31	$0.31	$0.31
Other cargo rates per metric tonne	$0.10	$0.08	$0.08	$0.08	$0.08	$0.08
South Shore Trade Area	$0.10	$0.18	$0.19	$0.17	$0.17	$0.15
Roberts Bank Rail Corridor	$0.06	$0.06	$0.06	$0.05	$0.06	$0.05

After 2019, GIF rates will be re-set to recover 90% of the outstanding GIP costs over the remaining term to 2040. VFPA will again update its GIF calculations in 2019 with 2018 volumes and actual project costs to calculate GIF rates effective January 1, 2020.

VFPA will follow a similar process annually thereafter, raising or lowering the GIF rates as necessary, so that VFPA only collects GIF fees, on a net basis, that enable it to recapture 90% of the amounts that it prefunded on behalf of industry for the 17 GIP projects. Based on anticipated growth through the gateway, rates are expected to slowly decrease between 2019 and 2040.

Frequently Asked Questions

1. How will GIF rates be calculated for 2019 and beyond?

The GIF rates for 2019 have now been estimated and are shown on page 10 of this report. VFPA will review its calculations later in 2018 and update them in 2019 to calculate GIF rates effective January 1, 2020, and annually thereafter, raising or lowering the GIF rates as necessary, so that VFPA only collects GIF fees, on a net basis, that enable it to recapture 90% of the amounts that it prefunded on behalf of industry for the 17 GIP projects.

2. How will over/under recovery in each year be addressed?

If GIF revenues in any one year are over expectations, future years GIF rates will be re-set at lower levels to compensate so that the total amount of net GIF revenues VFPA collects, on a present value basis, just equals 90% of the present value it contributed to the GIP projects. On the other hand, if GIF revenues in any one year are under expectations, future years' GIF rates will be re-set at higher levels.

3. Would a major unforeseen increase or decrease in tonnage moving through one of the 3 trade areas during a year lead to a recalculation of GIF rates during the year?

No. We expect annual recalculations to be sufficient to ensure that, over the 30 year estimated life of the GIP projects, the present value of net GIF revenues will only equal 90% of the present value VFPA contributed to the GIP projects.

4. If there is a material change in commodity mix moving through one of the 3 trade areas, will the GIF rate determination process change?

A material change in the commodity mix moving through any one of the three trade areas means that a customer(s) is moving more commodities than expected when the GIF was implemented. Since the customer moving increased cargo is benefiting more from the GIP projects, it's reasonable that they would pay more GIF and VFPA would not change the GIF rate determination process to compensate.

5. How will new terminals be introduced into the mix?

If new terminals are developed over the estimated 30 year life of the GIF and benefit directly from the GIP projects, then VFPA will apply the GIF to those volumes moving through the new terminals. Increased volumes from new terminals should reduce the GIF rates for all terminals in that trade area, regardless of the commodities each terminal handles.

6. What if the infrastructure lasts longer than the 30 years that you are estimating, or does not last that long? What will happen to the GIF?

VFPA believes that 30 years is a conservative estimate of the life of the GIP assets and its GIF program has been designed to enable it to recapture 90% of its pre-funding amounts over these 30 years. If asset lives prove to be either longer or shorter than 30 years, plans are for the GIF to still remain in place for 30 years.

7. What if the infrastructure lasts longer than the 30 years that you are estimating? How will operating costs be recovered after the 30 year period if the GIF is not in place?

Plans are for the GIF to remain in place for 30 years until the end of 2040 despite asset lives potentially extending beyond this period. VFPA will cover the operating costs after 2040, if asset lives prove to be longer than 30 years, from its general revenues.

8. What will the annual audit process be?

Total actual revenue and expenditures in Tables B and C in this report have been extracted from note 19 of the Consolidated Financial Statements of Vancouver Fraser Port Authority for the Year ended December 31, 2017. These financial statements were audited by the independent auditors Ernst & Young LLP and its Independent Auditors Report is included in these financial statements. A complete copy of VFPA's 2017 Financial Statements can be found at www.portvancouver.com. The information used to calculate future GIF rates, however, is mostly based on volume forecasts and, as such, has not been audited.

9. Why is VFPA recapturing insurance costs of some GIP assets through the GIF?

At the time the GIP projects were being developed, it was unclear who would own the various assets after construction was completed. It was ultimately determined by the various delivery agents that it made the most sense for VFPA to own some of the GIP assets. As a prudent asset owner, VFPA has elected to insure these assets. The most material insurance costs were for property insurance and 90% of these costs are being recaptured through the GIF, as are other GIP costs that are incurred by VFPA as the asset owner.

10. Why is VFPA recovering its land costs through the GIF?

VFPA has contributed certain land parcels to the GIP projects that were necessary to accommodate the project works. In each case, VFPA has either incurred actual out of pocket cash costs to acquire the necessary rights to use the land, or has lost the opportunity to earn rent on these land parcels. Similar to how VFPA is recovering its cash contributions to the GIP from the GIF, VFPA is recovering its land contributions from the GIF as well.